Astrid Schwarzenberger (Ed.)

Public / private funding of higher education: a social balance

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Astrid Schwarzenberger
Tel. +49 (0) 511 12 20 456
E-Mail: schwarzenberger@his.de

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The project "Public / Private funding of higher education: a social balance" was carried out as a "General activity of observation, analysis and innovation" within Actions 6.1.2 and 6.2 of the Socrates Programme, answering the call for proposals EAC/65/05. More specifically, it refers to this call for proposals' priority theme "What should be the role and profile of Higher Education in relation to the European social model?".

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The present report has been evaluated by Prof. D. Bruce Johnstone, University at Buffalo, USA, during December 2007 / January 2008.

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The research consortium formed for this project consisted of the following institutions:

Sociologický ústav Akademie věd České republiky (Institute of Sociology, Academy of Sciences of the Czech Republic)

- Prof. Petr Matějů
- Tomáš Konečný

Lancaster University, Lancaster University Management School (LUMS)

- Ozge Dilaver Kalkan
- Prof. Geraint Johnes
- Dr. Jill Johnes

HIS Hochschul-Informations-System GmbH (Higher Education Information System) coordinating institution

- Astrid Schwarzenberger
- Christoph Gwosć
- Dr. Klaus Schnitzer

CHEPS Center for Higher Education Policy Studies at the Universiteit Twente (University of Twente)

- Prof. Hans Vossensteyn

NIFU STEP (Norwegian Institute for Studies in Innovation, Research and Education)

- Vibeke Opheim

Universidad Politécnica de Valencia (Technical University of Valencia), Centro de Estudios en Gestión de la Educación Superior (Centre for the Study of Higher Education Management) – CEGES

- Prof. José-Ginés Mora Ruiz
- Andrea Detmer

Foreword

The financing of higher education in Europe, as throughout the world, has seen dramatic, as well as ideologically and politically contested, changes in the last decade or so. In part, of course, this is because the very country composition of what we call *Europe* has changed, as well as the continued strengthening of the importance of a *European Higher Education Area* that is to be more than the sum of the individual country higher educational institutions and systems. But much of the ideological and political contestation is the consequence of the very high and rising costs of higher education and of issues surrounding the sharing of these increasing cost burdens.

At the heart of many of the changes – which are very much unfinished and on-going – are three fundamental facts about the financing of higher education and the connection between higher education finance and the pursuit of greater social equity, or *social balance*. The first of these is the high cost of higher education and even more, the rapid and continuous increase in this cost. This cost trajectory is driven first by the yearly increases in per-student costs (that is, independent of any underlying enrollment increases), which tend in all countries to be upward at rates in excess of the prevailing rates of inflation. This tendency of unit, or per-student, costs to increase at *inflation-plus* rates is a function of higher education's natural production function – most specifically (and quite unlike manufacturing or construction), its natural resistance to the continuous substitution of capital for labor, which is the main source of productivity and growth in the general economy.

This inflation-plus increase in per-student costs is then accelerated by rising enrollments. Enrollment increases, in turn, are a function of demographics, or whatever increases there may be in the so-called university-age population cohorts, further accelerated by the growing participation rates of these (sometimes) growing cohorts. European countries differ considerably in both of these enrollment growth factors, with low population growth-high participation rate countries exhibiting lower anticipated higher educational enrollment growth, while high population growth-low participation rate countries are likely to have significantly greater numbers of young people every year emerging from secondary schools prepared for, and desiring, a higher educational experience. But the combination of these cost increase factors, even further accelerated in many European countries by immigration as well as by increasing amounts of education taken by the average student, means that the European Community as a whole will face a continuous upward pressure of higher educational costs at rates in excess of – and in some countries very considerably in excess of – prevailing rates of inflation. The significance of this fact alone is that these increasing cost trajectories are already outpacing, and will continue to outpace, the likely trajectories of increasing revenues – at least without a supplementation of governmental revenue, which leads us to the second fact.

The second fact is that these costs – referring to both the institutional costs of instruction and to the costs of student living – are everywhere shared among governments (or tax-payers), parents (or families), students, and philanthropists.[1] Beyond cost-sharing as fact, however, is the connotation of a policy change: that is, a shift of higher educational costs (especially the costs of instruction) from being borne predominantly by governments, or taxpayers, to being shared in greater proportions with parents and/or students. Cost sharing as a policy shift has several ra-

1 One can add business as a potential bearer of higher educational costs, but as businesses pass on their costs to consumers in the prices of their products, and as the average consumer does not differ appreciably from the average taxpayer, there may be little analytical usefulness in making the distinction.

tionales, most of them contested. But the least contestable is the combination of the aforementioned high and continuously rising costs combined with limitations on governmental revenues, which in turn is exacerbated by competing claims from other socially and politically compelling needs such as elementary and secondary education, health, housing, and other elements of the social safety net.

The third underlying fact, related to the link between higher educational participation and the goal of equity, or social balance, is the tendency of higher education – in the absence of policies to mitigate, and desirably to reverse, this tendency – to make individuals more different than more alike. All of the stories of the poor but bright and ambitious young man or woman making it to the university in spite of poverty, or poor schools, or rural isolation, or uneducated parents, or the handicaps of minority ethnic or linguistic status aside, the fact is that higher educational matriculation, persistence, and completion rates are correlated in all countries with social class and other attributes of marginalization. For all the exceptions, access to higher education even in Europe is limited by the level and quality of secondary schools and the aspirations of peers and family. And where there are tuitions and fees to be borne in addition to living costs and the opportunity costs of lost earnings, parental income can be an even greater predictor of higher educational participation, especially where means-tested financial assistance and generally available student loans are limited.

The countries of Europe are generally characterized by small and largely insignificant private higher educational sectors, by low (sometimes no) tuition fees, minimal philanthropic support, high costs of living away from home, and a wide range of indirect but higher educationally-related governmental benefits.[2] At the same time, there are very significant differences among European countries in regard to e.g. official expectations of parental contributions (either to tuition fees or to maintenance costs or both); whether tuition fees, if any, are to be deferred (and mainly paid by students) or up-front (and mainly paid by parents); the extent and the degree of means-testing, or targeting, of student financial assistance; the generosity of these forms of assistance (i.e. in the terms and conditions of the grants and in the elements of embedded subsidies in the loans); and the mix of direct, indirect, and non-cash subsidies that form part of students' or their parents' incomes. And to further complicate analyses and comparisons, there have been changes in these policies and programs in recent years in response to such factors as the growing acceptance of at least some degree of cost-sharing, combined with a continuing political priority given to lessening the socio-economic and ethnic disparities in higher educational enrollments.

Along with these changes, some of which might otherwise widen country differences in higher educational systems and policies, there are at the same time powerful currents to more closely conform national systems of higher education within the European Higher Educational Area. This report – six country case studies, with analysis and recommendations – is an important step in the direction of such greater conformity. Of particular importance was simply uncovering the facts necessary to compare different countries – no small feat, given the complexities of public finance in a single country, much less the task of comparing countries with different systems and policy tools.

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2 The minimal philanthropic support is especially in comparison to the United States. The insignificant private higher education sector is in comparison to the US, much of East Asia, much of Latin America, and even to the increasing numbers of generally low quality institutions that can be found in much of Africa and most of the former Communist countries. The relative low tuition in the public sector universities is in comparison especially to the US, Canada, Japan, Australia, South Africa, Hong Kong, Singapore, and China (with Russia and many former Communist countries charging high tuitions to the privately supported tracks in their public universities).

The report goes beyond the mere cataloging of numbers (e.g. of tuition fees, grants, loans, and teaching budgets) and a description of policy differences, to the much more difficult but potentially important measurement of the apparent effect of these higher educational funding arrangements on the *social balance*: that is, on differences in opportunity and status based on social class.

The six countries studied – England, Czech Republic, Germany, Netherlands, Norway, and Spain – provide not only regional coverage, but coverage as well along some of the major differences in European higher educational funding and access policies – e.g.: in the acceptance of tuition fees, the embrace or rejection of officially expected parental contributions, the prevalence of indirect and non-cash support for student and/or parents, the differing expectations of student contribution via loans, and with respect to the latter, the differing student loan schemes, particularly fixed schedule and income contingent repayment obligations, and between high and low degrees of interest subsidization.

As a fellow researcher in the field of international comparative higher education finance, I was honored to be able to participate in this project in a small way, as an evaluator, and as a contributor in this foreword. The report is a significant contribution to the scholarly literature on higher education finance and policy. More importantly, it has at least the potential to assist in moving the European Community forward its laudable goal of a more integrated European Higher Education Area and to the vision of an even more enlightened and equitable Community.

D. Bruce Johnstone
Buffalo, New York

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Abstract

The aim of this project was to provide information on the distribution of teaching-related costs of higher education between the public (i.e. the state) on the one hand and the private households on the other, taking *all* items of public support to households into account and distinguishing by socio-economic background groups. This information could then be used for discussions on European social policy in higher education and on the impacts of different cost-sharing approaches on widening access and supporting talented students.

The study therefore followed a twofold approach: On macroeconomic level, the differences between cost-sharing scenarios were compared between countries; in this, all items of public support to students and their parents that are linked to student status were taken into account. On microeconomic level, the focus was on the differences in a student's income, expenditure and public support by housing situation (living with parents or away from home) and socio-economic status group (SES).

These analyses were carried out for six countries from all corners of Europe representing different approaches of support: the Czech Republic, England, Germany, the Netherlands, Norway and Spain.

The macro analysis has shown that the private share is markedly higher in England and Spain (64% and 60% respectively) compared to the other countries (41% - 48%) where, in turn, the public share is higher.

When looking only at the share taken over by the state (excluding any spending on research), the teaching allocations make up different proportions within this share: In Germany, the share of teaching allocations within public spending is much smaller than in the other countries, and Spain has the highest share. In turn, this means that the share of public funding made available in the form of support to students and their parents is very high in Germany and very low in Spain (note that this does not refer to the total amounts spent, but only to the respective shares).

The types of support offered to households can be split into three: support to students in cash form (e.g. grants), support to students in non-cash form (e.g. in the form of subsidies to students' transportation), and support geared at the students' parents (in the form of benefit payments or tax relief). In Spain and Norway, only cash support to the students plays a role, non-cash support also accounts for a certain share in the Netherlands and England, and the Czech Republic and Germany rely on all three types of support. In Germany, the share of support to the parents is higher than the other two support types, which raises the question if this indirect way of supporting students is quite appropriate with regard to targeted steering.

When looking at overall funding per student (referring to purchasing power standards), Norway and the Netherlands spend less, and Spain and the Czech Republic spend more than the average for the six countries. The total spending is about average for England and Germany; but in England, the levels of public and private funding show great differences compared to the average.

On micro level, eight student groups were distinguished: Students were differentiated by living situation (at home or away from home), and for each of these scenarios, four sub-cases differentiating by SES were considered. To make sure that the results could be compared between countries, only those students that could be considered "normal" in all countries e.g. in terms of their age group were taken into consideration, and it was assumed that their family situation was the same throughout (e.g. unmarried, both parents married, alive and living together). On the whole, living away from the parents is the most common form of student living. It is hardly sur-

prising that a student's income is higher for those living away from home than for those living with their parents, though the scope of this difference varies by country.

What is striking is that the income within each country's housing situation groups hardly varies by SES, whilst the composition of the income from different sources is subject to much variation, depending on the different policy approaches. Family contributions clearly play the most important role in the Czech Republic, Germany and Spain: i.e. in countries where students are generally seen to be dependent on their parents. In all countries, family contributions are highest for students with a high SES. In England, the Netherlands and Norway, where students are deemed to be independent individuals, dependence on public loans is much higher. Both grants and loans tend to counteract the differences by SES, and students' earnings finally make up for remaining differences. Whereas one might have expected that students' expenditure would vary by SES at least concerning maintenance costs, this has not shown in the countries studied here.

Also on microeconomic level, the support granted to students' parents was taken into consideration, and in terms of its share in the overall public support, this plays indeed a very important role in Germany and the Czech Republic. The different types of support do not always follow the same pattern in all countries concerning differences by SES, which is because the countries use distinct approaches in dealing with such differences between SES: Some use items of flat-rate support regardless of SES, some use targeted support models (both kinds are found: those counteracting differences by SES, and those increasing such differences), and in some countries, mixed models are also in use. Since mixed models may nullify the SES-related effects of one kind of support with another, the use of such mixed models should at least be reviewed. In all cases, the scope of the differences by SES should be observed by policy-makers to judge whether they are deemed acceptable with regard to counteracting social inequity.

On a whole, it could be seen that the differences both between countries and between SES groups within countries are considerable. In those countries where public support to students (and their parents) does little to compensate for differences by SES, one might ask if there shouldn't be more ways of widening access and supporting talented but underprivileged students. However, as the country-specific cost-sharing models are based upon different underlying concepts of a student's in/dependence of his/her parents and since these may be linked to legal concepts of alimony rights etc., it may not be easy to harmonize this situation across Europe. All the same, the different approaches should be optimised with regard to social equity and effectiveness.

1 Introduction

This project was carried out as a "General activity of observation, analysis and innovation" within Action 6.1.2 and 6.2 of the Socrates Programme, answering the call for proposals EAC/65/05. More specifically, it refers to this call for proposals' priority theme "What should be the role and profile of Higher Education in relation to the European Social Model?". It therefore puts an emphasis on the social aspect of sharing the costs of higher education.

Social models for the delivery of reproductive functions in society are all based on a rationale of cost-sharing between private and public interests. This rationale exerts fundamental influence in all knowledge-based economies and especially in the field of higher education, where high private returns and public benefits are expected from human capital investment.

The universal acceptance of the cost-sharing rationale has, however, not prevented national policy-solutions to public-private cost-sharing for higher education funding from developing into directions that are quite diametrically opposed. The incompatibility of various national systems became particularly evident when issues of portability of student support systems were discussed for the European Higher Education Area (EHEA) during the BFUG-Seminar, Noordwijk, 2005). This incompatibility seems to be one of the main obstacles for shaping the EHEA.

The reason for this diversity is that every society tries to "square the circle" between the antagonistic aims of excellence and equity (Bradley / Whitehead, 2003). Until now, the political and scientific debate has delivered no clear evidence on the grade of effectiveness of the different social models of cost-sharing in the EHEA. The uncertainty has become more evident as a severe deficit since the "social dimension" has been accepted as a policy-field within the Bologna process and criteria for social minimum standards or for cross-border portability are being discussed (Bergen Communiqué, May 2005).

This project has thus aimed to supply some facts for this discussion by quantifying the actual and full monetary value of the public and private flows of funding needed to cover all higher education costs including students' costs of living and the teaching-related operation of higher education institutions. Furthermore, concerning such average costs, a distinction was made between students of different social origin representing target groups of social policy actions.

The present report on the project first gives an overview of the research approach followed for the project, explaining the different levels of analysis in more detail. In chapters 3-8, the results for each of the six countries are presented and discussed separately (in alphabetical order). A comparison between all countries and the ensuing conclusions are then covered in chapters 9 and 10 of this report.

2 Research approach and methods employed

2.1 Project aim

The overall aim of this project was to provide reliable data and information on the distribution of costs of higher education between the public and the private side, including even "hidden" costs/ subsidies e.g. in the form of tax exemptions, and allowing for differentiation by socio-economic status group. This translates into a twofold task:

Firstly, a macro perspective is taken: The project is to explore the financial settings of sharing the costs of higher education between the public and the private side, i.e. by the state on the one hand, and students and their families on the other hand. In this, all items of public support that are granted to students and/or their parents are to be taken into consideration.

Secondly, the analysis is done from a micro perspective: the shares of private and public costs are attributed to groups of students with different socio-economic background. This will give us a much better insight into the scope of public assistance and allow reflecting upon social disparity and social exclusion.

The information gained within the study can be used for further discussions on the objectives of / concepts for a European social policy in higher education and on the impact of different social models on widening access and supporting talented students.

2.2 Differences compared to other research publications on the subject of higher education funding

Existing knowledge in the field of cost-sharing was scattered and sparse, and it lacked the central information which could *connect* the knowledge gained in different fields such as the composition of students' income, financial support to students *and* indirect support. In particular, most existing studies would not match such data with information on socio-economic status. The odd national studies that might provide at least parts of such information are all based on different definitions and concepts and are therefore difficult to compare.

In its publication "Education at a glance", the OECD reports shares of public and private funding for tertiary education on macroeconomic level. The figures for public expenditure include expenditure for institutions as well as subsidies to private entities (households and other); the figures for private expenditure are limited to expenditure for fees and other payments made to institutions (OECD 2007, pp. 227 ff.). A breakdown to microeconomic level with a differentiation by socio-economic background is not supplied here.

EURYDICE has done excellent work on "Financial support for students in higher education in Europe" (European Commission, 1999) by analysing the different components of financial support systems. However, the crucial question of how these elements work together in the different national systems and what they mean in monetary terms as well as in terms of access still remained unanswered.

Although the social surveys among students in Europe (EUROSTUDENT-network) provide information on students' real budget by sources of income, they only trace the direct parts of pub-

lic support for students of different social status. They do not indicate the hidden indirect public contributions like family allowances and tax benefits given to the students' parents, although they can be quite substantial in many national systems. Without this knowledge, every comparison between countries is distorted.

The International Comparative Higher Education Finance and Accessibility (ICHEFA) Project directed by Prof. D. Bruce Johnstone at the University at Buffalo offers a "Database Student-Parent Cost by Country". With regard to Europe, however, the data do not cover all regions (information on Southern European countries is missing). Analyses only differ by type of institutions, but not by socio-economic groups of students.

Therefore, this project starts out from the approach developed by Johnstone – differentiating the expenses paid by the public and the private side, taking all items of public support into account – , but enhances this by applying it to certain student prototypes of different socio-economic status and living situation, thus enabling an assessment of social stratification.

2.3 Reasoning for choice of countries involved

This study has been carried out in six European countries. The countries were specially selected for the project to represent the different types of general social policy in higher education-funding within the EHEA.

As earlier research e.g. in the EUROSTUDENT project has shown, social systems for student support vary from country to country: Some focus more on contributions via institutions (e.g. subsidies for meals and accommodation), some on support to individuals. Concerning the latter, some systems take students to be family-dependent, others consider them to be independent. Regarding these different approaches, one can establish different scenarios for certain groups of countries: Nordic countries use a different approach from countries in Southern, Eastern or Western Europe. The U.K. seems to play a role of its own in this context.

Therefore, countries representing these different groups have been chosen for participation in the project: England was selected to represent the U.K., Norway was selected for the Nordic countries, Spain for the Southern European countries, the Czech Republic for Central Eastern Europe, and Germany and the Netherlands for Western Europe – in this case, based on the differences concerning tuition fees and the student support systems, it seemed sensible to choose two countries rather than just one.

In the following chapters, the countries are ranked in alphabetical order.

2.4 Research design

In line with the aim pursued within this project, two distinct levels of analysis are included in this report. On a "macro level", the focus is on the comparison of cost-sharing approaches between countries: This way, the teaching-related expenditure on higher education from the public and private side (private households) is established, and the public and private shares in this can be compared with each other.

On a "micro level", we concentrate on comparing cost-sharing scenarios according to a student's social background (student prototypes). For each prototype, the student's income and ex-

penditure is established, and the share of public support in this is calculated. In this regard, cost-sharing ratios may differ even within each of the countries.

A prerequisite for both tabulations is a detailed analysis of all private und public resources devoted to students' costs of living as well as institutional operations being at work in the special national setting. This includes a detailed analysis of all regulations and public subsidies available to students and their parents (conditions for the award of loans and grants, scale of award, amount of tax exemption, eligibility for benefits etc.). The various forms of support (including those in kind) have to be expressed in monetary terms. Where the real value of the public support (like grants, loans, family support, and benefits in kind) is established per socio-economic background, the relevant national regulations for the award of these support forms for a given household case (e.g. national taxation-tables, social legislation) have to be taken into account.

In a synoptic comparative analysis of these indicators, differences in the cost distribution will be interpreted in the context of the respective legal framework conditions and their impacts on social mobilisation with the aim to stimulate disadvantaged socio-economic groups to participate in higher education. The considerations and conclusions of this study can be used as input for and as a filter for the ongoing discussion on cost-sharing and national as well as European social model(s) to enhance access to higher education.

2.4.1 Definitions

To ensure that the *same* types of public support are taken into consideration in all countries and referred to in the country-specific analyses and the overall comparison in the same way, the following definitions were applied within this study:

Direct support vs. indirect support

- Direct support is geared towards the students themselves. This may be in the form of cash as well as non-cash support.
- Indirect support, by contrast, is targeted at the students' parents. This can also take the form of cash or non-cash support.

Cash vs. non-cash support

- Cash support would be types of support that increase disposable income – be it in the form of benefits actually paid out (child benefits, grants) or as tax exemptions or loan subsidies.
- Non-cash support, by contrast, would decrease expenditure: This could e.g. be free or subsidised public transport, dormitories, meal vouchers or health insurance.

2.4.2 Macro level analysis

So as to establish the shares of public and private funding in the total teaching-related funding of higher education, all items of public funding first have to be established – and those of private funding respectively. This is done in matrix form as shown in Table 1. Regarding the left side of the matrix reporting public expenditure, all teaching-related expenditure is included here, whether it is geared at institutions or households. As far as the private expenditure reported in the right side of the matrix is concerned, the aim is not to establish the costs of student life, but to establish the

sum that the students (and their families) actually pay themselves now or (concerning loan repayment) at some time in the future, leaving aside any items of public support.

2.4.2.1 Macro matrix

Table 1 Total teaching-related expenditure on higher education for full-time students

Public funding	Private funding
Teaching allocations to higher education institutions (including teaching-related research) **Support to households:** **Direct support (cash)** ■ Grants ■ Student-specific tax exemptions[3] ■ Subsidies on loans **Direct support (non-cash)** ■ Subsidies for health insurance ■ Subsidies for facilities ■ Subsidies for transportation **Indirect support (cash)** ■ Child-related payments (child allowances and other benefits) ■ Tax exemptions **Indirect support (non-cash)** ■ Anything else but benefit payments and tax exemptions	**Student income*** (= grants, loans, parents' contributions, paid work, contributions in kind, any other income) ***minus* direct support (cash):** ■ Grants ■ Student-specific tax exemptions ■ Subsidies on loans ***minus* indirect support (cash)** ■ Child-related payments (child allowances and other benefits) ■ Tax exemptions ***minus* indirect support (non-cash)** * Income used as proxy for expenditure
Total **Proportion (of the sum public + private)**	**Total** **Proportion (of the sum public + private)**

In the matrix field for public funding, the teaching allocations made to higher education institutions are included. Besides, in accordance with the definitions made earlier, the support items are listed in the categories of direct support (cash and non-cash) and indirect support (cash and non-cash).

Concerning the right-hand side of the matrix, the expenditure from the private side, i.e. the students (and their parents), would have to be shown here. However, as data on student expenditure are neither complete nor highly reliable, their *income* is referred to here as a *proxy for expenditure*. In more detail, there are the following reasons for doing so:

3 It is true that there are tax exemptions that students can profit from in a number of countries, just as their working peers could. However, only those tax exemptions are taken into account here that apply to students only.

- Previous studies (e.g. social surveys in Germany and the Netherlands) have shown that the data on student expenditure is not as reliable as the data on their income. Apparently, students have a fairly clear idea of the amounts they get from different sources each month, but do not usually keep good track of what they spend. The fact that income sources do not change as much per month as expenditure for different categories would, also plays a role here.
- Although data on students' expenditure were asked for in the national surveys used for the EUROSTUDENT project, in some of these national surveys, only a limited set of expenditure categories were proposed to the students in the questionnaire (omitting a category for "other" expenditure). This means that the students could not even have given complete information on their spending situation, simply because this was not asked for in full detail. Therefore, using expenditure data from this source would mean that they would be too low for some of the countries.

A student's expenditure does not come solely out of his/her own pockets: Part of the expenditure is actually made possible by public subsidies such as grants. If they were included here, they would be counted twice, thus distorting the picture. Now because we are looking at student income as a proxy for their expenditure, those subsidies that are included in the students' reported income have to be subtracted from this income: i.e. direct cash support (grants, student-specific tax exemptions and loan subsidies), and the indirect support that is included in the students' income via their parents (assuming that child benefits, tax exemptions etc. would be reflected in the family contributions in cash and in kind).[4] What is then left can be considered to be the actual students' own share in expenditure.

The tabulation shows how much is actually spent on higher education teaching. Opportunity costs of higher education are not taken into consideration here – neither at individual nor at societal level.

2.4.2.2 Data specifications

To ensure that the data used in each of the countries are internationally comparable, a number of specifications had to be made:

- ISCED level: Data should refer to ISCED 5 A and 6 (higher education), but exclude ISCED 5 B.
- Treatment of private higher education institutions: Private higher education institutions are to be included only if they get any public funding.
- Reference to full-time students: In some countries, it is quite normal to pursue part-time studies, but in other countries, this is uncommon (and in Germany and Spain, not even officially offered). Therefore, to improve comparability of the data, these are adjusted for full-time students.[5]

4 Loans themselves are not subtracted, even though they do form a publicly supplied form of income. However, they are paid back by the students at some point of time after graduation (at least partly), and therefore, loans have to be included.

5 This also concerns the calculation of the public subsidies: Those that apply only to full-time students are ssessed with their full amount, whilst those that apply to both full-time and part-time students are adjusted by the coefficient derived from the OECD figures on student numbers (number of full-time equivalents vs. number of full-time students): They are divided the by the number of full-time equivalents and then multiplied by the number of full-time students.

- Inclusion of foreign students: Expenditure on higher education includes expenditure made for foreign students – and, indeed, expenditure made *by* them (especially where they have to pay cost-covering tuition fees). Foreign students are therefore included.
- Where average values are required, the arithmetic mean (not the median) will be used.
- In essence, all support items for which the child's student status plays a role are considered.
- However, pension scheme payments / exemptions from such payments are not taken into consideration, even if there are special regulations for students.
- Administration costs for the respective support items are not taken into consideration.
- Interest subsidies on loans: To calculate this, the established loan per year is used for each year during all study years. The government borrowing rate is applied to this as the interest rate for the study period, the grace period and the repayment period. This means that the interest subsidy reflects how much government is "losing" by offering the loan.
- Owing to the very different conditions and regulations in each country, the calculation of the loan default follows separate, country-specific ways.
- The reference year for the international comparison is 2004. Data that are not taken from that year were adjusted for inflation/deflation. In the national reports, the reference year may be a different one; it should be the year the data (or most data) on public expenditure are from. This may mean that the data from a different year had to be referred to the number of students from 2004.[6]
- Data sources: As far as possible, data on teaching allocations have been taken from the OECD.[7] All other data may be taken from OECD or national sources – depending on which is considered to be more appropriate for each country concerning all other data used for the macro level. Data on the various forms of public support most often had to be taken from national data, though in some cases, OECD data were available and appropriate to use here. Concerning the private expenditure side, the income data used as a proxy for expenditure are taken from the national surveys from the EUROSTUDENT project. All items to be subtracted here were as far as possible taken from these surveys also to ensure that the private expenditure is measured as exactly as possible. This means that the values on the left and right hand side of the matrix do not correspond exactly in these terms.[8] Where indirect subsidies were subtracted (e.g. child benefits), the sums in question were taken from the left side and adjusted for the reference year / a different student number if necessary.

2.4.3 Micro level analysis

On the microeconomic level, the focus is on comparing cost-sharing scenarios according to a student's socio-economic background. First, certain student prototypes were established; then for

6 A private expenditure item would be divided by the number of students of the respective year (2005 or 2006), then adjusted for inflation. The annual inflation rate reported by Eurostat is used for deflation. In case of deflation being required for several years, the geometric mean of the respective years is used. Finally, the results derived from this are multiplied with the number of students from 2004.

7 There are two exceptions from this: a) England, as OECD data are on UK, and b) Norway, since the latest OECD data are from 2003 and only based on a special sample survey, so instead, the numbers from the National Budget 2005 were used for Norway.

8 For calculating loan subsidies on the right hand side of the matrix, the respective method established for the left hand side was applied (e.g. if 8% of loan subsidies on the left hand side were calculated, this percentage was then used to calculate the subsidy on the basis of the students' self-reported loans on the right hand side).

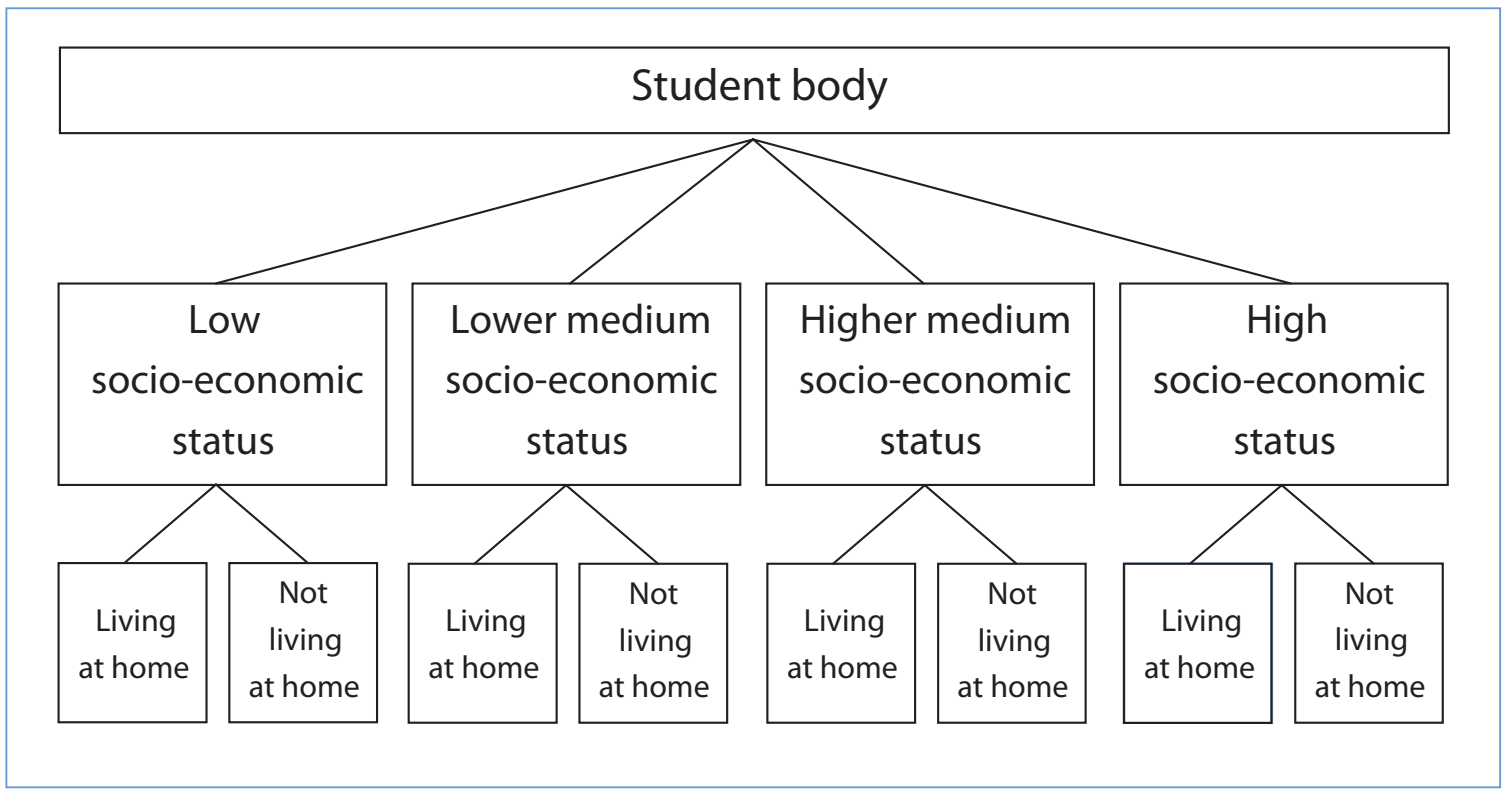
each of these, the respective income and expenditure was calculated and the share of public support was compared to these amounts. The cost-sharing ratios thus derived may differ even within each of the countries.

The main data sources used for this were the respective national social surveys amongst students that comprise information on their income and expenditure; these national surveys are gathered within the framework of the EUROSTUDENT project. Besides, to establish the socio-economic background of a student, data on the income distribution in each country were required, which are taken from Eurostat's EU-SILC (Statistics on Income and Living Conditions; UDB 2005 – version 2 of June 2007; cross-sectional data).

2.4.3.1 Student prototypes

The prototypes are to reflect four different socio-economic background groups: low, lower medium, higher medium or high socio-economic background. Students in the "low socio-economic background" group would have parents whose income falls within the lowest quarter of the respective national income distribution, whilst students from a "high social background" have parents whose income ranges in the top quarter of that income distribution. Students not living with their parents usually receive a higher amount of support than those still living with their parents. To ensure that the students' living situation (with parents or away from home) does not distort the picture, sub-cases for each social background are defined by student living situation. All in all, eight prototypes are thus derived.

Figure 1 Division of students by socio-economic background and living situation



To establish the four socio-economic background groups, reference was made to the respective national income distribution as reported in Eurostat's EU-SILC (Statistics on Income and Living Conditions) from 2005. Only those households with children were referred to in these data, because this comes close to the situation where a student child still is considered to be part of the household. For these households with children, the entire income (not only earnings from employment)

was taken into consideration. Negative income cases were excluded. On this basis, the quartiles within the national income distribution were established for each country.

These data were then to be linked to the data from the national social surveys collected within the EUROSTUDENT project: Where information on the parental income was available from the respective survey, the quartiles established in the EU-SILC data could be used as cut-off points for emulating the EU-SILC income distribution with the survey data to arrive at four socio-economic background groups there, too. Where information on parental income was not asked for in the survey, a different link had to be found. A reasonable proxy was the parents' education and occupation. The assumption then was that the four groups thus derived are in line with the four income groups established via EU-SILC. Depending on which kind of link was used, either the gross or the net income distribution within the EU-SILC data were referred to.

An F-test was carried out for each country's results to establish whether the differences observed between students with distinct living situations and from different socio-economic backgrounds are significant.

2.4.3.2 Micro matrices

For each of the student prototypes established, the income and expenditure reported in the survey data is presented in the form of a simple table. When looking at these data, the basic problems with the data on students' expenditure (reliability and completeness) should be kept in mind. To ensure better comparability between countries, the income categories have been reduced to grants, public loans, earnings, family contributions (in cash and in kind) and "other" (as the residual category for *all* other income items) in this study. On the expenditure side, only two categories are used: cost of study and maintenance. Cost of study refers only to the average monthly spending on tuition and any other fees to higher education institutions and on instruction material, but not to extraordinarily high study-related expenditure e.g. for a computer or a costly musical instrument. Maintenance includes accommodation, food, clothing, personal care, communication, leisure, travel and transportation and any other expenditure that was reported.

Table 2 Micro level – "cash flow approach" matrix

Income	Expenditure
■ Grants ■ Public loans ■ Earnings ■ Family contributions in cash ■ Family contributions in kind ■ Other	■ Cost of study: (Tuition fees, Social / administrational fees, Instruction material - but no PC) ■ Maintenance: (Accommodation, Nutrition, Clothing, Personal care, Communication, Leisure, Travel/ transportation, Other)
Source: Eurostudent	Source: Eurostudent

This simple tabulation will already allow e.g. for comparisons of the students' income composition by socio-economic status, and an international comparison of the respective shares of the cost of study in a students' overall expenditure could also be interesting.

To allow for a comparison of the students' income and expenditure with the respective public subsidies applying to each student prototype, the matrix had to be expanded to include these public subsidies: This could be direct and indirect support, both cash and non-cash.

Where an indirect subsidy had to be calculated for each of the income groups, the SILC median income for the respective group were used as a basis. For the sake of international comparison, the definition of household cases was standardised and applied in all six countries for the calculation of the indirect subsidy. Therefore, where an indirect subsidy applied at all, it was always (i.e. for all social backgrounds and both living situations) calculated for an "artificial" prototype family of two parents (both alive, married, living together and both working) and one child, i.e. the student.[9] Depending on the complexity of the tax system, the social security system and the terms and conditions for receiving benefits and tax reductions, further assumptions may have had to be made to calculate such subsidies (e.g. in the case of Germany).

When the public subsidies were to be expressed as a share of the students' income, we first had to add to the students' income those items of public support which are not yet included in the income they have reported, but must be seen as "hidden income" – otherwise the relationship of numerator and denominator is distorted. Naturally, direct non-cash support items (i.e. health insurance subsidies, subsidies for facilities and subsidies for transportation) are not reported by the students as sources of their income.[10] Therefore we had to add these items to their income when comparing the income to public subsidies.[11] The same logic applies to comparisons of public subsidies with the students' expenditure.

9 EU-SILC data show that the most common family type for the six countries would be two adults and two children. However, we chose families with just one child as the basis for calculations here to ensure clarity as to which child the support refers to and to ensure that the child-related support really was linked to student status (and was not paid for the other non-student child).

10 There may, however, be exceptions: In the Netherlands, for instance, the public transport pass is, in fact, already included in the income reported by the students.

11 By contrast, direct support (e.g. in the form of grants) already is included, and it is assumed that the indirect support geared towards the parents is reflected in their contributions in cash and in kind.

Based on these deliberations, the full matrix for the micro level looks like this (data sources added in blue):

Table 3 Micro level – "full" matrix

Income	Expenditure
■ Grants ■ Public loans ■ Earnings ■ Family contributions in cash ■ Family contributions in kind ■ Other ■ Public subsidies (direct non-cash support): - Health care subsidies - Subsidies for facilities - Subsidies for transportation Sources: Eurostudent; public subsidy calculations based on national data	■ Cost of study: (Tuition fees, Social / administrational fees, Instruction material - but no PC) ■ Maintenance: (Accommodation, Nutrition, Clothing, Personal care, Communication, Leisure, Travel/ transportation, Other) ■ Public subsidies (direct non-cash support): - Health care subsidies - Subsidies for facilities - Subsidies for transportation Sources: Eurostudent; public subsidy calculations based on national data
Public subsidies (of the above): ■ Direct cash support - Grants (taken from student income) - Tax exemptions (national data) - Loan subsidies (default, exemption from repayment, interest subsidy[12]) ■ Direct non-cash support (national data) - Health care subsidies - Subsidies for facilities - Subsidies for transportation ■ Indirect cash support (calculated on the basis of EU-SILC median income per income group) ■ Indirect non-cash support Sources: Eurostudent, national data, calculations based on national data	

2.4.3.3 Micro level: Specifications

Just as for the macro level, a number of specifications had to be made on the micro level, too, to ensure comparability of the data. As the focus on this level is the "typical" student, a number of limitations were applied to exclude students whose income and spending patterns do not reflect what could be deemed normal.

12 Interest subsidy calculation established in macro analysis, applied to public loans as stated in Eurostudent.

- This means that the following filter criteria were applied to the respective survey data:
  - Only students of the typical respective national freshman age (according to OECD) plus/minus three years are included.
  - Given the often unusually high tuition fees at private institutions, only students at public higher education institutions are referred to (Studying at a public higher education institution is the normal case in all of the countries).
  - So as to prevent a distortion of the spending pattern picture, students with severe disabilities are excluded form the analysis.
  - Only ISCED 5A students are taken into consideration.
  - Owing to the differences in income and spending patterns, only the respective national students are looked at in each country.
- Concerning the survey data, the arithmetic mean (not the median) is referred to.
- Concerning the calculation of the indirect subsidy, all items of support for which the child's student status plays a role should be considered on the basis of the household case defined (prototype family of two parents (both alive, married, living together and both working) and one child, i.e. the student).
- The data refer to a whole year.
- Where certain support items are only granted during term time, this is adjusted to a full year, following the guideline that "a student is a student for 12 months".
- The reference year for the international comparison is 2004. Data that were not taken from that year were adjusted for inflation/deflation, referring to Eurostat for the applicable inflation rate. Furthermore, to facilitate the cross-country comparison, the respective purchasing power parity (source: OECD) is applied. By contrast, within the national reports, the micro analysis was made with the latest available data (in national currency).
- Data sources: The information on students' income and expenditure was taken from national surveys (Eurostudent data) only. For the public subsidies, various sources had to be used. As far as possible, direct cash support should refer to Eurostudent data; where that was not possible, other national data had to be used. Regarding direct non-cash support, this could only be calculated based on the respective macro level computations for each country. Where an indirect subsidy had to be calculated, this was done on the basis of EU-SILC median income per income group.
- As far as data from EU-SILC are concerned, the following specifications were made:
  - Only households with children are considered.
  - The household income (not earnings) is looked at.
  - Negative income cases are excluded, but no further cuts are made at the extremes of the spectrum for each country.[13]
  - Within each country, the quartiles within EU-SILC data are used to establish four income groups.
  - For each "income case" family, two sub-cases are made differentiating between student living at home / not living at home.

13 In some countries, it would have seemed reasonable to cut off e.g. one percent of the values from each end of the spectrum. However, this was not the case for all countries, and the percentage that might have been employed for either extreme was not always the same. So as to avoid different treatment of the countries, no such cut-offs were made at all for the sake of international comparability.

2.5 Difficulties related to internationally comparative studies

As for nearly all studies that compare data from different countries / systems, a number of caveats and limitations apply.

- Different data sources: Despite the efforts made e.g. by Eurostat and the OECD, data on the subject of cost-sharing in higher education are not complete and cannot simply be taken from one single source. The only way was therefore to use different data sources – national and international ones – and strive for maximum comparability by applying certain criteria for the data.
- Different reference years/periods: Owing to the variety in data sources, they do not all refer to the same year, so they have to be adjusted for inflation. Besides, some countries and data sources refer to calendar years, others to academic years.
- Data availability has been a major problem in some of the countries. Where calculations for specific items of public support had to be made, not all the variables required for them were known and available. Where it was impossible to obtain such data from official sources despite much effort, some assumptions had to be taken for the further calculations. They are documented within the respective country studies.
- Even where data can be obtained, the different educational structures and policies may mean that their comparability is limited, as the data should be seen within the specific context. Differences in demographics and enrolment trends as well as the role of part-time students in each of the countries may further limit immediate comparability.
- As has been laid out in the explanations of the micro analysis, linking data from different sources (EU-SILC and national surveys taken for the EUROSTUDENT network) cannot always be done in the same way. However, great care was taken to ensure that the results were as well comparable as possible.

The participants of this project trust that in spite of these difficulties, the results from this study can still give a basic insight into the different cost-sharing approaches in the countries involved in terms of size, ratios (public/private), kind of support.

However, given the limitations stated above, the reader is strongly advised not to look at any specific figure and take this to be the absolute truth, but rather compare basic shares and trends. To avoid that single figures from this report are quoted out of context and thus misunderstood/misinterpreted, the international comparison deliberately does not give any information on absolute expenditure per capita.

3 Country Report of the Czech Republic

Author: Petr Matějů
Institute of Sociology, Academy of Sciences of the Czech Republic

with the assistance of:

Tomáš Konečný
Michal Franta
Centre for Economic Research and Graduate Education, Prague

Simona Weidnerová
Institute for Social and Economic Analyses, Prague

Jiří Večerník
Petr Soukup
Institute of Sociology, Academy of Sciences of the Czech Republic, Prague

Contents

3.1 Introduction

The aim of our study is to describe and analyze the distribution of costs devoted to higher education across the public and private dimension. The following section addresses the size, general structure and funding principles of Czech higher education system, as well as particular components of higher education funding provided from public sources. These are targeted either directly to students, to the families with students or may take a different form. We then present and discuss the output obtained from both macro and micro-level data. The final section summarizes our results.

3.2 A brief overview of the Czech tertiary education system

3.2.1 General information

In principle, tertiary education is available to all applicants with complete secondary education (i.e. with the secondary school-leaving exam) who successfully passed the entrance exam. Each institution defines its own admission criteria and determines the content of the entrance examination.
Tertiary education institutions are either university-type (in 2005, there were 28 institutions, 24 of which were public, 2 were state-run) or non-university type (36 private institutions). Study programmes are prepared by individual institutions/faculties and approved by the Accreditation Commission of the Ministry of Education.
Most universities offer bachelor's, master's, or engineering degree (relating to technical or economic fields) programmes. After students pass these types of university study, some continue in their specialization into doctoral programmes.

Table 4 ISCED level, length of studies and typical age in Czech higher education institutions

Institution	ISCED level	Length	Typical age
Tertiary professional school	5B	2-3.5	19-21/22
Higher education institution	5A	3/4/5/6	19-22/26
Doctoral programmes	6	3 and more	-

Apart from the university and non-university type tertiary education institutions, the remaining component of Czech higher-education system consists of tertiary professional schools, which provide students with advanced technical knowledge. Their curriculum is prepared by the school and accredited by the Ministry of Education. The graduate is called a "specialist with a diploma" (DiS). The current size of the Czech education system is shown in Table 5.

Table 5 Overall size of the Czech tertiary education system in 2004/05

	Number of institutions	Number of students	% of total number of students
Universities/colleges			
Public	25	274 962	83.84
State	2	4 114	1.26
Private	40	19 120	5.83
Total HEIs	*67*	*298 196*	*90.93*
Tertiary professional schools			
Regional	114	19 593	5.97
State	1	85	0.02
Private	47	8 340	2.55
Religious	12	1 741	0.53
Total TPS	*174*	*29 759*	*9.07*
TOTAL	***241***	***327 955***	***100.0***

Source: Institute for Information on Education

3.2.2 Financing tertiary education[14]

The share of the public budget spent on education is proposed by the government and approved by the Parliament. The amount is decided by political priorities and is not directly related to the output of tertiary education institutions. The Act states that a public tertiary education institution is entitled to a state subsidy and limits what this subsidy may be used for.

Mechanisms for allocating state subsidies for tertiary education institutions are set by the Higher Education Act. The total state subsidy for a particular institution is based primarily on its teaching and research performance. The main portion of the grant for teaching activity is based on a performance formula. The amount of money allocated is derived from the volume of teaching activity. The total sum for each public tertiary education institution is calculated as a sum of the products of the number of students and the financial assessment of each accredited programme. Recently, the number of graduates has also been included in the formula. The financial assessment of a study programme is the product of the normative base and a coefficient reflecting the relative cost of the programme.

Part of the funding of public tertiary education institutions is based on a contractual principle. In this case, the funding depends on the congruence between the Long-term Plans of individual institutions and the Long-term Plan of the Ministry. Any particular project's eligibility is examined by expert teams consisting of members of the Czech Rectors' Conference and the Council of Tertiary Education Institutions and representatives of the Ministry.

14 This part of the report is based on the chapter on "Financing Tertiary Education" in the Background Study for the OECD Tertiary Education Review prepared by Center for Higher Education Studies, Prague.

Financial support for R&D from the state budget takes two forms: institutional and targeted. Institutional support is provided to tertiary education institutions by the Ministry according to the recommendations of the Research and Development Council and has two parts:

- Support for specific research, i.e. research linked with the provision of Master's and doctoral programmes. The total amount is allocated to tertiary education institutions according to a formula that includes several quality indicators
- Support based on research plans, which should be comprehensive, relatively detailed documents, planning the research of the tertiary education institution for a period of 5–7 years, including staff and budget requirements.

There are three other sources of revenues: revenues from services for students and study-related fees, revenues from property, and revenues from research and development activities and services.

Study-related fees include fees for courses taught in a foreign language (the cost of which is not limited by the Act), "penalty tuition fee" for the extension of the standard length of study, and for studies in a second degree programme at the same level.

3.3 The student welfare system

3.3.1 Basic principles

A difference must be recognized between the legal status of a student in the Czech higher education system as such, and the legal position of a student for the purposes of the social security (or support) system. Before the amendment to the Higher Education Act of 2005, which introduced a social stipend for university students (effective from 2006), the legal status of a student [Act on Higher Education Institutions (No. 111 of 1997)] did not imply any social guarantees or access to special student welfare.

The State assumes the responsibility for financing the studies of all students at all public higher education institutions. However, a person may claim the right to tuition-free higher education only within the quota set every year. The quota determines the maximum number of students than can be enrolled each year under existing financial limits (i.e. the state subsidy to public universities). Within this framework, the State participates in covering the costs of several social services provided by higher education institutions to their students (i.e. accommodation and meals).

The inclusion in the social security/support system is a result, though not self-evident, of the status of a student. Obtaining social benefits is more connected with the financial situation of a person who is dependent on his/her parents (family) than with specific student status. Consequently, there is an age limit – stipulated by law – that allows for the entitlement to certain social benefits, such as social grants, state-paid health insurance, tax relief, etc. Within this context, the student (though adult) is perceived as a child [explicitly: "dependent child" in the terms of the Act on State Social Support (No. 117 of 1995)].

For the purposes of our analysis, we have to make a distinction between social security and social support:

- Social security is an insurance system designed to cover the needs of a person in a future situation and circumstances. Apart from health insurance, it also guarantees social benefits pro futuro to students. The social security system considers people to be employees. Therefore, the position of students in such a social security system is in general governed by the rule that study at a higher education institution is an equivalent to the employment for that period of time.
- Social support, on the other hand, is a budgetary system through which the state contributes to families in order to cover some part of their living expenses, including the study-related expenses of their children. The underlying principle here is the expected solidarity of family members ("jointly tested persons" in terms of the Act on State Social Support) in the shared responsibility for any expenditures the family may have.

In the sphere of social security and social support, the student-targeted policy is predominantly aimed at shortening the length of study through either limiting the age for the participation in the system (26 years) or stipulating the maximum period of study (6 years).

3.3.2 Types of welfare support

The Czech Republic represents a typical example of a system where the state's responsibility for financing higher education through institutional funding is supplemented by the responsibility of the families for the living expenses of a student. In this context, the family responsibility is subject to partial compensation by indirect student support within the social support system (on the basis of a means-test) and also by subsidized accommodation and meal services provided to (some) students by the institutions.

The elements of the student welfare system in the Czech Republic can be briefly described as follows.

3.3.2.1 Student benefits

1. Scholarship

A *scholarship* is a grant that a student may receive from the higher education institution or its autonomous parts. There are specific conditions to which a student must comply in order to qualify for a scholarship. The related procedures are further stipulated by the institutional by-laws. Scholarship is most commonly a non-specific grant. Social assistance scholarships would probably be rare cases, given that the student's family could lose entitlement for other social grants for all its members solely on the grounds of the receipt of the social assistance scholarship.

2. Exemption from or reduction of tuition fees

A student may be required to pay a tuition fee to the institution, namely if he/she studies longer than is allowed by law (penalty tuition), or if a graduate decides to enroll in another study programme that is not consecutive to the previous one (this amount of this fee is, however, insignificant – about 80 € per year). The rate of penalty tuition may vary from about 500 to 3,000 € per year, depending on the type of programme. There is no legal entitlement to the exemption from or reduction of tuition fees.

3. Individual tax benefits

Any scholarship paid to a student is exempt from taxation [*Act on Income Taxes (No. 586 of 1992)*, Sec. 4 (1/ k)]. A student younger than 26 years, or a Ph.D. candidate younger than 28 years, can increase the non-taxable earned income from 38,040 CZK per year (basic non-taxable income) by another 11,400 CZK (about 407 €). In other words, a student's non-taxable earned income is 49,440 CZK [*Act on Income Taxes (1992)*, Sec. 15 (1/ g)].

3.3.2.2 Benefits to families with students

1. Child Allowances

Child allowance is a long-term, periodically repeated subsidy designed to contribute to covering the living costs of a family connected with raising and nursing a child. However, *dependent children* over the age of 18 (which applies namely to students) are also qualified to receive this social grant. A family is eligible for the child allowance if its average income per head was lower than the legal living minimum for the family multiplied by factor 3 [*Act on State Social Support (1995)*, Sec. 17]. There are three categories of child allowances per month, which are determined by the number of family members and the total income of the family:

up to 1.1 of the subsistence minimum	810 CZK/month
1.1 – 1.8 of the subsistence minimum	709 CZK/month
1.8 – 3.0 of the subsistence minimum	355 CZK/month
above 3.0 of the subsistence minimum	0 CZK/month

2. Tax relief

The parents of a student, that is to say, one of them (chosen by their agreement), can claim a tax relief in the amount of 25,560 CZK (about 900 €) per year [*Act on Income Taxes (1992)*, Sec. 15 (1 / b)], if the student has not reached the age of 26. If the student is physically disabled and needs special care under social legislation, the tax relief amount is multiplied by two.

3.3.2.3 Other forms of student support

1. Subsidized accommodation and meals

Provision of accommodation and meals subsidized by the state is the only direct as well as specific form of student support in the Czech Republic. The subsidy is non-mandatory and there is no legal entitlement to receive it.

Until 2005, accommodation was provided to students by the public higher education institutions through their own publicly subsidized accommodation facilities. Since 2006, public subsidies for accommodation are distributed by universities to students in need as subsidies for accommodation.

2. Health insurance
Health insurance is publicly organized and compulsory for all people residing or employed in the Czech Republic. Therefore, students are also included in public health insurance. If they are younger than 26, the insurance premiums are paid for them by the state budget. The state contributes to the health insurance system 476 CZK per month/student [*Act on Public Health Insurance (No. 48 of 1997)*, Sec. 7(1)]

3. Public transport discounts
A student up to the age of 26 can claim a discount on public transportation (bus or rail), if he/she presents a special card issued in conformity with a directive of the Ministry of Transport and certified by the respective higher education institution. The fare discount can only be claimed for the purposes of travel from the place of residence to the place of the higher education institution. Note that while the overall public support in this category might prove relatively important, neither official statistics nor public budgets contain adequate information on this matter. We have therefore decided to exclude funding in form of public transport discounts from our further analysis.

4. Pension insurance
Students of higher education institutions are included in pension insurance during the period of six years of study after the age of 18 [Act on Pension Insurance (No. 155 of 1995), Sec. 5(1/m)]. No premiums are paid for them, not even from the state budget. Their future pensions are thus paid from the premiums of other, economically active participants based on the principle of solidarity.

5. Insurance in the case of illness
The time of study at a higher education institution is fully counted as time of employment for the purposes of insurance in the case of illness. This part of the social security system guarantees a substitute for income to a person who is temporarily unable to work due to an illness (up to 1 year) or pregnancy/maternity.

In 2006, means-tested student's social stipends were introduced. Since our analysis is based on 2004 and 2005 data, consequences of this change in student financial aid are not reflected in the results of the analysis.

3.4 Results from the analysis of public and private components in financing tertiary education in the Czech Republic

3.4.1 Results from a macro level analysis

The macroeconomic figures on public expenditure on higher education are based largely on the UNESCO-UIS / OECD / EUROSTAT Data Collection on Education Statistics 2004 (UOE). Furthermore, our calculations of tax reductions and child allowances rely also on the data from EU-SILC 2005[15] and EUROSTUDENT databases. Table A1 in the Technical appendix provides a more detailed ex-

15 SILC – Survey on Income and Living Conditions.

planation regarding the construction and content of individual components of the total (public and private) expenditure.

In the present context, public expenditures on higher education are understood as any direct and indirect support provided by the government to higher education students. By direct support we mean all instruments or provisions directly geared towards students, e.g. grants or subsidies on student loans. The items in indirect support do not flow towards students but rather to their parents. Nonetheless, their ultimate objective is again student benefit.

We further divide each category according to its impact on student income and hence distinguish cash and non-cash type of support. Cash support increases disposable income either through the actual provision of cash or as a tax exemption or loan subsidy. Non-cash support, by contrast, decreases recipients' expenditure and includes e.g. subsidized meals or free health insurance.

Table 6 reflects the macroeconomic perspective by comparing the total public expenditure on higher education to the corresponding total private expenditure. Note that the items appearing on both sides of the table sometimes differ. The reason is that since we want as clear a measure of private expenditure as possible, we decided to exploit self-reported data from the EUROSTUDENT database instead of figures obtained from country national statistics. The second remark concerns the student income variable. Given that parents as the intermediate recipients of indirect support can transfer the obtained funding either in cash or in form of food or clothing, the reported student income variable also includes parents' contributions in kind.

Table 6 Per capita public and private expenditure using the macroeconomic data (million CZK)

Public expenditure		**Private expenditure**	
Teaching allocations:	**19,234.4**	**Student income:**	**22,116.1**
Direct support (cash):	**1,290.5**	**- Direct support (cash):**	**- 400.6**
Grants	1,238.4	- Grants	- 348.5
Tax reductions of student's earned income	52.1	- Tax reductions of earned income	- 52.1
Subsidies on loans	0	- Subsidies on loans	0
Direct support (non-cash):	**2,066.9**	**- Indirect support (cash)**	**- 2,408.8**
Health insurance	1,260	- Tax reductions of parents	- 1,147.9
Subsidies on facilities	806.9	- Child allowances	- 1,260.9
Indirect support (cash):	**1,900.1**		
Tax reductions of parents	1,147.9		
Child allowances	752.2		
Indirect support (non-cash):	**0**		
Total (per year, in mil. CZK)	**24,491.9**	**Total (per year, in mil. CZK)**	**19,306.7**
% of the total	**56**	**% of the total**	**44**
		Total public and private	**43,798.6**

Number of full-time ISCED 5a and 6 students studying at public HEIs in 2004 totals 220,580.

The overall picture confirms the dominance of public expenditures over private expenditures in Czech higher education. Out of the total 19,234.4 million CZK (approx. 603.1 million EUR),[16] more than half originates in the public domain (56%), the residual 44% coming from private sources.

By far the largest part of public expenditures can be traced to teaching allocations (79% out of the total 24,491.9 million CZK).[17] With a large gap follow direct cash and non-cash support (5.3 % and 8.4% respectively), indirect cash support captures 7.8%. of the total sum. A category of special interest is Subsidies on loans. Its contribution to public expenditures is nil, simply because any similar scheme in the Czech Republic is missing.

3.4.2. Results from a micro level analysis

Following the analytical strategy adopted by the international research team, we proceeded in four steps:

1. We used the 2005 Czech national data file from the Survey on Income and Living Conditions (EU-SILC), reporting on the income situation of households in 2004 to define quartile groups and corresponding cut-off points based on net household income. This exercise was carried on a subsample of households with children. Relevant statistics for these groups were calculated: mean and median of net income, mean and median income per individual in a household, the proportion of households in each quartile group falling into the categories used to determine child (student) allowances based on the subsistence minimum (for a definition of these categories, see the section on Benefits to Families with Students in this report). Table 7 depicts the main results of this analysis. The identified cut-off points used in subsequent analyses were: 205,116; 283,000; and 379,867 CZK per year.

16 Using the average annual exchange rate 31.891 CZK/EUR taken from EUROSTAT.

17 For a detailed description of the content of individual items, see the section on Technical and Explanatory Notes.

Table 7 Definition and basic characteristics of quartile income groups– households with children (incomes in Czech crowns)

	Quartile group				Total
	1	2	3	4	
Sample size*	339	370	346	332	1 387
Population size**	350 511	351 175	351 534	351 552	1 404 772
Mean of net income	148 724	244 356	327 075	568 702	322 055
Median of net income	159 264	245 186	324 311	487 917	283 000
Mean income per individual in household	48 787	68 539	87 973	146 371.9	87 880
Median income per individual in household	45 176	66 679	86 000	125 628	77 281
Number of households falling into categories defined by subsistence minimum:					
< 1.1	119 746	1 928	0	0	121 674
1.1 - 1.8	189 775	144 327	18 947	0	353 050
1.8 - 3.0	42 014	200 845	304 408	95 265	642 532
>3.0	0	4 074	0	255 246	287 516
	350 511	351 175	351 534	351 551.7	1 404 772
Proportion of households falling into categories defined by subsistence minimum:					
< 1.1	34	1	0	0	9
1.1 - 1.8	54	41	5	0	25
1.8 - 3.0	12	57	87	27	46
>3.0	0	1	8	73	20
	100	100	100	100	100

Source: Czech Statistical Office – SILC 2005, Czech data file

2. The same data file was used to estimate child allowances to households with ISECD 5A students. The results are displayed in Table 8.

Table 8 Estimates of child allowances to households with students in 2004 (in Czech crowns)

Group defined by multiplier of the subsistence minimum	Number of households	Proportion of households	Allowance per month	Total transfer to households per month
up to 1.1	10 462	4.18	810	8 474 220
1.1 - 1.8	36 542	14.59	709	25 908 278
1.8 - 3.0	103 629	41.38	355	36 788 295
above 3.0	99 778	39.85	0	0
Total	250 411	100.00		71 170 793

Source: Czech Statistical Office – SILC 2005, Czech data file

3. The identified cut-off points applied on the net parents' income reported by the student and the information on student's housing status (living at home, living away from home) were applied to define eight types of students' households on the sub-sample of respondents of the Eurostu-

dent survey data. The analysis focused only to full-time students in bachelor and master degree programmes (ISCED 5A) enrolled in public universities, who were Czech nationals, 19 – 22 years old.[18] Due to a large number of cases with missing values of the reported parents' income, regression analysis was used to impute the missing values (see the explanatory note on imputation of income data in the Technical appendix). The distribution of cases within the types of students' households is presented in Table 9.

Table 9 Distribution of cases in Eurostudent data within types defined by household income and accommodation status

Type	Group defined by parents' income	Accommodation status	Number of cases	Proportion of cases
1	Low	Living at home	35	3.2
2		Living away from home	60	5.4
3	Lower medium	Living at home	66	5.9
4		Living away from home	128	11.5
5	Higher medium	Living at home	164	14.7
6		Living away from home	215	19.4
7	High	Living at home	166	14.9
8		Living away from home	236	21.2
Total			1112	100.0

Source: Eurostudent 2005, Czech data file

For the sake of comparability with countries in the project which cannot use income data to define the types of households, we also used socio-economic status of the background family. Mother's and father's education and occupation and total net household income entered principal component analysis which identified a single component representing socio-economic status of parents. For further analyses this variable was converted to quartile groups. The distribution of cases in types defined by socio-economic status is displayed in Table 10.

18 The decision to limit the age by 19 and 22 years was determined by two facts. First of all, the Czech Republic adopted Bologna principles quite late and rather hesitantly. Therefore, in 2004 there were still two types of "undergraduates", those in the so-called long master degree programs, and those in newly defined "short" bachelor degree programs. For the sake of comparability, our aim was to focus on students in typical (short) bachelor (undergraduate) degree programs. Typical age for this group is 19 – 22 years. In Eurostudent data file, 67% of full-time students in these programs were within this age range. Another reason for this decision was the sharply decreasing probability of admission after the typical age of entry to tertiary education (18-19 years). It also explains high concentration of students in bachelor degree programs in the age group 19 – 22 years of age.

Table 10 Distribution of cases in Eurostudent data among types defined by quartiles of parents' household socio-economic status and accommodation status

Type	Groups defined by parents' socio-economic status	Accommodation status	Number of cases	Proportion of cases
1	Low	Living at home	93	8.4
2		Living away from home	157	14.1
3	Lower medium	Living at home	119	10.7
4		Living away from home	154	13.8
5	Higher medium	Living at home	96	8.7
6		Living away from home	150	13.5
7	High	Living at home	97	8.7
8		Living away from home	154	13.9
Total			1112	100.0

Source: Eurostudent 2005, Czech data file

4. The defined types of students' households were then used to analyze differences in students' living conditions, namely in the structure of their disposable income, expenditure and social support.

3.4.2.1 A student's disposable income and the sources of its coverage

Tables A4 and A5 show the means of total disposable income and the sources of disposable income in eight types of student households in the most detailed structure the Czech Eurostudent survey permits.[19] The average student disposable income of 76,800 CZK per year represents 88% of the mean net income per individual in households with dependent children in 2004 (SILC). At first glance, the total disposable income varies among groups defined by household income or socio-economic status to a lesser degree than between the two groups defined by type of accommodation. The results of the analysis of variance displayed in Table 11 proved that though the effect of household income on a student's total disposable income is significant (F= 3,061, sig=0.027), its effect is much weaker than the effect of the type of housing is (F= 24.858, sig=0.000). The effect of socio-economic status (Table 12) is even weaker and not significant.

19 Income in this table does not include non-cash public subsidies (health care subsidy, subsidy for facilities and transport, and other indirect non-cash subsidies).

Table 11 Analysis of variance of total disposable income by household income of the background family and housing status

		Hierarchical Method				
		Sum of Squares ($x10^6$)	df	Mean Square ($x10^6$)	F	Sig.
Main Effects	(Combined)	413 898	4	103 474	8.511	0.000
	INCOME	111 664	3	37 221	3.061	0.027
	HOUSING	302 233	1	302 233	24.858	0.000
2-Way Interactions		29 638	3	9 879	0.813	0.487
Model		443 536	7	63 362	5.211	0.000
Residual		12 896 560	1 061	12 158		
Total		13 340 097	1 068	12 493		

Table 12 Analysis of variance of total disposable income by socio-economic status of the background family and housing status

		Hierarchical Method				
		Sum of Squares ($x10^6$)	df	Mean Square ($x10^6$)	F	Sig.
Main Effects	(Combined)	365 367	4	91 341	7.213	0.000
	SES	77 046	3	25 682	2.028	0.108
	HOUSING	288 321	1	288 321	22.769	0.000
2-Way Interactions		26 878	3	8 959	0.708	0.548
Model		392 246	7	56 035	4.425	0.000
Residual		12 833 909	1 014	12 662		
Total		13 226 156	1 021	12 960		

Surprisingly, there is little variation among income groups also in the financial contribution of parents. The analysis of variance showed much weaker effect of income (F= 3,312, sig=0,019) than student's housing status (F= 61,310, sig=0,000). Students living with their parents receive less than a half of the amount provided by parents to a student who lives away from home. The effect of parents' socio-economic status on financial contribution of parents is not significant at all (F=2,067, sig=0,103).

Another surprising result concerns student's earned income. We found that the higher the parents' household income, the stronger the student's tendency to contribute to his or her disposable income from the paid work (mostly part-time job). This tendency is stronger among students who live with their parents than among students living independently. While students from the lowest income group earn about 18% of their disposable income, students living in households falling into the highest income quartile earn 27% of their total income. Therefore, both household income and living at home have a significantly positive effect on student's earned income.

As expected, social support (grants, allowances, stipends) shows significant variation both between income groups and types of housing. While students living in households falling to the lowest income receive on average 31% of their disposable income from grants, allowances, and stipends, students from the economically most advantageous conditions get only 12% of their income from these sources.

If we define student's income according to the guidelines for the comparative analysis (i.e. estimated income in kind as well as direct non-cash public subsidies are added to the total student's income),[20] the differences between students living at home and those who live independently become smaller and insignificant, while socio-economic status and income of the background family show stronger and statistically significant effect (see Table 13 and Table 14).

Table 13 Student's income by income of the background family and housing status (in CZK, per year)

Income group	Student living at home		Student living away from home	
	Income	Relative income	Income	Relative income
Low income	67,287	100.00%	71,143	100.00%
Lower medium income	68,915	102.42%	90,120	126.67%
Higher medium income	79,071	117.51%	71,215	100.10%
High income	97,863	145.44%	99,224	139.47%

Unique effects: income group F=4.753, sig=0.003, housing status: F=0.412, sig=0.521

Table 14 Student's total income by socio-economic status of the background family and housing status (in CZK, per year)

Socio-economic status	Student living at home		Student living away from home	
	Income	Relative income	Income	Relative income
Low	70,629	100.00%	83,000	100.00%
Lower medium	76,713	108.61%	80,659	97.18%
Higher medium	81,118	114.85%	85,367	102.85%
High	111,257	157.52%	94,308	113.62%

Unique effects: socio-economic status F=3.476, sig=0.016, housing status: F=0.020, sig=0.887

Table 15 and Table 16 display the relationships between student's income (which again includes estimated income in kind for students living with parents as well as direct non-cash subsidies) and total public subsidies (direct, indirect, cash and non-cash) in groups of students defined by their socio-economic situation (family income, socio-economic status of parents) on the one hand, and housing status on the other. As expected, the share of public subsidies is larger among students living away from home and among students from lower socio-economic backgrounds, particularly if they live independently.

20 In the Czech case it means only health care subsidies and subsidies for facilities.

Table 15 The relationship between income and public subsidy by income of the background family and housing status

Income group	Student living at home			Student living away from home		
	Total income	Public subsidies	Public subsidies/ income	Total income	Public subsidies	Public subsidies/income
Low income	67,287	21,513	0.32	71,143	42,053	0.59
Lower medium	68,915	23,367	0.34	90,120	29,067	0.32
Higher medium	79,071	20,761	0.26	71,215	25,289	0.36
High income	97,863	21,516	0.22	99,224	26,563	0.27
Total	83,764	21,511	0.26	85,311	28,093	0.33

Table 16 The relationship between income and public subsidy by socio-economic status of the background family and housing status

Socio-economic status	Student living at home			Student living away from home		
	Total income	Public subsidies	Public subsidies/ income	Total income	Public subsidies	Public subsidies/income
Low	70,629	22,471	0.32	83,000	29,568	0.36
Lower medium	76,713	20,957	0.27	80,659	26,168	0.32
Higher medium	81,118	21,580	0.27	85,367	29,113	0.34
High	111,257	20,159	0.18	94,308	28,261	0.30
Total	84,650	21,261	0.25	85,827	28,279	0.33

3.4.2.2 Student's expenditure

Table 17 shows the structure and coverage of students' expenditures. The largest maintenance items are accommodation and food, both exceeding 16,000 CZK or slightly over 525 € per full-time student and year. In relative terms, each category constitutes about a quarter of the total private expenditures. Other quite large items in terms are clothing and transportation. While spending on clothing represents 12% (i.e. 7,610 CZK), transportation consumes 13% of private expenditures or 8,265 CZK in absolute terms. Health bill accounts for a relatively low 4% of the total budget, which corresponds to 220 CZK/month. Altogether, the part attributable to the maintenance expenses equals 56,022 CZK and covers more than 87% out of the total 64,044 CZK per year.

Table 17 Students' expenditures and their coverage (in CZK per year)

	Covered by		Total	% covered by		Total
	Student	Parents		Student	Parents	
Accommodation	8,483	8,315	16,798	50.50	49.50	100
Food	10,268	5,860	16,128	63.66	36.34	100
Clothing, toiletries	4,476	3,134	7,610	58.82	41.18	100
Transportation	4,474	3,791	8,265	54.13	45.87	100
Health	1,738	865	2,603	66.77	33.23	100
Other	3,151	1,467	4,618	68.24	31.76	100
Maintenance total	32,590	23,432	56,022	58.17	41.83	100
Fees	607	1,853	2,460	24.67	75.33	100
Books	2,962	2,599	5,561	53.27	46.73	100
Study related expenditure total	3,569	4,452	8,021	44.50	55.50	100
Total	36,159	27,884	64,044	56.46	43.54	100

Source: EUROSTUDENT 2005

Study-related expenditures totalling 8,021 CZK constitute only 13% of private expenditures. About two-thirds of this sum are used for the purchases of books, payment of fees takes the remaining one-third. As it turns out, the balance tilts slightly in favour of students and becomes more pronounced for food and health care. On the other hand, parents generally cover a larger part of tuition fees, which is very low (the only fee charged at public universities can only be a so-called 'penalty fee' charged for exceeding the standard length of study or for studies in a second degree programme at the same level).

Table 18 presents the expenditures on maintenance and study-related items of students living with parents as opposed to those who live away from home. As expected, students who live away from home have relatively higher level of expenditures (69,112 CZK compared to 55,251 CZK spent by students living with their parents) and cover a larger proportion mainly of maintenance expenditures (63% vs. 45%).

Table 18 Student expenditure coverage for students living at home and with parents and elsewhere (in CZK per year)

	Living at home			Living away from home			All		
	Covered by		total	Covered by		total	Covered by		total
	student	parents		student	parents		student	parents	
Maintenance	20,922	25,149	46,071	39,305	22,445	61,750	32,590	23,432	56,022
Study related	3,685	5,495	9,180	3,503	3,859	7,362	3,569	4,452	8,021
Total	24,608	30,644	55,251	42,808	26,304	69,112	36,159	27,884	64,044
	% covered by		total	% covered by		total	% covered by		total
	student	parents		student	parents		student	parents	
Maintenance	45.41	54.59	100.00	63.65	36.35	100.00	58.17	41.83	100.00
Study related	40.14	59.86	100.00	47.58	52.42	100.00	44.50	55.50	100.00
Total	44.54	55.46	100.00	61.94	38.06	100.00	56.46	43.54	0100.00

Source: EUROSTUDENT 2005

As shown in Table 19 and Table 20, expenditures which include direct non-cash subsidies show large variation between students who live with parents and those living independently, but much less (though still significant) differences between groups defined by socio-economic status and income of the background family.

Table 19 Student's expenditure by income of the background family and housing status

Income group	Student living at home		Student living away from home	
	Total expenditure	Relative exp.	Total expenditure	Relative exp.
Low income	56,698	100.00%	84,661	100.00%
Lower medium income	57,355	101.16%	76,104	89.89%
Higher medium income	51,588	90.99%	65,457	77.32%
High income	57,383	101.21%	70,557	83.34%

Unique effects: income group F=4.556 (sig=0.004). housing status: F=44.793. sig=0.000

Table 20 Student's expenditure by socio-economic status of the background family and housing status

Socio-economic status	Student living at home		Student living away from home	
	Total expenditure	Relative exp.	Total expenditure	Relative exp.
Low	55,924	100.00%	67,201	100.00%
Lower medium	52,561	93.99%	67,855	100.97%
Higher medium	49,213	88.00%	69,054	102.76%
High	63,054	112.75%	77,226	114.92%

Unique effects: income group F=3.644 (sig=0.012). housing status: F=44.7939. sig=0.000

An important question is what is the relationship between expenditures covered by the student or his/her parents, on the one hand, and public subsidies, on the other. If we define private expenditures as costs of study and the maintenance costs, while the public subsidy subsumes grants, stipends, child benefits, tax relief to parental income, tax relief to student's income, health insurance subsidy and subsidy for facilities per student, we come very close to the real share of private and public sources in financing the costs of study at public universities. The results are displayed in Table 21 and Table 22.

Table 21 The share of private sources and public support in financing the costs of study at public universities by household income (in CZK per year)

Income group	Student living at home			Student living away from home		
	Expenditure	Public subsidies	Public subsidies/ expend.	Expenditure	Public subsidies	Public subsidies/ expend.
Low income	56,698	21,513	0.38	84,661	42,053	0.50
Lower medium income	57,355	23,367	0.41	76,104	29,067	0.38
Higher medium income	51,588	20,761	0.40	65,457	25,289	0.39
High income	57,383	21,516	0.37	70,557	26,563	0.38
Total	55,137	21,511	0.39	71,266	28,093	0.39

Table 22 The share of private sources and public support in financing the costs of study at public universities by socio-economic status of parents (in CZK per year)

Socio-economic status	Student living at home			Student living away from home		
	Expenditure	Public subsidies	Public subsidies/ expend.	Expenditure	Public subsidies	Public subsidies/ expend.
Low SES	55,924	22,471	0.40	67,201	29,568	0.44
Lower medium SES	52,561	20,957	0.40	67,855	26,168	0.39
Higher medium SES	49,213	21,580	0.44	69,054	29,113	0.42
High SES	63,054	20,159	0.32	77,226	28,261	0.37
Total	55,028	21,261	0.39	70,297	28,279	0.40

Given the fact there are no student loans, the share of public subsidies in students' expenditure is quite low and also its sensitivity to parents' income and social status is very modest.

A closer look at the level and the structure of the public subsidy (Figure 2 and 0, Table 23) gives at least partial answer to the question why the sensitivity of the subsidy to parents' income is so low in the Czech Republic. First of all, Figure 2 reveals that the total public subsidy shows very little variation between groups defined by parents' income especially among students who live at home. In this group, decreasing level of direct subsidy (stipends, grants) towards higher income groups is compensated by increasing level of tax benefits, while child benefits are almost constant.

Students living away from home who come from a poorer family receive markedly higher social support (grants, stipend, child benefits) than students from wealthier families. In any case, the results displayed in Table 23 show that the proportion of social support (grants, stipends and child benefits) in the overall subsidy diminishes towards higher income groups, while the indirect support (tax relief) changes in the opposite direction.

Figure 2 The level and structure of public subsidy to students living at home

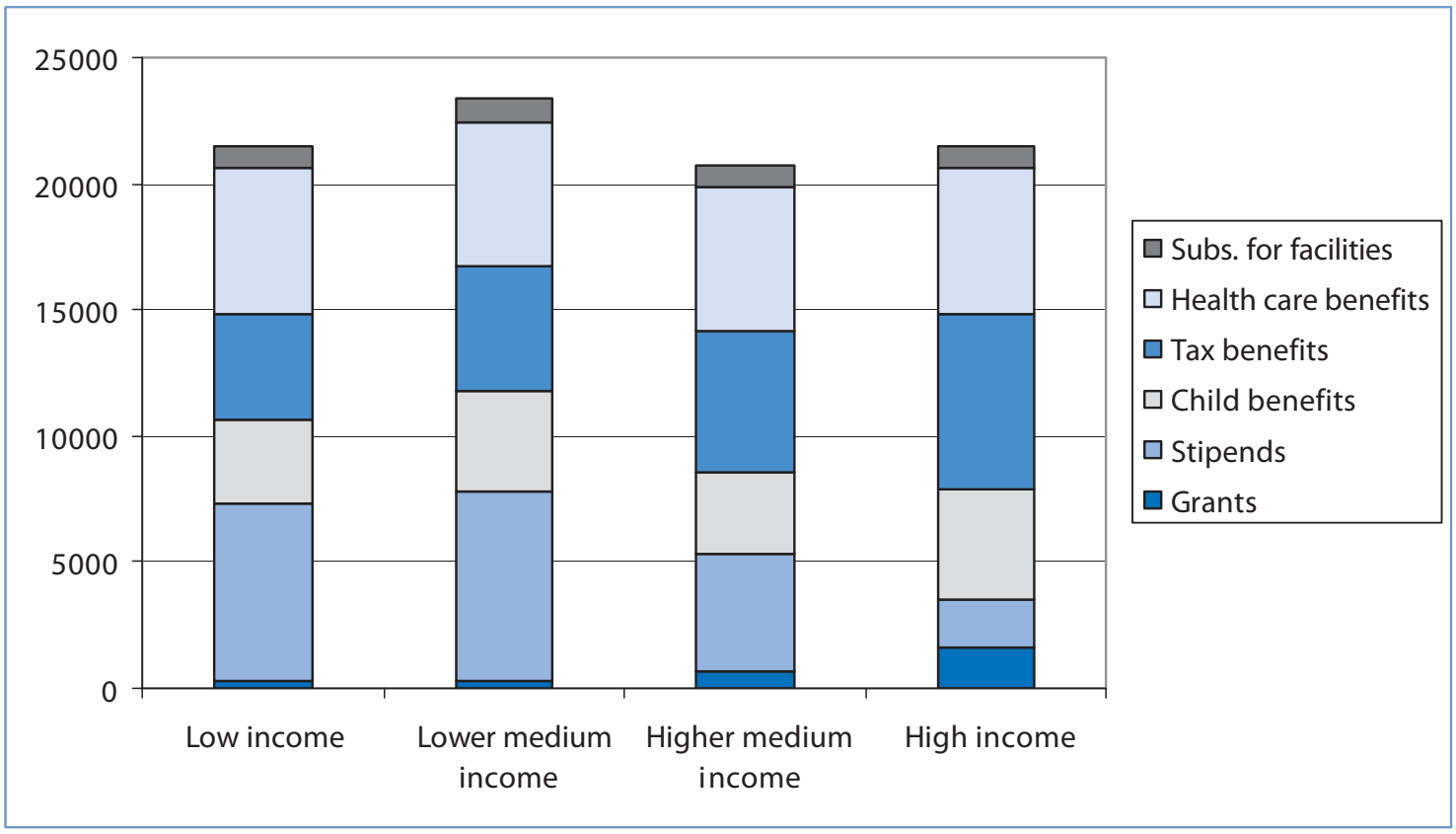


Figure 3 The level and structure of public subsidy to students living away from home

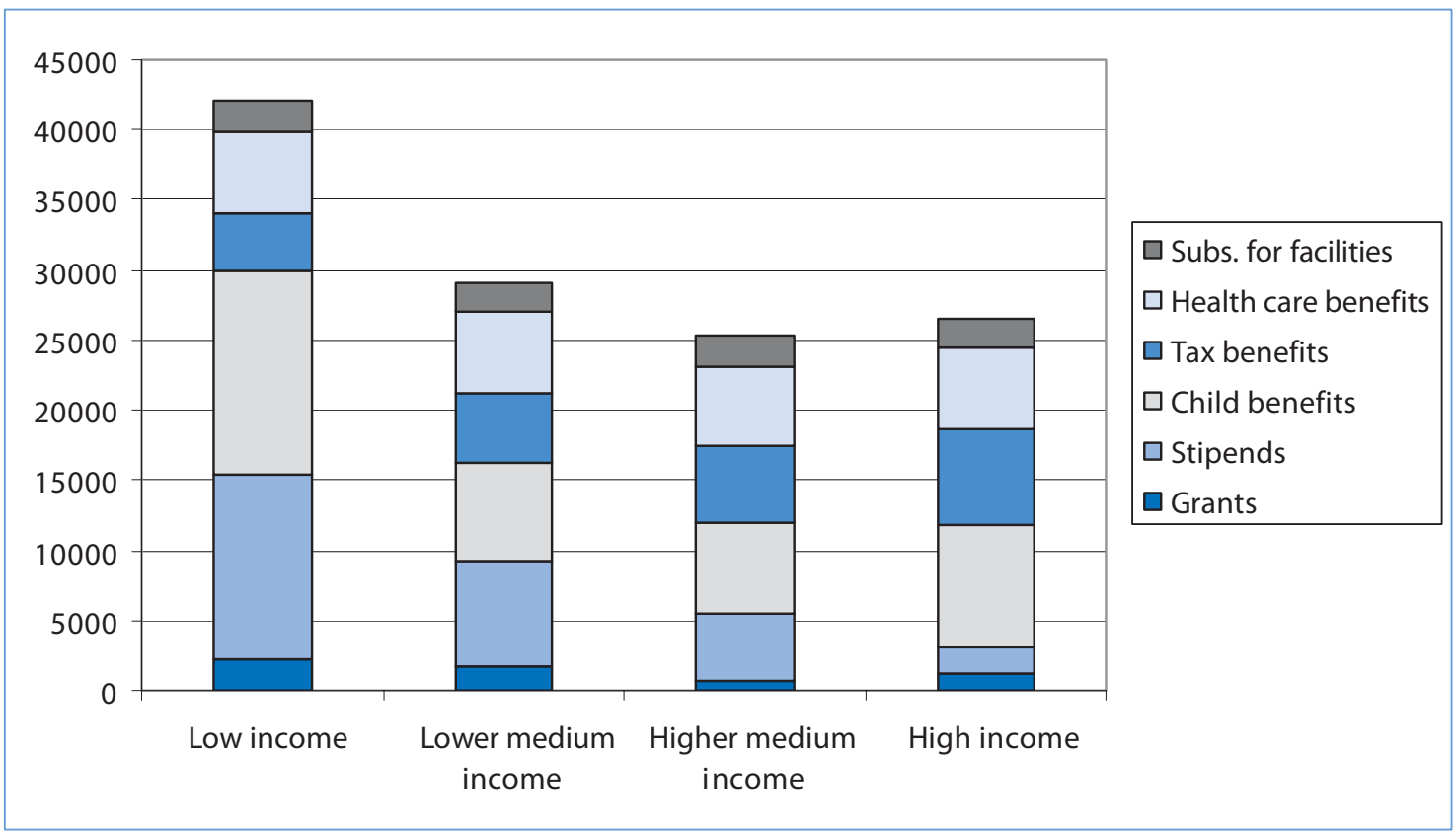


Table 23 The structure of public subsidy to students by parents' income situation (%)

	Student living at home				Student living away from home			
Support	**Low income**	**Lower medium income**	**Higher medium income**	**High income**	**Low income**	**Lower medium income**	**Higher medium income**	**High income**
Grants	1.24	1.17	3.33	7.41	5.10	6.03	2.55	4.32
Stipends	32.66	32.31	22.12	9.04	31.71	25.72	18.79	7.57
Child benefits	15.61	17.07	15.71	20.09	34.25	24.21	25.74	32.69
Tax benefits	19.61	21.02	26.84	32.59	10.07	17.18	21.79	25.83
Health care benefits	26.66	24.55	27.63	26.66	13.64	19.73	22.68	21.59
Subs. for facilities	4.22	3.88	4.37	4.22	5.22	7.12	8.45	8.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 24 The structure of public subsidy to students by parents' socio-economic status (%)

	Student living at home				Student living away from home			
Support	**Low SES**	**Lower medium SES**	**Higher medium SES**	**High SES**	**Low SES**	**Lower medium SES**	**Higher medium SES**	**High SES**
Grants	8.65	2.44	3.10	4.12	5.42	2.90	3.51	5.52
Stipends	25.24	17.75	22.09	8.65	26.96	18.31	15.52	11.14
Child benefits	13.59	21.27	15.59	19.83	24.10	27.48	33.04	32.28
Tax benefits	22.96	26.84	28.44	34.44	16.94	21.37	20.76	23.38
Health care benefits	25.53	27.37	26.58	28.45	19.40	21.92	19.70	20.30
Subs. for facilities	4.04	4.33	4.21	4.50	7.18	8.03	7.46	7.38
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

3.5 Conclusions

At this point, before entering the phase of a thorough comparative analysis, we can make a preliminary conclusion that, at the macro level, in the Czech Republic the share of public funding in financing higher education is quite significant and comparable with other countries. As regards a student's disposable income, it is determined by the parents' household income situation to a much lesser degree than one would expect. It is quite surprising, because a similar conclusion can be drawn for students' and parents' contributions to various segments of expenditure; in this case we found the effect of the income situation to be quite weak as well. Also, students coming from higher income and socio-economic groups tend to earn more than students from poorer families. As a consequence, non-cash support to this group in the form of tax relieves for both student's

and parents' income balance for a lower support from child benefits and stipends. Last but not least, the degree of both direct and indirect cash public subsidy to students (especially child benefits, but also stipends and other forms of targeted support) show quite a weak sensitivity to the socio-economic situation of the student's background family.

This rather blurred picture of the share of private and public financing of higher education is very likely a consequence of the dominant tendency to finance higher education through institutions and less through students (limited contributions of students to teaching allocations as well as low targeted participation of the state in financing the maintenance costs and the costs of study). It has much to do with both the prejudices towards participation of students in financing higher education (tuition fees) and the legal definition of the student as a dependent child rather than an independent unit of financial aid programmes and policies.

Appendix

1. Explanatory notes to table on total macro-expenditure on public higher education

Using macroeconomic data, Table 25 outlines the structure and scope of public expenditures on higher education in the Czech Republic.

All numbers relate to the expenditures by all levels of government (i.e., central, regional, and local governments). Funding from international organizations is not included.

In the case of the Czech Republic, public expenditures for all institutions reduce to public institutions due to zero flows recorded for private educational sector. Hence the first row in Table 25, Teaching Allocations, represents direct expenditures for all institutions of higher education (obtained from line G1 in Table 'Czech Republic - Education Expenditure by Level of Education, Source and Type of Transaction', UNESCO-UIS / OECD / EUROSTAT Data Collection on Education Statistics 2004), clear of expenditures on ancillary services and capital (lines G5a, G5b).[21] Direct expenditures by a government may take either the form of purchases by a government agency of educational resources to be used by educational institutions or of payments by a government agency to educational institutions that have the responsibility of purchasing educational resources themselves. In the Czech Republic, the latter category receives relatively more weight as indicated in Section III on the present financing of Czech tertiary education. The figure contains also row G5c, direct expenditure on R&D, which is considered as fully teaching-related. Data with more refined information on the structure of R&D are not available.

Grants in Direct support (cash) category account for the total amount of scholarships and other grants paid to students or households (line G10), adjusted by the share of full-time students enrolled in public institutions. This category includes public scholarships and all kinds of similar public grants, such as fellowships, awards and bursaries for students.

Tax reductions on students' earned income were obtained from own calculations based on the EUROSTUDENT data. The system of student loans is not operative in the Czech Republic, therefore the category Subsidies on loans does not apply.

Direct non-cash support includes health insurance and subsidies for facilities. Monthly health insurance payments are determined by law at 476 CZK per person. The amount of subsidies for facilities has been obtained from line G5b in UOE 2004. According to the UOE 2004 Database, ancillary services are defined as services provided by educational institutions that are peripheral to the main educational mission. The main component represent student welfare services, which might include halls of residence (dormitories), dining halls, and health care.

Indirect cash support consists of tax reductions for parents and child allowances. All households with dependent child in bachelor or master degree programme are eligible for a reduction of 25,560 CZK per student and year. We subtracted this amount from gross income of households with children contained in SILC 2005 database and calculated the average difference between the net household income with and without dependent child.

Since child allowances in the Czech Republic are differentiated according to preset multipliers of the legally defined subsistence minimum for the family, we distributed households from SILC 2005 database with a student enrolled either in bachelor or master programme into slots cor-

21 All references to lines Gx refer to the Table 'Czech Republic - Education Expenditure by Level of Education, Source and Type of Transaction', UNESCO-UIS / OECD / EUROSTAT Data Collection on Education Statistics 2004.

responding to different levels of implied child allowances.[22] Their aggregate sum was then averaged over the total number of households with bachelor or master students.

Table 25 Total expenditure on higher education – public sources (year 2004), private institutions and government-dependent private institutions excluded, ISCED 5a and 6 considered

Category	Description (data from Finance2004.xls)	Formula	Total (mil. CZK)	HE expenses per student
1) Teaching allocations			**19,234.4**	**87,199.1**
	Direct expenditures to public institutions by all levels of government [row G1], ancillary services [(G5a/G5)*G1] and capital [(G5b/G5)*G1] excluded.* Direct expenditures for R&D activities are included, we consider them as teaching related.	G1*[1-(G5a+G5b)/G5]	19,234.4	87,199.1
2) Direct support (cash):			**1,290.5**	**5,850.2**
Grants	Scholarships and other grants to students/households [G10] adjusted for the number of students of public institutions.**	G10*share of students in public institutions	1,238.4	5,614.2
Tax reductions of students' earned income ****	own calculations (SILC 2005)		52.1	236
Subsidies on loans	G11 - category does not apply		0	0
3) Direct support (non-cash):	Total		**2,066.9**	**9,370.1**
Health insurance of students	own calculations	476*12*# of FT students[$]	1,260	5.712
Subsidies for facilities	Direct expenditures designated for ancillary services both from all levels of government [(G5b/G5)*G1]***	(G5b/G5)*G1	806.9	3,658.1
4) Indirect support (cash):			**1,900.1**	**8,614**
Tax reductions of parents	own calculations (SILC 2005)		1,147.9	5.204
Child allowances	own calculations (SILC 2005)		752.2	3,410
5) Indirect support (non-cash):			0	0
Total			**24,491.9**	**111,033.4**

Source: UNESCO-UIS / OECD / EUROSTAT Data Collection on Education Statistics 2004, SILC and own calculations

22 For a more detailed functioning of child entitlement scheme see 3.3.

Notes:

* We approximate the share of expenditures in public institutions on ancillary services and capital by the shares reported for both public and private institutions.

** [G10] is reported for students enrolled in both private and public institutions. We are interested in public institutions only. Therefore we use the share of full-time students enrolled in public institutions to compute expenditures on scholarships and grants.

*** Share of ancillary services approximated by the share for both public and private institutions.

**** Based on average earned income 22,176 CZK per year (source Eurostudent 2005).

$ Number of full-time ISCED 5a and 6 students studying at public HEIs in 2004 totals 220,580.

2. Explanatory notes on income data imputation in EUROSTUDENT data file

Since EUROSTUDENT survey data on household income are not complete, and dropping the cases with the missing data from the analysis would have reduced dramatically the number of cases in classifications below a critical level, we decided to apply the regression method of imputation of the missing data. Due to a large number of missing cases (above the acceptable limit for this procedure in ISSP) it was impossible to use imputation method implemented in statistical packet SPSS. We therefore applied the following procedure:

1. Only full-time students with age lower or equal 25 years were selected. There were 2200 cases with 48% cases with valid values in the variable on household income.
2. The following variables entered regression equation predicting household income: financial support from parents, financial support from social benefits, self-evaluation of financial situation, education of student's father and mother.
3. Regression coefficients were used to estimate household income for cases with missing data. Respondents who had missing values at least for one of the predictors mentioned above (46 cases), were excluded from the imputation procedure.
4. As a result, instead of 593 cases before imputation, we have for the analysis 1.112 full-time students 18 to 21 years of age falling into ISCED 5A category.

We also analyzed potential consequences of the imputation for data consistency. Despite the fact that father's and mother's education were among six predictors in the regression equation applied in the imputation process, the correlations between father's and mother's education on the one hand, and household income before and after the imputation, on the other show quite acceptable differences (see Table 26).

Table 26 Correlation of parent's education and household income (separately for students living and not living with their patents)

	Father's education	Mother's education
INCOME - **original** - only students living with their parents	0.326	0.286
INCOME - **imputed** –students living with their parents	0.401	0.355
INCOME - **original** - only students not living with parents	0.317	0.335
INCOME - **imputed**- students not living with their parents	0.416	0.399

Source: Eurostudent 2005, Czech data file

Descriptive statistics for original and imputed data are displayed in Table 27. The results show that the average household income after imputation is higher than income computed from the original data with missing values (about 700 CZK higher in absolute figures, 3 % higher in relative terms). This was expected result, since people with higher incomes are always more likely to refuse to answer the income questions. The students very likely followed the same pattern.

Table 27 Descriptive statistics for household income (in CZK) before and after imputation of missing values

	N	Minimum	Maximum	Mean	Std. Deviation
INCOME-original	593	10,500	99,000	29,106	13525,19
INCOME-after imputation	1112	7,916	99,000	29,826	10666,70

Source: Eurostudent 2005, Czech data file

Table 28 Disposable income of students and its sources by household income and type of housing (in CZK per year), estimated income in kind for students living at home is not included

Socio-economic status	Type of housing	Parents, partner	Grants	Loans	Social support	Stipends	Earned income	Other	Reported total disposable	Calculated total disposable
Low	At home	19765	267	106	7027	3357	11070	421	42012	42012
	Away from home	44886	2145	575	13336	14405	14462	1145	93778	90955
	Total	35576	1449	401	10998	10311	13204	877	74594	72816
Lower medium	At home	16985	274	317	7550	3988	15679	0	44794	44794
	Away from home	58329	1753	3829	7476	7038	17393	1010	97960	96829
	Total	44335	1252	2640	7501	6006	16813	668	79965	79216
Higher medium	At home	21307	692	86	4593	3261	20219	1107	51419	51265
	Away from home	44866	645	282	4753	6509	16715	835	74603	74603
	Total	34700	665	197	4684	5107	18227	952	64600	64533
High	At home	26547	1594	2493	1944	4322	31815	932	83065	68377
	Away from home	64106	1147	3691	2011	8685	20990	1341	108634	102096
	Total	48593	1331	3198	1983	6886	25453	1172	98093	88197
Total	At home	22537	940	1047	4225	3788	23236	814	61813	56085
	Away from home	54651	1193	2278	5095	8160	18216	1086	93640	90722
	Total	41733	1092	1784	4745	6403	20234	977	80847	76800

Source: Eurostudent 2005, Czech data file

Table 29 Disposable income of students and its sources by socio-economic status and type of housing (in CZK per year), estimated income in kind for students living at home is not included

Socio-economic status	Type of housing	Parents, partner	Grants	Loans	Social support	Stipends	Earned income	Other	Reported total disposable	Calculated total disposable
Low	At home	16863	1944	486	5671	3054	17103	821	54143	43546
	Away from home	56144	1602	2306	7972	7126	14458	631	90239	90239
	Total	41497	1730	1630	7114	5608	15444	702	76780	72897
Lower medium	At home	20759	511	0	3719	4458	19295	490	55379	49231
	Away from home	47440	760	4870	4790	7191	18449	1304	85640	84804
	Total	35785	651	2743	4322	5997	18818	948	72422	69265
Higher medium	At home	23486	668	303	4767	3364	20630	371	53589	53589
	Away from home	54373	1022	612	4519	9619	20905	546	96436	91596
	Total	42306	884	491	4616	7176	20797	478	79697	76748
High	At home	31190	831	3805	1744	3997	38462	1309	89019	81338
	Away from home	62322	1559	1262	3148	9124	19564	1780	99699	98759
	Total	50284	1278	2245	2605	7141	26871	1598	95570	92023
Total	At home	23008	954	1095	3943	3766	23697	734	62725	56664
	Away from home	55084	1239	2272	5124	8252	18309	1067	92973	91347
	Total	42328	1126	1804	4654	6468	20452	934	80945	77567

Source: Eurostudent 2005, Czech data file

4 Country Report of England

Authors: Ozge Dilaver Kalkan
Geraint Johnes
Jill Johnes
Lancaster University Management School (LUMS)

Contents

4.1 Introduction

In this report we present two studies: first a macroeconomic analysis and, secondly, a microeconomic analysis of funding of higher education (HE) in England. The study focuses on England instead of covering all countries of the UK because the higher education system, and especially the funding system, differs across countries of the UK; in particular, tuition fees as such are not charged in Scotland though there are other arrangements (see section 4.2), and the introduction of differential tuition fees was delayed in Wales. The macroeconomic analysis examines the public-private share in the funding of students in HE, describing the main forms of public funding; the microeconomic part, meanwhile, compares the income and expenditure patterns of students from different social backgrounds and the share of public subsidies in this. Both studies are designed to yield results that are comparable with those obtained for five other countries contributing to the EU's Socrates project on the public and private funding of higher education: a social balance.

In the following three sections we first introduce the HE system in the UK and then present the findings of the macroeconomic and microeconomic studies respectively. In the final section, the limitations of the research and directions for further research are discussed.

4.2 A brief overview of higher education in the United Kingdom

Higher education in the United Kingdom is a peculiar mix of public and private activity. A typical institution receives much of its income from the state (in the form of tuition subsidies, research funding, and various ad hoc support), and is extremely highly regulated (through, inter alia, the evaluation of teaching and research activities). However it also receives a substantial proportion of its resource from private agents – notably in the form of tuition fees – and it retains some measure of autonomy. As Rosalind Pritchard (1992) has observed, British universities are 'autonomous legal entities governed by their Councils or governing bodies and thus technically private'.

Only one fully private British university exists. This is the University of Buckingham which was founded, as the University College at Buckingham, in 1976. In 1983 it gained the right to be called the University of Buckingham.

Altogether, there are about 131 institutions of higher education in England (and a further 20 in Scotland, 12 in Wales and 4 in Northern Ireland). These higher education institutions include traditional universities which typically have a strong research mission (59), former polytechnics that were granted university status in 1992 (36), a new generation of universities that were previously known as colleges of higher education (15), and a group of colleges of higher education that have yet to achieve university status (21). In addition, some students are taught in further education colleges.

Overseas students represent a major source of income for UK higher education institutions – especially the universities which have most international prestige. Some 9% of undergraduate students are domiciled outside the UK, and around two thirds of these are from outside the EU. The corresponding figures for postgraduates are much higher – some 31% are domiciled outside the UK, and almost three quarters of these are from outside the EU. The distinction between EU and non-EU students is important for funding reasons, since students from outside the European Union usually pay higher fees than EU students (though fees charged to non-EU students are determined on a programme-by-programme basis within each university).

Students in the UK may study for degrees at bachelor, masters, and doctoral level. In addition, there are a number of qualifications below the bachelor level that are taught at higher education institutions – especially the new universities and the colleges. These include the new Foundation Degrees; these are two-year qualifications that are intended to serve as qualifications in their own right, but also to provide a pathway to bachelor degree level work. These are often aimed at experienced workers who left the education system early in life.

The abolition of the binary divide between universities and the former polytechnics in 1992 represents a reform that has had widespread implications. This led to a unified system of funding, in turn to a unified system of performance indicators, and a common bureaucratic burden – epitomised by the regulation of the Quality Assurance Agency and the evaluation of research activity through the periodic Research Assessment Exercises.

But most recent educational reforms in the United Kingdom have mostly concerned student finance. The introduction of student loans in 1990, and the introduction of tuition fees for (home and EU) undergraduates in 1998, along with the modification of the student loan system to become an income-contingent loan system (also in 1998) have been followed by the introduction of differential tuition fees (again for home and EU students[23]) in 2006. The last of these apply in England; in Wales, the introduction of differential tuition fees was delayed, while in Scotland students do not pay tuition fees at all (although graduates do make a contribution to the funding of higher education through an alternative arrangement).

Universities receive their funding from a number of sources:

- Undergraduate students in England pay tuition fees.[24] These were introduced following the Dearing Report of 1997, and legislation was later amended so that, starting in October 2006, institutions could charge up to £3000 per year. In practice, most institutions are charging the maximum £3000, though some universities are charging less for some degree programmes. (Note that fees for overseas – i.e. non-EU – students are typically higher, and vary much more from course to course and university to university.) Domestic students receive a subsidised income contingent loan[25] to finance both their tuition and maintenance costs while in higher education. This loan is sufficient to cover tuition fees at £3000 per year plus annual maintenance costs at up to £3495 (if the student is living with her parents), £4510 (if she is living away from home outside London), or £6315 (if she is living away from home in London).[26] Students from poorer families may also qualify to receive a grant of up to £2700 per year. In the case of Buckingham, students pay much higher tuition fees, but the university does not receive grants from the Higher Education Funding Council.

23 Institutions have been free to set tuition fees for all overseas students and postgraduates for over 25 years now, so while granting them freedom to set the tuition fees for home and EU undergraduates extends this freedom to cover the largest single group of students for the first time, this has not involved any change of principle.

24 They do so in Wales too, though differential tuition fees were introduced later there than in England. In Scotland, students do not pay tuition fees, but graduates have been required to make a contribution to higher education (though the new Scottish administration has plans to remove this).

25 Graduates repay this student loan by paying 9 per cent of their income over £15000 per year, and cease repayments once the loan has been paid back in full. The interest rate on the loan is subsidised - it equals the rate of price inflation.

26 All domestic undergraduates are entitled to receive 75% of the loan to cover maintenance, but the remaining 25% is means-tested on the basis of family income.

- The Higher Education Funding Councils[27] pay each university a grant, part of which is driven by the universities' teaching commitments. About 70 per cent of the Funding Council Grant (about £3 billion) is awarded for teaching purposes. In the case of England, HEFCE's system of support for the teaching function of higher education institutions has been subject to periodic changes, but in essence the system is one in which institutions are rewarded on the basis of the numbers of student recruited. The first stage in the methodology involves an estimation of the resource needed to deliver learning to each institution's students. This calculation is based on actual student numbers, with different weightings attached to different subjects.[28] The estimated resource need (known as the 'standard resource') is then compared with a second figure known as the 'assumed resource'. This is essentially the inflation-adjusted grant that the institution received in the previous year, adjusted also for agreed increases in student numbers, with allowance made for changes in fee income and other factors. So long as the standard resource is within 5 per cent of the assumed resource, the HEFCE teaching grant made to the institution in the current year equals the assumed resource. If the gap exceeds 5 per cent, HEFCE will take some action; this typically involves an adjustment in student numbers. The ± 5 per cent tolerance band implies that institutions may vary the numbers of students that they recruit from year to year. This offers institutions, which are formally autonomous and legally independent of government, a great measure of flexibility. Premia are available to support the widening participation agenda, part-time modes of study, and location in London (where institutions face higher salary and property costs). HEFCE's methodology is therefore a formula funding method, and offers very limited scope for variation in how the formula is applied across institutions.
- Postgraduate students pay tuition fees. Universities are free to choose the levels at which these fees are set. Domestic postgraduates often have their fees and living costs subsidised by either their employers or the research councils. A high proportion of postgraduates are from overseas.
- The Higher Education Funding Councils' grant to universities has a second component, driven by the universities' research.[29] This accounts for a little over 20 per cent of the Funding Council allocation to institutions. Periodic Research Assessment Exercises (RAE) which are based on informed peer review determine the extent to which each institution will benefit from this income. Strong performers receive significantly more of this research income than do institutions whose research performance is relatively weak. The RAE results are published, and so have a strong impact on a university's attractiveness to students (especially in the lucrative overseas postgraduate market), and to corporate clients.
- The Research Councils[30] award grants for specific projects. Applications from individual academics and groups are assessed by peer review. The grants may then be spent on hiring re-

27 These councils have jurisdictions that correspond to the constituent countries of the UK - hence we have the Higher Education Funding Council for England (HEFCE), the Scottish Higher Education Funding Council, and the Higher Education Funding Council for Wales.

28 Subject Bands A, B and C attract 4, 1.7 and 1.3 times respectively the funding attached to Band D. Band A refers to medicine and allied subjects; Band B comprises laboratory based subjects; Band C is made up of subjects that are part classroom based and part laboratory based; and Band D subjects are classroom based.

29 The Funding Councils are quasi-autonomous non-governmental organisations (quango). They receive the income that they distribute to universities from the public purse, and ensure that decisions about resource allocation are kept at a step removed from the government of the day.

30 There are 7 research councils, publicly funded, each of which is specific to a given broad subject area. These too are quangos.

search assistance, purchase of equipment, and miscellaneous expenditures related to the project. An allowance is made for the universities' overheads in administering the grant. The research councils make annual grants of about £500 million.

- The Funding Councils make special funding available for capital projects and other initiatives. This represents most of the residual 10 per cent of Funding Council expenditure.
- Other sources of research income include projects undertaken for international organisations, foundations and charities, and collaboration with industry.
- Miscellaneous income comes from renting accommodation and other facilities, catering etc.

Funding of the HE Colleges is similar to that of universities. The balance between the various sources of finance is somewhat different, though. The colleges are more reliant on tuition fees and Funding Council grants for teaching – and less so on sources of research funding – than are the universities (particularly the pre-1992 universities).

Funding for the FE colleges is complicated. For their higher education functions, they receive tuition fees and Higher Education Funding Council grants. But most of their income comes in return for the provision of education at upper secondary level and at further education (vocational tertiary) level, and this comes primarily from the Learning and Skills Council.

It is readily observed that the income of a typical British institution of higher education comes from a large variety of sources. Funding councils, tuition fees, research grants, endowments, and other income respectively account for 39, 24, 16, 2 and 20 per cent of institutions' income. This means that, of the £18 billion annual income of all higher education institutions, a little over one half (the funding council contribution plus most research grants) comes from government. The remainder comes from fees, residence and catering charges, private research income (including income from charities), and other sources. In many respects, a university will behave like a typical private institution. For the most part, for instance, activities at postgraduate level have many of the characteristics of a private market - the university sets its own tuition fees and chooses how many students it admits. This is nowhere more apparent than in the case of postgraduate education in the field of management. Indeed it is a particular characteristic of management schools within universities that most income comes from private sources rather than from the public purse.

Table 30 Funding of higher education in the United Kingdom

Funding source	Percentage in income of higher education institutions
Funding councils	39 %
Tuition fees	24 %
Research grants	16 %
Endowments	2 %
Other income	20 %
Total	100 %

Note: The figures do not sum to 100 owing to rounding

Most of the expenditure of higher education institutions (about 58 percent) is accounted for by staffing costs. Other operating expenditures account for a further 36 percent. Depreciation and interest charges account for 5 and 1 percent respectively.

4.3 Macroeconomic analysis

This part of the study aims to examine the major sources of HE funding in England from a macro perspective. Accordingly, the data for the public sources of funding are collected from related governmental bodies for the academic year (1 August-31 July) 2004-2005, and the amount of private funding in the same period is estimated based on individual-level questionnaire data (Eurostudent 2004).

The public sources of funding are divided into five components in the research design. These are teaching allocations, grants and scholarships, indirect support, subsidies on student loans, and subsidies for facilities. In England there are no public expenditures that can be associated with the subsidies for facilities so the public funding of students in HE occurs via four components.

In order to find the public expenditure per student, the total public expenditure on HE is divided by the number of full-time ISCED 5a (undergraduate and masters degree) and 6 (research degree) students. The calculations on the number of students are based on the Higher Education Statistics Agency (HESA) reports and they include overseas students as well as the UK and EU students. These student numbers are shown for 2004-2005 in Table 31.

Table 31 Number of ISCED 5a and 6 students

HE student number in UK	England	UK
Degree		
Undergraduate	1,448,380	1,754,910
Postgraduate	447,440	532,630
Total	1,895,820	2,287,540
Type of study		
Full-time	1,135,780	1,391,505
Part-time	760,040	896,035
Total	1,895,820	2,287,540
Origin		
UK	1,627,525	1,969,140
Other EU	79,525	100,000
Non-EU	188,770	218,395
Total	1,895,820	2,287,535

Source: The Higher Education Statistics Agency (HESA) Students in Higher Education Institutions, 2004/2005

In addition, for improving comparability with other countries in the project, the public expenditure data are adjusted to represent expenditure for full-time students. Accordingly, the public expenditure categories that both full-time and part-time students benefit from are divided by the full-time equivalence[31] of all students and then multiplied by the number of full-time students.

One of the expenditure categories, which is adjusted in this way, is the allocations of funding attached to institutions' provision of teaching ('teaching allocations'). The data on teaching allocations are from HESA publications[32] and follow the OECD framework; all transfers to the HE institutions that are not specified as research or capital allocations are assumed to be teaching allocations.

The data on grants and loans are provided by the Student Loans Company. Like teaching allocations, the grants are also adjusted for part-time students because they are eligible for some forms of student grants.[33] It is also worth noting that the reference year matters when analysing these forms of public support in England. Overall, starting from the 1990-91 academic year, there was a gradual shift from supporting students' maintenance costs with the non-repayable grants and scholarships to supporting those with subsidised but repayable student loans. This shift accelerated from 1994-95 and as of 1999-2000, all basic support for maintenance costs was provided through loans.[34] There were some major changes in the academic year 2004-05; these inclu-

31 Full-time equivalence of part-time students are calculated by the institutions. This figure covering all students in England as well as the number of full-time students is taken from Higher Education Statistics Agency (HESA), Students in Higher Education Institutions 2004-05.

32 Table 1, Higher Education Statistics Agency (HESA), Resources of Higher Education Institutions 2004-2005

33 Grants given to students in England amounted to about £228 millions. This figure is adjusted using the same full-time equivalence and full-time student numbers as above.

34 Statistics of Student Support for Higher Education in United Kingdom - Financial Year 2003-04 & Academic Year 2004-05 (Provisional), National Statistics Office.

ded a substantial increase in tuition fees, with institutions now given free rein to determine fees for domestic undergraduates up to a maximum of £3000 per year. But arguably the most important of these recent changes was the return of the maintenance support grants, albeit at a relatively low level, with the new Higher Education Grant (HEG).

This new scheme aims to support the students from lower income backgrounds. Accordingly, students whose families' household incomes were lower than £15,200 per annum were given the full HEG grant of £1,000; and those whose household incomes were between £15,201 and £21,185 were given partial HEG grants. Another new scheme that was introduced in 2004 for supporting students from low income families was the Access to Learning Fund (ALF), which replaced earlier hardship funds. Funding for ALF was allocated to institutions, which then supported students from lower income families.[35]

There have also been changes with respect to the students' contributions in tuition fee cost. Starting from 1998-99, students were expected to contribute up to a certain amount to their tuition costs. Hence, for example, in 2004-05 students contributed up to £1,150 of the average tuition cost of £4,000 (the remainder being paid by government through the funding council). Support for these tuition fee contributions was available to students via the Local Education Authorities. Depending on their household incomes students could get partial or total exemptions from their tuition fee contribution liabilities.

To summarise, as of September 2004 there were four main grants: Fee Support, Course Grant[36], HEG and ALF. In addition to these, there were also small scholarships and allowances depending on special needs and other circumstances of students (student with dependants, disability allowances, etc.).

In the last decade, there have been some changes in the student loan arrangements as well. In 1998-99 a new form of loan was introduced in addition to the existing mortgage style loans. The new loan was called the 'income contingent loan' and its share in the student loan portfolio increased gradually. In 2004-05, only 9% of the amount lent to students was made up of mortgage style loans. In the new system the student loans have zero real interest rate. Their real value is sustained with an interest rate equalling national inflation rate. Once the students graduate, they need to repay the loan in instalments that are calculated according to their annual income. If their annual income for that year is lower than £15,000, they are exempt from any repayments. If they earn more, they need to repay an amount equalling 9% of the difference between their income and the £15,000 base. Any debt that is not repaid after 25 years after graduation is written off.

Data on the face value of student loans are provided by the Student Loan Company. The subsidy rate on the student loans is estimated to be 16.5%, consisting of a 12.5% interest rate subsidy and another 4% subsidy on deferred loans. As the interest rate to be paid by the graduates equals the inflation rate, the interest rate subsidies are calculated by comparing the present value of the interest revenues which could be collected in a twenty five year repayments schedule if the government's borrowing rate[37] in 2004 was applied to the loan, with the same figures when an interest rate that is equal to the current inflation rate is applied. This calculation is explained in further detail in appendix 1a.

35 Higher Education Grants in England and Wales: Academic Year 2004-05, National Statistics Office, First Release

36 Course Grant is only available for the part-time students.

37 The annual average rate of discount for the 3 month Treasury bills is selected for this use. This figure was 4.44% for the calendar year 2004.

There are also subsidies on the loans in deferment, since after 25 years the remaining debts will be cancelled. We could not take the historical rate for past loans to estimate these subsidies since there has not been adequate time since the new loan system was introduced. We therefore conducted a simulation and studied the average remaining debt after twenty five years of 25,000 students. Accordingly, Labour Force Survey is used to obtain economic activity and earnings data of 10,860 graduates[38], with respect to heterogeneity variables like gender, ethnicity and subject of the degree. In addition, the career paths of women graduates are studied in periods of five years to reflect inactivity patterns over time. Finally, the cases that are assigned to be economically active in the previous period are allowed to have higher probabilities to stay so, and vice versa those who have been inactive are modelled to be more likely to stay inactive compared to other cases. The simulation results show a remaining debt near £ 18 million at the end of the 25th year, out of the future value of approximately £467 million[39] loans assumed to be given to 25,000 students. This corresponds to a subsidy rate around 4%.[40] It is however vital to note that this non-repayment rate cannot be used for different amounts of total student loans at the time of graduation. Since the repayments are dependent upon graduate incomes, higher levels of debt are associated with significantly higher risks of non-repayment. Further details about this estimate can be found in appendix 1b.

Non-cash support categories cover the types of public support which do not increase students' disposable incomes but instead reduce their expenditures. Non-cash support in England is largely by means of exemptions from Council Tax payments.[41] The Council Tax is the main form of local taxation in England and the base for this tax is the value of the residential property. In the UK, students are exempt from this tax; council tax is zero for dwellings where students constitute the only residents. The central government compensates the local authorities for their relevant losses in tax revenues but this is not done in direct compensation payments. Instead the number of council tax exemptions is one of the many components of the local authority's tax base calculation. A crude estimate of these compensating payments yields a total of £170 million, based on the average council tax per dwelling (£967) in the financial year 2004/05[42] and the total number of student dwelling exemptions (173,600) in November 2004 (Department for Communities and Local Governments, 2007).

All this information about public expenditure on higher education is presented in the left hand side of Table 32. This table is for finding the public and private shares of expenditure on higher education. Our approach here is distinguishing between what government and students (or parents) spend per student, and then adding these two figures to obtain the total expenditure. We then calculate the share of public expenditure versus the private expenditure based on this total figure.

38 The participants of the Labour Force survey, who are between ages 25 and 49 and who have a degree are included.

39 The average total loan at graduation is calculated as £8,923. For 25,000 students the outstanding loans at the year of graduation are £223 millions. The future value of this amount after twenty five years with an interest that is equal to the 3% inflation rate is roughly 467 millions.

40 The precise output of the simulation was 3.84%.

41 Council tax payments do not affect the value of disposable income.

42 Source: Department for Communities and Local Government, Private Communications.

Table 32 Public and private expenditure on higher education

Public expenditure (thousands)		Private expenditure	
Teaching allocations:	£3,826,417	Student income:	£8,333
Direct cash support		minus direct cash support	
Grants:	£189,951	minus grants:	£614
Subsidies on Loans:	£387,668	minus loan subsidies:	£448
Direct Non-Cash Support		minus indirect cash support:	£0
Council tax exemptions:	£170,000	minus indirect non-cash support:	£0
Indirect cash support	£0		
Indirect non-cash support	£0		
Total:	£4,574,036		
Total per student:	**£4,027**	**Difference (per student):**	**£7,271**
% in total expenditure:	**36%**	**% in total expenditure:**	**64%**

The right hand side of the table presents an estimate of the private expenditure on higher education. This corresponds to participation and maintenance costs of the students. Assuming students know their income better than their expenditure on specific expenditure categories, and that they spend most of their income; we use the reported values of student income instead of student expenditure. Our interest in this part of the study is not finding the cost of student life; but rather the amount that the students are actually paying themselves either now or in the future. We therefore subtract all kinds of public support that they receive in money form from their reported income.

The macroeconomic analysis shows that 36 % of the funds invested in the higher education of students (including student maintenance, but not including the funding of research) are public funds, with the teaching allocations having the largest share. However, we would note that the private expenditures on tuition fees are not fully represented in Table 3, since this table refers to data only on domestic students. Tuition fees are fixed at relatively low levels for UK and EU undergraduates but are much higher for overseas (that is, non-EU) students. In the research design, private expenditure on HE is planned to be estimated based on the information retrieved from the Eurostudent survey. To sustain comparability with other countries we followed this procedure. However, since Eurostudent did not cover overseas students, this method underestimates the private expenditure on tuition fees. If we adjust the right hand side by subtracting the amount of tuition fee cost for UK and EU students (£1,150 in 2004/05), and then add the average tuition fee for all students (UK, EU and non-EU) which amounts £2465, the rate of public share in total expenditure falls to 32 %, and the private share rises to 68%.

4.4 Microeconomic analysis

This part of the study aims to explore the income sources and the expenditure patterns of undergraduate students in England and the share of public subsidies in this. The Eurostudent 2004-2005 survey is the primary data source for this analysis. In this section, the income and expenditure figures are disaggregated by parental occupation groups, with a view to investigating whether or not students from different backgrounds have access to differential levels of funding, and whether some groups are particularly disadvantaged through the availability of financial support that is inadequate to meet their needs.

Our sample includes full-time undergraduate students who were in the 18-22 age group at the time of the questionnaire and who do not have any severe disabilities. The disability information in the dataset varies between countries; our practice is to exclude all disabled students except those with dyslexia. In addition to these criteria that are followed by all the teams in the research project, we have excluded students living in London since there would likely be significant variations in the expenditure figures of these students compared with others.

To facilitate comparability with the other countries participating in the project, we originally intended to use the EU-SILC dataset to obtain the national income quartiles for households with children, and then use the Eurostudent dataset to study income and expenditure profiles of students from these four different income groups. However, the parental income variable in the British variant of the Eurostudent survey refers to main income earner rather than the household. Moreover, it is a categorical variable, defined with very broad income groups. There are actually five parental income categories with £10,000 intervals but the first category is designed to cover the parental income figures below £10,000 and none of the participants fell in this category. So there are, in practice, only four parental income categories. The first one covers students with parental incomes up to £20,000 and the last one covers all cases with parental income higher than £40,000. Such a grouping does not allow very refined analysis. A further problem is that data on parental income are missing for a substantial proportion of respondents. We have therefore drawn on data on parental occupation in order to evaluate occupational earnings.

The parental occupation variable data in the Eurostudent UK are collected in 13 occupational groups following a new national standard called National Statistics-Socio Economic Classification (NS-SEC). The related question is only asked to full-time dependent students and only the occu-pation of main income earner in the household where the student lived before starting his or her course is asked. The NS-SEC standard is designed to generate three socio-economical groups based on this standard: managerial and professional occupations; the intermediate occupations; and the routine and semi-routine occupations. To improve comparability with other studies, we decided, however, to aggregate occupations into four groups. We therefore referred to a third dataset; the Labour Force Survey (2007), ranked the 13 occupational groups according to net weekly income and identified which occupational groups belong to which quartile.[43]

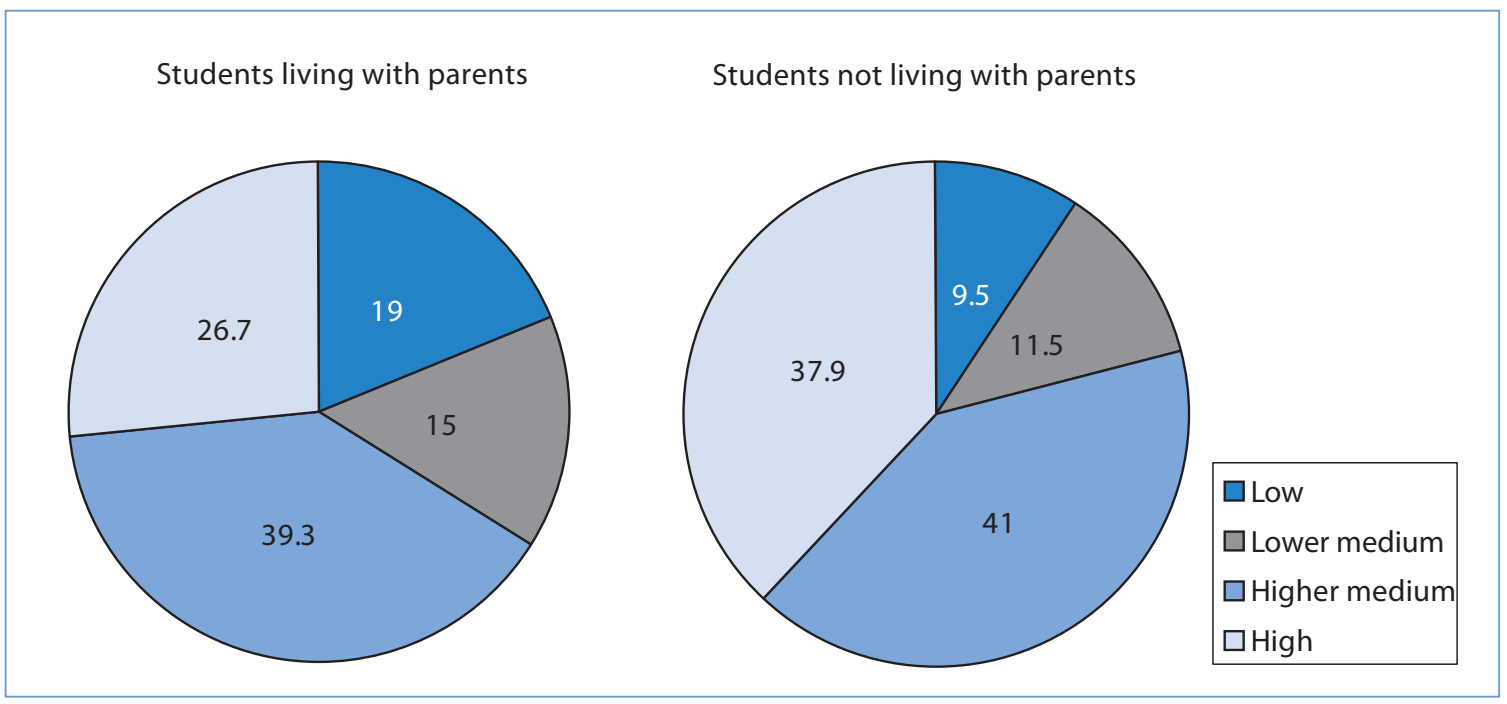
43 Net weekly income is not reported for employers and own account workers in the Labour Force Survey. For these workers we have mapped occupation onto income using the income data for employees. Interrogation of the Eurostudent data suggests that, occupation by occupation, the earnings of self-employed workers are similar to those of employees.

Table 33 Cumulative percentile distribution of socio-economic background groups

Socio-economic background	Labour Force Survey	Eurostudent (all data)	Eurostudent (selected data)
	Percentile	Percentile	Percentile
Low	32 %	12 %	11 %
Lower medium	51 %	23 %	23 %
Higher medium	81 %	65 %	63 %
High	100%	100 %	100 %

Table 33 relates the UK population to our sample with respect to the socio-economic groups that we use. The students from the lowest socio-economic group make up about 11 % of the sample, while this group seems to cover 32% of the UK population. Some 77% of the students in our sample are from high and higher medium socio-economic groups. The detailed breakdown of students by socio-economic group for students living with parents and students not living with parents (respectively) is provided in Figure 4.

Figure 4 Socio-economic backgrounds according to where student lives



Student income is examined under six categories as seen in Table 35. A few explanations are helpful at this stage. The 'grants' category covers the three main forms[44] of scholarships in England as explained in the macroeconomic analysis, as well as NHS and teaching training bursaries given to higher education students. The other forms of public support like benefits and allowances are grouped under the 'other income' category. This category also includes the used savings, private loans and, perhaps less likely, forms of income students may receive, such as that which accrues from their owned assets. The used savings are calculated by subtracting the stock of savings at the end of the academic year from the stock of savings at the beginning. If there is an increase in savings during the term period, then this is treated as a case of zero (not negative) used savings.

44 Those are Higher Education Grant, Fee Support and Access to Learning Fund.

The private loans cover loans from commercial institutions, overdrafts, arrears in payments, career development loans and informal loans. Finally, the 'paid work' category includes not only the earnings during the term time but also in the holidays.

There are a few consistent patterns when we come to consider the sub-categories of student income. Contributions of families and friends rise with parental income, both for students who are living with their parents and for others. Parental contributions in-kind for the students who are living with their parents may not reflect the true value of in-kind transfers they receive from their parents. For example, this variable does not include an explicit imputation for rent. Many students – both those living at home and others – have benefited, and will presumably continue to benefit financially as a result of their parents supporting them through their studies, often paying tuition on their behalf.

Table 34 Average student income according to parental income and where student lives

Where students live during term	Socio-economic background	Average total student income
Students living with their parents	Low	£8,163
	Lower medium	£8,194
	Higher medium	£7,537
	High	£8,715
	F	0.655
Students not living with their parents	Low	£9,513
	Lower medium	£9,620
	Higher medium	£9,437
	High	£9,638
	F	0.219
	F (all 8 groups)	4.204***

*** Significant at 1% level

Some of the other patterns are clearer for the students who are not living with their parents. Grants, student loans, private loans and earned income all go down for higher socio-economic backgrounds. Altogether, the four main sources of student income show clear trends for students not living at home, with the effect of public funds (grants and student loans) and earned income compensating the fall in family contributions for students from lower social backgrounds.

Table 35 Student income categories according to socio-economic background

Socio-economic background											
	Living with parents					Not living with parents					
	Low	Lower medium	Higher medium	High	F	Low	Lower medium	Higher medium	High	F	F (all 8 groups)
Grants	£1,325	£777	£776	£724	3.197 **	£1,175	£1,203	£813	£456	22.195 ***	11.43 ***
Student loans	£2,313	£2,246	£1,918	£1,918	1.977	£3,290	£3,380	£3,086	£2,664	14.318 ***	22.31 ***
Earnings	£2,597	£3,040	£2,964	£3,422	2.574	£2,299	£2,265	£2,044	£1,741	2.130 *	5.81 ***
Family contributions money	£510	£782	£899	£1,241	1.251 *	£1,046	£1,399	£2,177	£3,351	52.248 ***	43.04 ***
Family contributions in-kind	£309	£276	£394	£325	1.041	£168	£362	£320	£394	1.791	1.27
Other	£1,227	£1,429	£1,276	£1,235	0.451	£1,879	£1,642	£1,562	£1,678	0.903	0.90

*** Significant at 1 % level
** Significant at 5 % level
* Significant at 10 % level

The results presented in Table 35 imply that increasing public support partially compensates for decreasing support from the families for the students from less favourable socio-economic backgrounds. However, the analysis so far fails to show how well this compensation works for students. From the perspective of access to higher education, a vital piece of information is the amount of income that will be provided to the student either by her family or from public funds; this is because she would have to rely on her own resources (through working part-time, or through taking out a loan that would need to be repaid later) to make up any shortfall between this total and her total expenditure. We have therefore grouped the different sources of money income according to whether it is provided to the student (by family or state) or whether she needs to earn, borrow, or otherwise secure the resource (found income). This is done for the students who are living away from home. (Students who are living with their parents may fail to distinguish the income provided to them by their parents.) Once again we see a clear trend from the higher socio-economic groups to the lower ones; the income provided to the student during her years in higher education falls steadily. In other words, although students from different socio-economic backgrounds can reach similar levels of income, those from lower socio-economic groups need to earn or borrow from private institutions significantly more than others.

Table 36 Provided income versus found income according to socio-economic background

	Socio-economic background				
	Low	Lower medium	Higher medium	High	F
Provided income	£5,678	£5,941	£6,124	£6,595	43.017***
Found income	£3,836	£3,679	£3,313	£3,043	3.119***

*** Significant at 1% level

When the annual expenditures of students are studied, we see that the change with respect to the socio-economic background is far from monotonic. It appears that students from different backgrounds have comparable spending patterns (Table 37).

Table 37 Average student expenditure according to socio-economic background and where student lives

	Living with parents					Not living with parents					
	Low	Lower med.	Higher med.	High	F	Low	Lower med.	Higher med.	High	F	F (all 8 groups)
Student expenditure	£8,302	£9,590	£8,342	£7,530	1.283	£9,283	£8,930	£9,438	£9,122	0.500	1.869*

* Significant at 10 % level

Student expenditure is also examined in two main categories: expenditure on participation and expenditure on maintenance. The former includes costs of fees and instructional material except computers.[45] Travel costs are included as maintenance expenditure, although we recognise that this might be moot. Some of the other types of maintenance expenditure are housing, food, entertainment and the expenditure on personal items like clothes or CDs. There is no clear pattern of expenditure across parental socio-economic groups.

Table 38 Expenditure categories according to socio-economic background and where student lives

	Living with parents					Not living with parents					
Student expenditure	Low	Lower med.	Higher med.	High	F	Low	Lower med.	Higher med.	High	F	F (all 8 groups)
Participation	£1,389	£1,406	£1,419	£1,388	0.293	£1,401	£1,421	£1,381	£1,403	0.544	0.335
Maintenance	£7,210	£8,214	£6,916	£6,370	1.032	£7,891	£7,543	£8,018	£7,753	0.439	1.597
Total	£8,599	£9,621	£8,334	£7,758		£9,291	£8,964	£9,398	£9,156		

45 Data on computer expenditure were not available for some countries in the project.

There is not much variation at all in the levels of expenditure linked directly to higher education participation; the £1,150 tuition fee[46] cost is the same for all students. The expenditure on maintenance varies more with respect to the socio-economic groups than the expenditure on participation. However these observed differences do not follow a clear pattern and they are not statistically significant.

Findings on student income and expenditure are reviewed in tables Table 39 and Table 40. These tables also clarify the associated public subsidies with these figures, and after adjusting for in-kind types of public support to students, the total public subsidies are calculated as a percentage of student income and expenditure. Accordingly, the public subsidies that students from different socio-economic backgrounds get vary from 10 to 21 % of their income and expenditure.

Table 39 Student income and expenditure and public subsidies – students living with parents

Students living with their parents									
	Low	Lower medium	Higher medium	High		Low	Lower medium	Higher medium	High
Income					**Expenditure**				
Grants	£1,325	£777	£776	£724	Participation	£1,389	£1,406	£1,419	£1,388
Student loans	£2,313	£2,246	£1,918	£1,918	Maintenance	£7,210	£8,214	£6,916	£6,370
Earnings	£2,597	£3,040	£2,964	£3,422	**Total**	£8,599	£9,621	£8,334	£7,758
Family contributions cash	£510	£782	£899	£1,241					
Family contributions in-kind	£309	£276	£394	£325					
Other	£1,227	£1,429	£1,276	£1,235					
Total	£8,281	£8,551	£8,227	£8,865					
Plus in-kind transfers					**Plus in-kind transfers**				
Direct non-cash support	-	-	-	-	Direct non-cash support	-	-	-	-
Total (money and in-kind)	£8,281	£8,551	£8,227	£8,865	Total (money and in-kind)	£8,599	£9,621	£8,334	£7,758
Public subsidies					**Public subsidies**				
Direct cash support	£1,706.65	£1,147.59	£1,092.47	£1,040.47	Direct cash support	£1,706.65	£1,147.59	£1,092.47	
Direct non-cash support	-	-	-	-	Direct non-cash support	-	-	-	-
Indirect cash support	-	-	-	-	Indirect cash support	-	-	-	-
Indirect non-cash support	-	-	-	-	Indirect non-cash support	-	-	-	-
Total public subsidies	£1,706.65	£1,147.59	£1,092.47	£1,040.47	Total public subsidies	£1,706.65	£1,147.59	£1,092.47	
Public subsidies in student income	**21%**	**13%**	**13%**	**12%**	**Public subsidies in student expenditure**	**20%**	**12%**	**13%**	**13%**

46 It is worth noting that although many students, particularly those from lower socio-economic backgrounds receive fee support, this support is reported under the grants category of Student Income rather than discounting the tuition fee cost reported under participation expenditure. Under the new system of tuition fees, introduced in 2005, there is likely to be much more of a distinction across socio-economic groups in the levels of expenditure devoted to participation.

Table 40 Student income and expenditure and public subsidies – students not living with parents

Students not living with their parents									
	Low	Lower Medium	Higher Medium	High		Low	Lower Medium	Higher Medium	High
Income					**Expenditure**				
Grants	£1,175	£1,203	£813	£456	Participation	£1,401	£1,421	£1,381	£1,403
Student loans	£3,290	£3,380	£3,086	£2,664	Maintenance	£7,891	£7,543	£8,018	£7,753
Earnings	£2,299	£2,265	£2,044	£1,741	**Total**	£9,291	£8,964	£9,398	£9,156
Family contributions money	£1,046	£1,399	£2,177	£3,351					
Family contributions in-kind	£168	£362	£320	£394					
Other	£1,879	£1,642	£1,562	£1,678					
Total	£9,857	£10,251	£10,002	£10,284					
Plus in-kind transfers					**Plus in-kind transfers**				
Direct non-cash support	£201 [47]	£201	£201	£201	Direct non-cash support	£201	£201	£201	£201
Total (money and in-kind)	£10,059	£10,452	£10,204	£10,485	Total (money and in-kind)	£9,493	£9,166	£9,600	£9,357
Public subsidies					**Public subsidies**				
Direct cash support	£1,717.85	£1,760.70	£1,322.19	£895.56	Direct cash support	£1,717.85	£1,760.70	£1,322.19	£895.56
Direct non-cash support	£201	£201	£201	£201	Direct non-cash support	£201	£201	£201	£201
Indirect cash support	-	-	-	-	Indirect cash support	-	-	-	-
Indirect non-cash support	-	-	-	-	Indirect non-cash support	-	-	-	-
Total public subsidies	£1,918.85	£1,961.70	£1,523.19	£1,096.56	Total public subsidies	£1,918.85	£1,961.70	£1,523.19	
Public subsidies in student income	**19%**	**19%**	**15%**	**10%**	**Public subsidies in student expenditure**	**20%**	**21%**	**16%**	**12%**

4.5 Conclusions

This report analyses the public and private funding of HE in England, with an aim to compare this aspect of the English system with those of other countries participating in the research. The OECD framework is applied for categorisation of the public funds, in order to sustain compara-

47 Council tax exemptions based on the average £967 per dwelling and 4.8 adults sharing a house.

bility. Furthermore, with respect to the public funding directly paid to individuals; only the ones that are exclusive to HE students (and not available to other members of the public) are taken into the analysis.

A clear distinction such as this one is necessary in order to identify the funds that are specifically put on HE within a very diverse range of services offered by the governments. There is however a limitation of this approach, which should be taken into consideration while comparing countries with each other. Considering the governments in two countries that both offer a certain service to the students, if this service is available for a larger share of the population in one of the countries, the related expenditure is no longer considered a public fund on HE. Based on this definition we may conclude that the government that offers the service to students only is spending more on HE compared to the other government, while it is also possible to say it just spends too little on the remaining population.[48]

Our macro-level analysis presents data from different publications and institutions and it shows that in England about forty percent of the funding on HE is from public sources.

The micro-level analysis explores the sources of funding available for students from different socio-economical backgrounds. The primary data source for this part of the study is the Student Income and Expenditure Survey which is also available for the other participating countries. There are however remarkable differences in the way questions are asked and the answers are recorded in different countries. For instance, the parental income variable in the English survey was recorded in five categories, which did not enable us to use the exact quartile cut-off points as it was planned. The high rate of missing observations was also troublesome as explained earlier. We therefore used the parental occupation variable together with the parental income.

Overall, our findings imply the students from different socio-economical backgrounds have comparable income and expenditure levels. However, when we look at the sources of student income, we see some differences across parental income and occupation groups. Not surprisingly, as we move from the higher socio-economic groups to the lower ones, the contributions from families fall. This is largely offset by the rising share of public support like grants and scholarships but especially for the students who are not living with their parents, there is also a necessity to find additional sources of income, mainly by working for longer hours.

48 An example for this would be the national health services which are provided free of charge to all residents in UK. In some of the other countries participating in the research, students are exclusively exempt from health insurance payments and therefore related public expenditure is taken as funding on HE in the study.

References

Department for Communities and Local Government: *Local Government Finance Statistics – Council Tax and National Non-Domestic Rates*. Retrieved on 10 August 2007 from http://www.local.communities.gov.uk/finance/stats/ctax.htm.

Department for Communities and Local Government: Private communications dated 22 August 2007.

Dolton, P./ Makepeace, G. / Inchley, G.D. (1990): *The Early careers of 1980 Graduates: Earnings, earnings differentials and postgraduate study*. Employment Department Group Research Paper No. 78. London: HMSO.

HESA (Higher Education Statistics Agency): *Resources of Higher Education Institutions 2004-2005.*

HESA (Higher Education Statistics Agency): *Students in Higher Education Institutions 2004-2005.*

HESA (Higher Education Statistics Agency): *The Destinations of Leavers of Higher Education in the United Kingdom for the Academic year 2004/2005*.

International Social Survey Programme (2003): Data Retrieved on 20.08.2007 from http://zacat.gesis.org/webview/index.jsp.

National Statistics Office: *Statistics of Student Support for Higher Education in United Kingdom - Financial Year 2003-04 & Academic Year 2004-05* (Provisional).

National Statistics Office, First Release: *Student Loans for Higher Education in United Kingdom, Financial Year 2004-05*.

National Statistics Office, First Release: *Higher Education Grants in England and Wales: Academic Year 2004-05*.

National Statistics Office: *The Labour Survey, 2007.*

Pritchard, R. O. (1992): *Principles and pragmatism in private higher education: examples from Britain and Germany*. In: Higher Education No. 24, pp. 247-273.

Student Loans Company: Private communications dated 30 May 2007 and 14 June 2007.

Appendix 1a: Calculation of interest rate subsidies on student loan

Though student loans in UK are re-payable, important amounts of public funds are invested in student loans largely because those loans are provided to the students with interest rates lower than the government borrowing rate. In the new student loan scheme, the graduates are expected to pay an interest equal to the inflation rate. That is, they are not expected to pay any real interest.

Table 41 Data used for interest subsidy calculation

Data	Value	Source
Government borrowing rate : Annual average rate of discount, 3 month Treasury bills	4.44 %	Bank of England
SLC 2004/05 Academic year interest rate	2.60 %	Student Loans Company, Statistical First Release
Inflation rate, December 2004 (for reference)	3.00 %	Bank of England
Market interest rate: 2004 Average of the end of month, 10 years fixed mortgage rates (for reference)	5.97 %	Bank of England
Average student loan	£ 2803	Student Loan Company (for total loans) and HESA (for the number of full-time, undergraduate, UK students)

In this part, we calculate the amount of the relevant subsidies in a simple framework. Assuming the government borrowing rate and the inflation rate are constant at their 2004 values given above, we first calculate the amount of equal annual payments a student would make, in order to pay off his or her loan in the average repayment period; the period in which half of the graduates pay their loan back. Based on the output of our simulation study (explained in appendix 1b) we estimate this period as eleven years and for simplicity we assume the graduate pays back with constant annual payments. We make the calculation first with the government borrowing rate and then with the academic year interest rate, that is based on the inflation rate. Table 42 shows these calculations for selected years in detail. The average loans are £2803 per year, so we used this figure for illustration.

Table 42 Interest rate subsidy calculation

Loan with market interest rate						Loan with SLC rate					
Year	Previous year balance	Amount borrowed	Year end with interest	Amount paid	End of year balance	Year	Previous year balance	Amount borrowed	Year end with interest	Amount paid	End of year balance
1	£0	£2,803	£2,926	£0	£2,926	1	£0	£2,803	£2,876	£0	£2,876
2	£2,926	£2,803	£5,981	£0	£5,981	2	£2,876	£2,803	£5,827	£0	£5,827
3	£5,981	£2,803	£9,171	£0	£9,171	3	£5,827	£2,803	£8,854	£0	£8,854
4	£9,171	£0	£9,574	£1,070	£8,505	4	£8,854	£0	£9,084	£936	£8,148
5	£8,505	£0	£8,879	£1,070	£7,810	5	£8,148	£0	£8,360	£936	£7,424
6	£7,810	£0	£8,153	£1,070	£7,084	6	£7,424	£0	£7,617	£936	£6,681
7	£7,084	£0	£7,395	£1,070	£6,326	7	£6,681	£0	£6,855	£936	£5,919
8	£6,326	£0	£6,604	£1,070	£5,535	8	£5,919	£0	£6,073	£936	£5,137
9	£5,535	£0	£5,778	£1,070	£4,708	9	£5,137	£0	£5,271	£936	£4,335
10	£4,708	£0	£4,916	£1,070	£3,846	10	£4,335	£0	£4,448	£936	£3,512
11	£3,846	£0	£4,015	£1,070	£2,946	11	£3,512	£0	£3,603	£936	£2,668
12	£2,946	£0	£3,075	£1,070	£2,006	12	£2,668	£0	£2,737	£936	£1,801
13	£2,006	£0	£2,094	£1,070	£1,024	13	£1,801	£0	£1,848	£936	£912
14	£1,024	£0	£1,070	£1,070	£0	14	£912	£0	£936	£936	£0

Next, we calculate the present value of the two streams of re-payments. The present value of re-payments of the loan with the (constant) government borrowing rate not surprisingly equals the present value of the borrowed amount (£8,060). The same figure is £7,052 for the loan with the (constant) SLC interest rate. The difference between these two values is the amount of subsidy on this average loan and it amounts to a £1,008. The rate of this subsidy to the borrowed £8,060 is 0.125, implying that the central government invests 13p for every pound that is borrowed by students. This calculation of course is simplistic and it is limited with the assumptions on the two interest rate figures.

Appendix 1b: Calculation of subsidies on the risk of the student loans

Part of the public funds used for student loans is due to financing the risk of default on repayments. Within the current student loan scheme, the graduates pay 9% of their income exceeding the threshold of £15,000 per annum through the tax system. This means if the graduate does not make an income exceeding the threshold for any reason including working overseas, unemployment or sickness, he or she doesn't make any repayments that year. After 25 years or when the graduate is 50 years old (60 if he or she was over 40 at time of last borrowing) any remaining debt is written off. It is this write-off that we refer to as default.

Since this new student loan scheme has been recently introduced, we do not have empirical information on repayments. We therefore decided to estimate the repayment rate with the help of a simulation study. Accordingly, we simulate the earnings and loan re-payments of 25,000 graduates, who are randomly assigned an employment status and an annual level of earnings. It is

assumed that the 3% inflation rate of 2004 will be steady and this would be the only interest applied to the student loans.

Initially, our intention was to build a relatively simple model, assuming homogeneity of the graduates in addition to independence of their economic activity from the previous periods. On the other hand, the question in hand is very much related with persistent unemployment or economic inactivity. There are those who experience prolonged periods of unemployment and those would be the ones who do not pay their loans off.

A quick review keeping the method and assumptions used in Appendix 1a, shows a constant annual income of £20,700 is sufficient to pay all the average student loan of £ 8,923 (£2,803 x 3 years, plus interest with inflation rate of 3%) in the given 25 years. Similarly, a graduate constantly earning the average graduate income near £26,700[49] would pay off this same loan amount if he or she did not work up to 15 years in the 25 years period. In other words, for the given amount of total loan, the repayment conditions seem to ensure graduates who regularly work would pay off all their debt in affordable instalments. Therefore if earnings and employment chances of graduates were evenly spread, all the student debt would be expected to be paid off.

However, we know that these 'evenly spread' assumptions are far from being plausible. On the contrary, it is well known that the employment probability (hazard rate) declines as the duration of unemployment rises. Both of the two explanations for this duration dependency are intuitive. Firstly, in the absence of major structural changes in the labour market, those who have been less likely to be employed will stay less likely to be employed (owing to worker heterogeneity). Secondly the longer the unemployment, the more the skills and morale of the worker deteriorate and the less work experience he or she gains compared to his or her peers (a real duration dependence argument).

We therefore employed the following strategies to address the issue of heterogeneity and unemployment dependency in our simulation. Firstly, we referred to empirical data on the economic status and earnings of graduates, paying attention to differences in gender, ethnicity and degree subject. Secondly, for female graduates we also considered changing patterns of economic activity in different age groups. Thirdly, we allowed the probabilities of having different economic activity states in the current period, to depend on the state in the previous period.

We applied the first strategy and the second by using two data sources. It is well recognised in the literature that the graduates face a period of relatively high unemployment as soon as they graduate, but this is a transitional period and within few years after graduation the unemployment rate falls and stabilises.[50] The Destinations of Leavers of Higher Education (DLHE hereafter) survey gives a very good snapshot of the employment and earnings of those who recently graduated, by questioning graduates in six to nine months after their graduation every year. Regarding the later years of the graduates' careers, we referred to the Labour Force Survey 2007, a survey of 60,000 households living at private addresses in the UK, collected by the Office for National Statistics.

Based on these data sources we prepared three sets of matrices. The first set takes the observed frequencies in the surveys as probabilities of having corresponding demographic characteristics like age, gender, ethnicity and subject degree. Again based on observed frequencies, the second set of matrices show how the cases will be assigned to five different economic activity states (full-time employee or self-employed, part-time employee or self employed, unem-

49 ISSP 2003, Simple average of male and female graduates' average annual earnings.

50 DLHE 2004/2005 shows a high unemployment rate of 6.55% of all graduates with known destinations for the recent graduates while according to Dolton et al (1990), this transitional unemployment stabilises to a level between 2 and 3 % of the economically active graduates within two years.

ployed, short term inactive, and long term inactive) given the demographic characteristics. It is worth noting at this point that, even with an extensive survey like the Labour Force Survey, the sample sizes may considerably fall when one distinguishes according to several criteria. For this reason, ethnicity is simplified to two groups; white and other in most matrices and the career path analysis is not done for the male graduates who seem to have relatively stable routes. The third set of matrices show the expected earnings of cases in a similar way.

The third strategy is applied with three parameters. The first parameter is to increase the probability of staying economically active for the graduates who were assigned to be economically active in the previous period, compared to other graduates with same gender, ethnicity and degree subject. The second and third parameters work in the same manner to increase the probability of staying economically inactive for graduates who were short term economically inactive and long term economically inactive respectively, in the previous period. In order to avoid the related probability figures from exceeding the level of 1, all three parameters behave in a logistic-like manner.[51] Although these parameters are chosen arbitrarily as 0.25, 0.15 and 0.30; they are in such a combination that the overall employment (as well as other economic activity states like part-time employment, etc.) levels are kept unchanged, hence it is a zero-sum model. We also run the simulation with three different sets of parameters. Those sets were [0.50, 0.30, 0.586] [0.75, 0.50, 0.857] and [0.1, 0.05, 0.14]. The resulting non-repayment rates were 3.64%, 4.53% and 3.78% respectively.

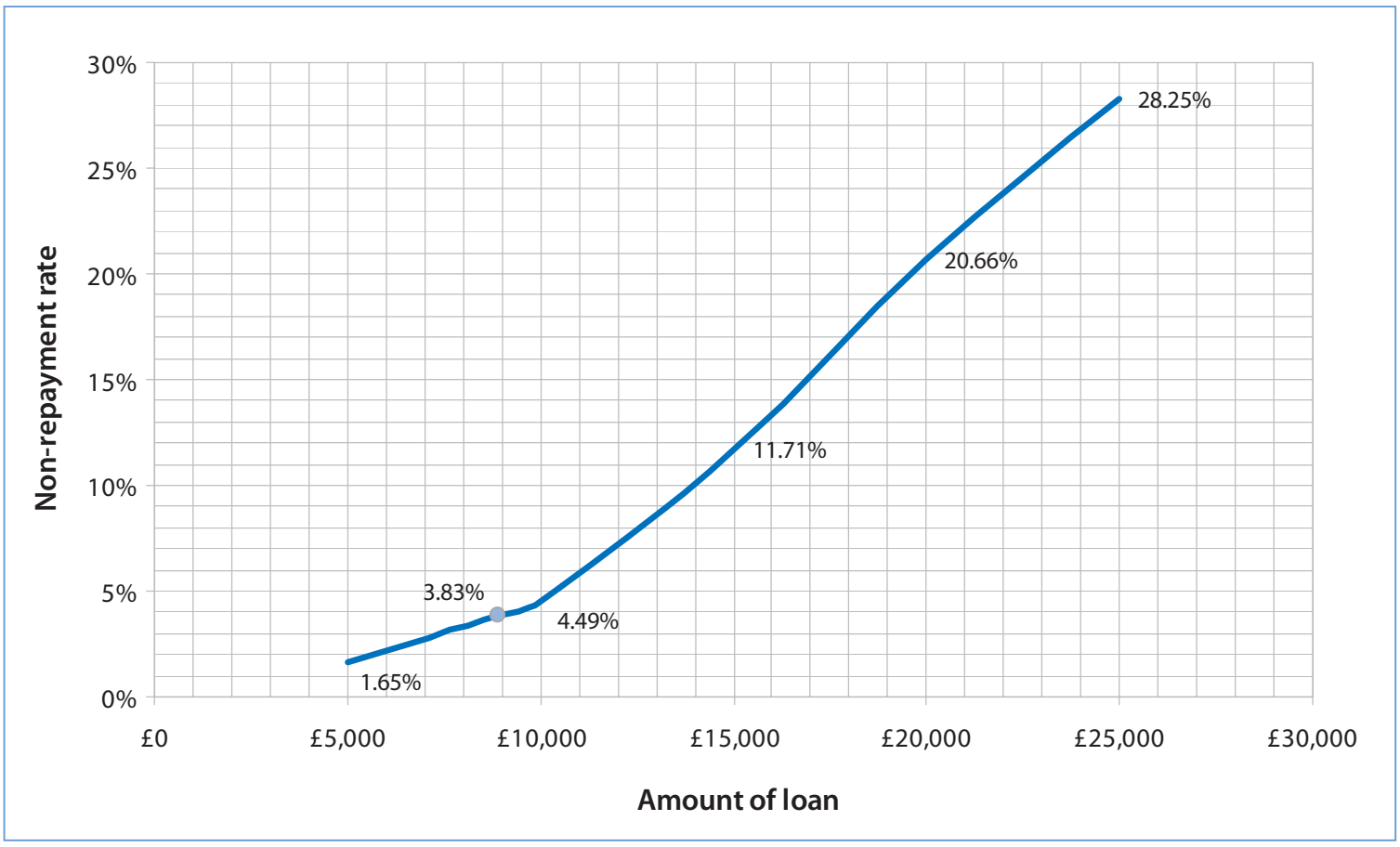
The simulation model is programmed to output the random numbers and the associated demographics, as well as economic activity status and earnings at each period. The output is later analysed in SPSS to check that the overall economic activity and earnings figures do not differ much from the average figures. With respect to the non-repayment rate for the student loans the following calculation is done; all the remaining debt of the 25,000 graduates at the end of the 25th year is summed up, and the rate of this figure on the future value of total debt (£8,923 of loans multiplied by 25,000) is the calculated non-repayment rate.

It is, however, important to note that since the repayments are income contingent, the value of total debt at graduation has important influence on the non-repayment rate. Since 2004/05 academic year, which was the year of analysis for our project, the maximum loan amount that the students can use has been increasing, particularly with the introduction of the tuition fee loans. We therefore run our simulation for different amounts of total loans. Figure 5 summarises the results of this study. If students graduate with a total loan of £20,000; £9,000 of this loan is not expected to be collected back.[52]

51 The original probability figure is added with its difference from 1, multiplied with the parameter. ($Prob_2=Prob_1+(1-Prob_1)$*parameter)

52 This figure does not include the 21% interest rate subsidies.

Figure 5 Non-repayment rate according to total loan amount at graduation



5 Country report of Germany

Authors: Astrid Schwarzenberger
Christoph Gwosć
HIS Higher Education Information System

Contents

5.1 The German higher education system – basic information

The German higher education system is characterised by its variety: On the one hand, each of the 16 federal states (*Länder*) is responsible for its respective education system (including higher education), which accounts for a broad spectrum of education policies, and on the other hand, there are different types of higher education institutions (HEIs). For this paper, only those institutions offering higher education at ISCED 5A level (or beyond) were taken into consideration: universities, *Fachhochschulen* (universities of applied sciences), *Kunst- und Musikhochschulen* (universities for music and the arts), and *Pädagogische* and *Theologische Hochschulen* (universities of pedagogy / of theology). ISCED 5B institutions are thus excluded. By far the most HEIs are public, though some are private – and the latter may also receive some public funding.

In 2006 (winter semester 2005/06), around 1,946,000 students were enrolled in some 350 German higher education institutions in ISCED level 5A and 6.[53] The Bachelor-/Master-structure is being gradually introduced since 1998; this process is to be completed by 2010.

As higher education falls within the scope of the 16 *Länder*, they are also responsible for funding their HEIs. Only concerning some general guidelines and in a few niches (e.g. the recent "Excellence initiative" for research funding) can the German Federal Ministry for Education and Research influence higher education funding. In all of the *Länder*, higher education institutions are largely state-funded: On average, universities receive 76% of their revenue from the state grant (excluding medicine), whilst this share is even 91% for *Fachhochschulen* (tuition fees were not taken into account yet in this breakdown).[54] Until recently, students were not required to pay tuition fees (except for the few private HEIs and in some other exceptional cases; however, a relatively small administrational fee was levied everywhere), but since 2005, it is open to the *Länder* whether or not to charge tuition fees. Some of them have introduced such fees of up to 500€ per semester for the first time in the winter semester 2006/07. New loan systems to cover specifically for tuition fees were introduced to complement the already-existing general student loan system (not tied to tuition fees).[55] However, since general tuition fees were only introduced after 2004, they practically do not play a role in this report's data for Germany.

5.2 Macro level

Generally, only two items are taken into account when public support to students and their families is discussed in Germany: the BAföG student grant/loan and child benefits. However, these make up only a part of the public support; indeed, public support to students and their families is actually marked by a tremendously large spectrum: There is a great number of grants, subsidies and tax exemptions that may apply – all related to the student status. The list of items presented here is not exhaustive – in fact, the list really is much longer yet, but for some of the support forms, insufficient data made it impossible to express their impact in monetary terms (this problem was also encountered by the Fraunhofer Institut, cf. Fraunhofer Institut 2006).

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53 Statistisches Bundesamt, FS 11/Reihe 4.1, Bildung und Kultur, Studierende an Hochschulen, Vorbericht, Wintersemester 2006/2007, own calculations.

54 For universities, another 20% come from third-party funding and 4% are operating income. *Fachhochschulen* also receive 4% of their income from operating income, but just 5% come from third-party funding. For more information on funding of HEIs in the respective *Länder*, cf. Leszczensky / Orr 2004 (updates at http://evanet.his.de/infoboerse).

55 For more information on the introduction of tuition fees, cf. Ebcinoglu 2006.

Even so, the list of items constituting public expenditure for higher education that is not geared towards the HEIs themselves is quite considerable, as Table 43 demonstrates: Whilst there is just one item of support paid directly to HEIs (teaching allocations), there are 28 items of support granted to students and their parents.

Note, however, that for a specific family with one or more student children, these forms of support may mutually exclude each other: For instance, a child-related add-on to unemployment benefits would not be granted at the same time as a tax relief for income from employment.

Owing to the extraordinarily high number of support items and the ensuing calculations required, it would exceed the limits of this report to include all explanations on the calculations for Germany within this report. Therefore, comments on how the various forms of support were calculated for Germany are published in a separate annex that can be found on the project's website at www.his.de/cost-sharing.

Table 43 Total public expenditure on higher education in 2004

Public Expenditure Category	Total in 1,000 €	Share of total
Teaching allocations		
Total of Teaching allocations	**9,888,680**	**58.493%**
Direct support (cash)		
BAföG grants	760,115	4.496%
Scholarships (ISCED 5A/6) from various *Studierenden-förderungswerke*	92,043	0.544%
Orphan's pensions from statutory pension insurance, statutory accident insurance and civil service social security funds	165,999	0.982%
General housing benefits	66,484	0.393%
Arbeitslosengeld (unemployment benefits)	1,706	0.010%
Subsidies on interest for *BAföG* loans (public loan)	89,103	0.527%
Intended cancellation of *BAföG* debt (public loan)	99,670	0.590%
Unintended default of *BAföG* loans (public loan)	20,931	0.124%
Total of Direct support (cash)	**1,296,051**	**7.666%**
Direct support (non-cash)		
Benefits from non-contributory statutory health insurance	1,225,788	7.251%
Benefits from reduced contribution for statutory health insurance	384,857	2.276%
Benefits from non-contributory statutory long term care insurance	152,443	0.902%
Benefits from reduced contribution for statutory long term care insurance	34,965	0.207%
Subsidies for facilities	667,587	3.949%
Subsidies for transportation	130,994	0.775%
Total of Direct support (non-cash)	**2,596,634**	**15.359%**

Public Expenditure Category	Total in 1,000 €	Share of total
Indirect support (cash)		
Child benefits (parents working outside the civil service)	1,442,083	8.530%
Child benefits (parents working for the civil service)	477,913	2.827%
Family allowances, local allowances and social allowances (parents working for the civil service)	276,421	1.635%
Financial aid to civil servants and judges	196,525	1.162%
Child-related add-on to *Arbeitslosengeld* (unemployment benefits)	27,230	0.161%
Child-related add-on to *Arbeitslosenhilfe* (unemployment benefits)	14,594	0.086%
Child-related add-on to short-time working benefits	570	0.003%
Child-related add-on to allowance for retirement provisions	11,282	0.067%
Child-related add-on to home owner's allowance	99,064	0.586%
Kinderfreibeträge (tax exemption for dependant children) according to § 32 EStG	100,620	0.595%
Tax reduction for single parents according to § 24b EStG	28,144	0.166%
Unterhaltsfreibetrag (tax exemption for children in education) according to § 33a Abs. 1 EStG	168,859	0.999%
Ausbildungsfreibetrag (tax exemption for non-resident children in education) according to § 33a Abs. 2 EStG	170,648	1.009%
Tax exemption for add-on taxes (church tax and solidarity surcharge)	110,403	0.653%
Total of Indirect support (cash)	**3,124,356**	**18.481%**
Indirect support (non-cash)	**-**	**-**
Total	**16,905,721**	**100%**

Source: OECD online database (teaching allocations); own calculations based on national data from numerous sources, cf. separate annex

Notes: Number of students including post-graduate students in 2004: 1,927,299 (ISCED 5A/6), without *Verwaltungsfachhochschulen*, including *Bundeswehrhochschulen*

The sum spent on teaching allocations (according to OECD data; however, according to some German statistics, the sum for teaching allocations is higher) constitutes not much more than half the sum of all items of public expenditure for higher education (58%).

Concerning all these other items, the most important share is attributed to forms of indirect support: These range from child benefits via child-related add-ons to parents' unemployment benefits to numerous types of tax relief (exemptions, reductions) for parents of student children. All these account for 18% of all public expenditure.

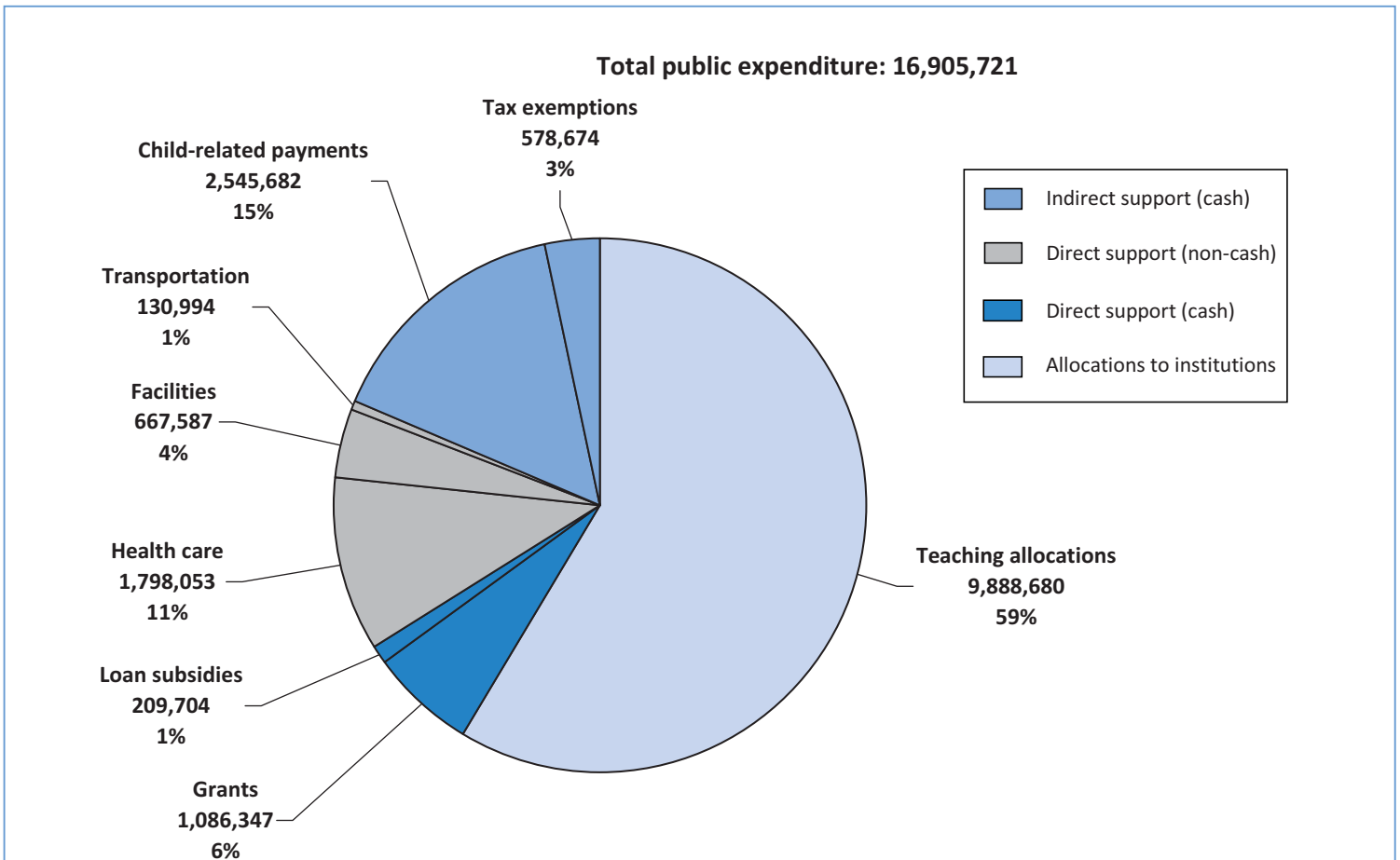
Another quite substantial item is the free inclusion of students in their parents' statutory health insurance. Together with free inclusion in parental long-term care insurance and the reduced rates for these types of insurances, this accounts for 11% of the public support.

The "visible" support forms – BAföG grant, child benefits and family allowances (i.e. the first three items listed under indirect support in table 43) – constitute only 17% of all public expenditure (and 42% of all support to students and their families); when subsidies on BAföG loans, cancellations of such loans and default are also taken into consideration, these basic support forms make

up 19% of all public expenditure (or 45% of all public subsidies excluding teaching allocations). This demonstrates that the sum of all other, less obvious forms of support is very much underestimated in Germany (if the support items that could not be expressed in financial terms for lack of data could also have been included, the importance of all support forms beyond BAföG and child benefit would be even more pronounced).

Figure 6 shows the results for all these support items on a more aggregated level, using the categories that are referred to in the international comparison.

Figure 6 Public expenditure for higher education in 1000 € in 2004



Source: Own calculations based on national data from numerous sources, cf. separate annex

Note: Rounding differences may occur.

The data on public expenditure are now contrasted with the private expenditure on higher education on the students' side (however, since survey data have shown that student income data are more reliable than their expenditure data, we use these as a proxy; cf. the general research design laid out in chapter 2.4). The student data were taken from the EUROSTUDENT project; in Germany, the data for this project stem from the 18th *Sozialerhebung* carried out by HIS and published via the *Deutsches Studentenwerk* (Isserstedt et al, 2007).

It must be noted that owing to the use of different data sources for public and private funding (in line with the specifications for the research approach, cf. chapter 2.4.2.2), these data do not match those for public support exactly, though of course, data have been adjusted for inflation/deflation where necessary.

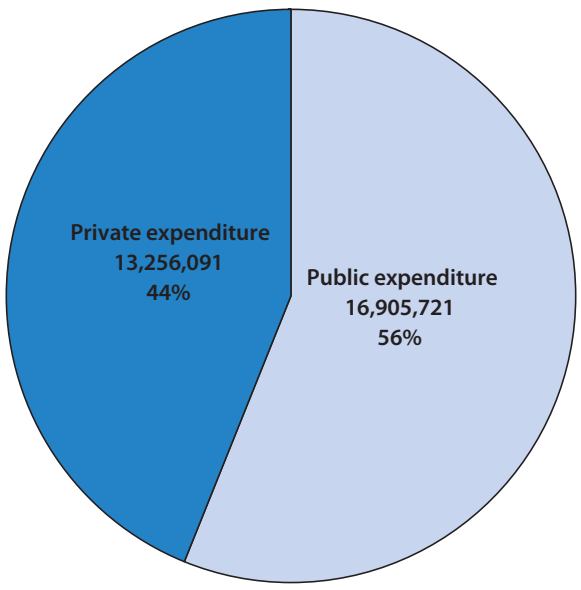
Table 44 General overview macroeconomic analysis: Total expenditure on higher education

Public expenditure		Private expenditure	
Category	**Total in 1,000 €**	**Category**	**Total in 1,000 €**
Teaching allocations[56]	9,888,680	Student income[57]	17,706,173
Direct support (cash)	1,296,051	minus Direct support (cash)	- 1,325,726
Direct support (non-cash)	2,596,634		
Indirect support (cash)	3,124,356	minus Indirect support (cash)	- 3,124,356
Indirect support (non-cash)	-	minus Indirect support (non-cash)	-
Total	**16,905,721**	**Total**	**13,256,091**
Share of total expenditure	**56%**	**Share of total expenditure**	**44%**

Source: OECD, own calculations based on national data and 18th Sozialerhebung (public expenditure: reference year 2004; reference year for private expenditure: 2006)

As the students' income serves as a proxy for their expenditure (cf. chapter 2.4.2), the parts of the public subsidies that are included in their income have to be subtracted, as they would otherwise be counted twice. Once this calculation is done, the overall teaching-related amounts for higher education are 16.9 billion € from the public side compared to 13.3 billion € from the private side, i.e. students and their families. The overall expenditure from both sides thus exceeds 30 billion €. Based on this total, the shares are 56% for public and 44% for private expenditure, as is shown in Figure 7.

Figure 7 Relationship of public and private expenditure for higher education in 1000 € (sum: 30,161,812 thousand €)



Source: OECD, own calculations based on national data and Sozialerhebung 2006 (public expenditure: reference year 2004; reference year for private expenditure: 2006)

One cannot simply judge these different shares in the teaching-related cost of higher education as high or low – this depends on the comparison to other countries.

56 Source: OECD online database.

57 Basis for calculation: arithmetic mean.

However, what can be said even without comparing the German scenario with other countries is that the multitude of observed support options makes it rather difficult to achieve a clear steering effect. Indeed, the augmentation of the BAföG that has currently been agreed upon in the German parliament is essentially thwarted by the recent reform of the child benefit system, where the age limit for student children has been reduced from 27 to 25 years. From this perspective, even the augmentation of the BAföG may not really mean more funds for the students over their entire period of study.

In the public discussion of support to students, hardly any issues other than BAföG and child benefits are touched upon, so it could rightly be questioned whether students – and their parents – really are fully aware of the other existing support options, and especially of the impact of such support forms in terms of planning reliability.

Note should be taken that the figures quoted here do not even take administrational costs of the respective support item into account – though given the different forms of support and the different bodies responsible for administering them, such administrational costs would hardly be negligible.

In this analysis on macroeconomic level, a whole range of questions remains unanswered: Does the level of support differ according to a student's socio-economic background? How and where do incentives to participate in higher education work, who are they targeted to? Which approach achieves the highest equity? Is the support concentrated on specific groups who most need it or is it spread out quite evenly across the whole (potential) student population? The following analysis on microeconomic level gives a better insight into such matters.

5.3 Micro level

For the calculations on microeconomic level, data on Germany from EU-SILC were used to establish four income groups. In all cases, only households with children were taken into account, because this comes close to the situation where a student child still is considered to be part of the household. The income ranges for the four groups are shown in the following table. For each of these groups, the median was calculated. In Germany, the gross income was required for the calculation of indirect subsidies, so only the income range and median income referring to gross income are reported here:

Table 45 Gross income of different income groups of families with children

	Income range (in €)	Median income	Observations
Lowest income group	0 < 30,792	20,472	1,265
Medium income group	30,792 < 46,097	38,848	1,265
High income group	46,097 < 64,371	54,459	1,265
Highest income group	≥ 64,371	83,205	1,265

Source: EU-SILC data on Germany

To combine this with data on student income, data from the EUROSTUDENT project were used. In Germany, they come from the social survey (*Sozialerhebung*) 2006 (Isserstedt et al., 2007). In the recent rounds of this survey, the respective parental income was not asked for (and previous such

surveys have shown that answers on parental income are not perfectly reliable anyway: e.g., gross and net income are mixed up by the students, so that the results are not dependable). Therefore, a proxy is used in that survey to establish different social background groups: A combination of parental education and occupation is used to derive four social background groups: low, lower medium, higher medium and high social background group.

All subsequent calculations are based on the assumption that these social background groups mirror the differences between the income groups. Thus, information on the income and expenditure of a student from a low social background group would be linked to information taken from the EU-SILC data on the income of the respective parents from a low income group (taking the parental income into account is important in Germany because quite a number of indirect support items, e.g. various types of tax relief, are made available to students' parents).

For each of the different background cases, two sub-scenarios were explored: In one of them, the student would still be living at home; in the other, the student would no longer live with his/her parents. All in all, eight different scenarios are thus looked at.

Table 46 Student living situation by social background (German ISCED 5A students aged 18-24, no severe disabilities, not at private universities)

Social background	All students		Student living at home			Student living away from home		
	Total number	Percentage of total	Total number	Percentage per SES	Percentage of total living at home	Total number	Percentage per SES	Percentage of total living away from home
Low	1,045	11.1	336	13.6	32.2	705	10.2	67.5
Lower medium	2,341	25.0	709	28.7	30.3	1,623	23.6	69.3
Higher medium	2,325	24.8	634	25.7	27.3	1,687	24.5	72.6
High	3,671	39.1	788	31.9	21.5	2,868	41.7	78.1
Total	**9,382**	**100.0**	**2,467**	**100.0**	**26.3**	**6,883**	**100.0**	**73.4**

Source: Special analysis of the German social survey (18th *Sozialerhebung*)

Remainder to 100% in each row: missing information on living situation

To ensure that the respective results on the shares of public/private funding can really be compared to each other, an artificial prototype family was constructed. This way, all differences other than in income are eliminated and cannot distort comparison. The prototype family was defined as follows: Both parents alive, married and living together, both parents earning income from employment (but only from employment), only one child (i.e. the student).

Owing to the highly complex taxation laws in Germany, further assumptions on the prototype family had to be made to compute indirect support: The parents would live in rented accommodation, are ensured via the statutory health insurance, they both pay church taxes, neither works in public services, one parent earns 50% of the other parents' income (i.e. one third of family income).

Due to the necessary specifications for the prototype family, only a few of the support forms theoretically possible were actually applied to the prototype family: Child benefits, *Kinderfreibetrag* (tax exemption for dependent children) according to § 32 EStG for students' parents, *Ausbildungsfreibetrag* (tax exemption for non-resident children in education) according to § 33a Abs. 2

EStG for students' parents and tax exemptions from add-on taxes (church tax and solidarity surcharge) for students' parents.

The results on indirect support were derived by calculating how much indirect support a student's parents would have received (two different results depending on whether or not the student lives at home); this was compared to what the same prototype parents would have received, excluding child-related support.

Table 47 Mean yearly income and expenditure of students by living situation and social background

Socio-economic status	Student living at home		Student living away from home	
	Income	Expenditure	Income	Expenditure
Low	6,367	5,449	8,400	7,548
Lower medium	6,787	5,866	8,403	7,632
Higher medium	6,405	5,386	8,547	7,787
High	6,375	5,435	8,928	8,141

Source: Special analysis of the German social survey (18th *Sozialerhebung*)

Table 47 shows the income and expenditure reported by the students in the social survey used for EUROSTUDENT. Unsurprisingly, students not living at home have higher income and expenditure levels than their peers who live with their parents. Concerning the differences by SES, it is noteworthy that the overall income and expenditure does not show much variation. Only for those students living away from home is there a slight increase in income (and expenditure) by SES.

But whilst the total amount of the students' reported is about the same, the composition of the income from different income sources varies considerably by SES. When decomposing the expenditure, it becomes clear that the differences observed stem from mainly different maintenance costs, as is shown in Table 48.

Table 48 Mean monthly income and expenditure components of students by living situation and SES (with significance level)

	Student living at home					Student living away from home				
SES F	low	lower med.	higher med.	high	F	low	lower med.	higher med.	high	F
Income categories										
Grants	66.12	35.54	22.05	11.00	60.13***	144.62	96.18	57.40	28.05	355.67***
Public loans	61.80	33.65	18.84	7.49	82.89***	142.49	92.15	51.37	22.07	481.12***
Earnings	123.85	169.93	153.12	125.25	8.69***	124.66	131.30	120.32	104.33	8.93***
Family contr.	245.90	295.05	314.01	360.09	13.12***	258.81	345.20	454.72	557.21	444.38***
Other	32.96	31.37	25.70	27.45	0.51	29.43	35.44	28.49	32.38	1.57
Expenditure categories										
Cost of study	59.31	58.36	55.26	54.46	2.19*	53.46	53.68	54.77	55.50	1.5
Maintenance	394.79	430.44	393.53	398.44	2.04	575.57	582.27	594.11	622.89	22.54***

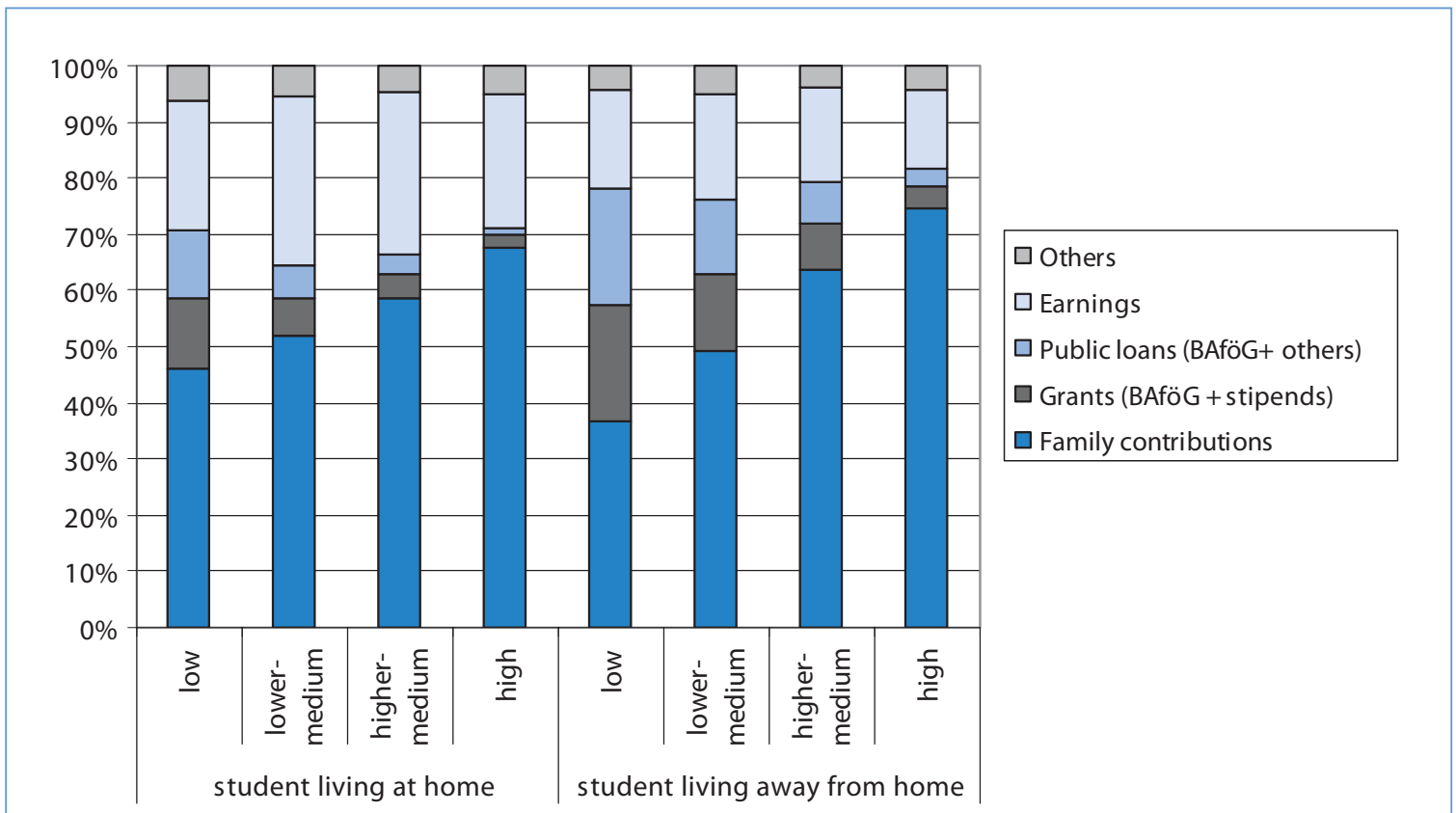
* significant at 10% level
** significant at 5% level
*** significant at 1% level
Source: Special analysis of the German social survey (18th *Sozialerhebung*)

When splitting up students' income into sub-categories by student prototype, it becomes clear that practically all the differences observed between the student prototypes are highly significant (except for the residual category "other income"). When looking at their expenditure, the cost of study faced by student living at home can be deemed significantly different between distinct SES groups; and for students living away from home, the differences in their maintenance costs are highly significant.

The differences in income sources are also shown in Figure 8: The higher the SES, the higher the share that the family contributes to a student's income. Whatever the family does not provide is largely made up for by BAföG for students from a lower SES.[58] Half of the BAföG is paid out as a grant, the other half is a loan; this is therefore split up into two categories here (grants and public loans). The other income items attributable to these categories are quite negligible in comparison. So when looking at grants and public loans (i.e. mainly BAföG), it would seem that this form of support achieves equity amongst students in terms of income shares (even though half of the BAföG is a loan, so that those who take out more money will obviously also have to repay more later). This implies that especially for students from the lowest SES, the public support does achieve the goal of compensating for a lack in parental financial support. However, it is noteworthy that this is not as well achieved for students from a lower- and higher-medium SES.

To arrive at a comparable overall income level, students make up for the differences in family contributions, grants and public loans by own earnings, thereby participating very directly in bearing the costs of their studies. Reflecting the support gap observed for the students especially from a lower- (but also higher-) medium SES, their participation by own earnings is the greatest.

Figure 8 Composition of students' reported income by SES and living situation (in %)



Source: Special analysis of the German social survey (18th Sozialerhebung)

58 Note that the students' reported income shown here includes *all* BAföG (i.e. both grant and loan part), whilst the tables and figures referring to the macro analysis – in line with the research approach outlined in chapter 2.4 – include only the part of the BAföG that is given out as a grant (since the other half paid out as a loan will be paid back by the students at least partially).

Concerning public support, this study goes beyond grants and public loans – so to enable a comparison of public subsidies versus income and expenditure, Table 49 also reports the "hidden income", i.e. direct non-cash support, in line with the research design laid out in chapter 2.4.3. This means that health care subsidies as well as subsidies for facilities and transportation were added. As these direct non-cash subsidies added to income and expenditure here do not differ by SES (see below), the observations made on Table 47 do not change.

Table 49 Mean yearly public subsidies and income and expenditure of students by social background and living situation

Socio-economic status	Student living at home			Student living away from home		
	Income incl. direct non-cash support	Expenditure incl. direct non-cash support	Public subsidies	Income incl. direct non-cash support	Expenditure incl. direct non-cash support	Public subsidies
Low	8,301	7,383	4,669	10,334	9,482	5,720
Lower medium	8,720	7,799	4,527	10,337	9,565	5,650
Higher medium	8,338	7,319	4,330	10,481	9,720	5,122
High	8,309	7,368	4,523	10,862	10,074	5,135

Source: Special analysis of the German social survey (18th *Sozialerhebung*); own calculations

When looking at the amounts of public subsidy that students from each of the groups profit from (Table 49), one can observe that the total amounts for public subsidies made available to students living at home are lower than those for students living on their own. Given that students living away from home may receive higher grants, this is to be expected.

It can also be seen that the lower the SES, the higher the overall public support – with the exception of students with a high SES. A more detailed look into the support items that apply here will explain why (see below, Table 52).

When all public support is expressed as a percentage of the respective income (including hidden income in the form of direct non-cash support), it becomes clear that public subsidies account for around half of a student's income, as is shown in Table 50. Students who live with their parents profit to a slightly greater degree from public support than their peers who have moved out (Students from lower medium SES excepted). The differences by SES are quite small from this perspective, so one might ask whether this is really intended. For students living away from their parents, the tendency that the higher their socio-economic background, the less they profit from public subsidies still holds true. For the students living with their parents, however, this pattern is less distinct.

Table 50 Public subsidies as share of student income by students' social background and living situation

Socio-economic background	Student living at home			Student living away from home		
	Income incl. direct non-cash support	Public subsidies	Public subs. / all income	Income incl. direct non-cash support	Public subsidies	Public subs. / all income
Low	8,301	4,669	56%	10,334	5,720	55%
Lower medium	8,720	4,527	52%	10,337	5,650	55%
Higher medium	8,338	4,330	52%	10,481	5,122	49%
High	8,309	4,523	54%	10,862	5,135	47%

Source: Special analysis of the German social survey (18th *Sozialerhebung*); own calculations

Table 51 contrasts public subsidies with students' expenditure: Owing to the similar total income and expenditure patterns, the observations on the students' income and the respective share of public subsidies therein (differentiated by living situation and SES) can also be made for their expenditure.

Table 51 Public subsidies as share of student expenditure by students' social background and living situation

Socio-economic background	Student living at home			Student living away from home		
	Expenditure incl. direct non-cash support	Public subsidies	Public subs. / all exp.	Expenditure incl. direct non-cash support	Public subsidies	Public subs. / all exp.
Low	7,383	4,669	63%	9,482	5,720	60%
Lower medium	7,799	4,527	58%	9,565	5,650	59%
Higher medium	7,319	4,330	59%	9,720	5,122	53%
High	7,368	4,523	61%	10,074	5,135	51%

Source: Special analysis of the German social survey (18th *Sozialerhebung*); own calculations

But how is the public subsidy composed in each of these cases? Is the tendency that the higher the income group, the lower the public support to be found for each of the support items? And how can the comparatively high support for students with a high SES be explained? Some insights into this are given in Table 52.

Table 52 Different forms of public subsidies by social background and living situation (in € for the year 2006; rounding differences may occur)

	Student living at home				Student not living at home			
Support	**Low SES**	**Lower medium SES**	**Higher medium SES**	**High SES**	**Low SES**	**Lower medium SES**	**Higher medium SES**	**High SES**
Grants	793	427	265	132	1,735	1,154	689	337
Loan subsidy	94	55	33	13	203	142	81	35
Indirect support (excl. child benefit)	0	264	251	597	0	572	571	982
Child benefit	1,848	1,848	1,848	1,848	1,848	1,848	1,848	1,848
Health care subsidy	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512
Subsidies for facilities and transportation	422	422	422	422	422	422	422	422
Total	4,669	4,527	4,330	4,523	5,720	5,650	5,122	5,135

Source: Special analysis of the German social survey (18th *Sozialerhebung*); own calculations

Obviously, there are some contradictory tendencies to be observed here:

- Whilst the first three support items are targeted in that they differ by SES (though not all in the same direction), the other three are following a flat-rate support model.
- The lower a student's social background, the higher the grants paid out to him/her. Also, students not living at home profit more from the loans than the students who live with their parents. As the amount of *subsidy* for the loan taken out depends on the amount of the loan itself (subsidy referring to BAföG loan only), this pattern is repeated in the subsidy on loans.[59] This is to be expected and should be quite in line with what is politically intended.
- Concerning indirect support forms (except child benefit), it is also true that these are higher for students not living at home than for those students living with their parents – this is largely due to the *Ausbildungsfreibetrag* (a tax exemption granted to parents whose student child lives apart from them); so this is to be expected and politically intended. Concerning this type of support, the *Kinderfreibetrag* and the tax exemption from add-on taxes, the students from the highest income group profit the most, whilst the income of parents from the lowest income group is indeed so low that they do not even profit from the support options made possible here. Whether or not this is politically intended to this *extent* may be questioned.
- Regardless of the social background, the amount of child benefits paid is always the same, which is undoubtedly politically intended; and it is also the same regardless of the student's housing status.
- The subsidies on health care as well as on facilities and transport are deemed to be the same for all students, regardless of their social background and living situation: A student who is in-

59 Here, the loan subsidy only refers to the interest-related subsidy. Intended cancellation of BAföG debt and unintended default of BAföG loans are not taken into account here, since no data on loan repayment by SES were available. As the loan subsidy only refers to the interest-related subsidy, this means that the loan subsidy included here is probably somewhat lower than it actually is.

cluded in his/her parents' health insurance (and long-term care insurance) would be subsidised by the state compared to a young person who pays even the lowest possible rate offered by statutory health insurances. This lowest possible rate was used to establish the amount of the subsidy. Likewise, the subsidies for HEI facilities such as dining halls and for transport are the same for all students, as students essentially profit from them to the same degree.

5.4 Conclusions

In the macro analysis, it has been shown that the share that the public side bears of the teaching-related cost of higher education amounts to 56%, compared to 44% for the private side (students and their parents). The teaching allocations constitute only about 58% of this public expenditure, so the share spent on study-related support to households is considerable. It has been shown that public support to students and their parents goes far beyond the forms of support that are generally discussed in public – BaföG and child benefits – not only in terms of the number of other support items, but also concerning the amounts in question. Indeed, a very characteristic feature of the macro analysis for Germany is the very long list of public support items to students and their parents – though not even all such items were included here, since not all of them can be expressed in monetary terms. The high share of support that is geared not towards the students themselves, but towards their parents is also a prominent feature of public support in Germany. This becomes even more noticeable when Germany is compared to the other countries.

As far as the micro analysis is concerned, one important observation is that whilst the total income reported by the students is nearly the same regardless of socio-economic status, the composition of the income through various income sources differs considerably by SES: Whilst students from a high SES are largely supported by their parents, students from a low SES have to rely more on public support especially in the form of BAföG.

When other public subsidies, too, are put in relation to students' income, though, it becomes clear that, relatively speaking, the share of public subsidies in their income (including hidden income in the form of direct non-cash support) is almost the same for all students. The multitude of public support items are linked to the highly complex taxation system in Germany, and in the micro analysis, they have been limited to just a few items for the calculations.

From these calculations, it has become clear that there are very different types of support items at work at the same time: Firstly, there are flat-rate support items that do not differentiate by SES (child benefits), and the non-cash support to students (e.g. subsidies for transportation) does not differentiate by SES either. Secondly, there are subsidies designed to reduce differences by SES, such as the means-tested BAföG. Thirdly, though, there are also numerous support items especially in the form of tax exemptions granted to students' parents that increase differences between SES groups and essentially favour students from high SES. Clearly, these different types of support are partially contradictory to each other and may compensate each other's effect. Whilst it may be assumed that each of these effects was politically intended, one might question whether the degree of these effects and, as a consequence, the overall result that public support constitutes about the same percentage in each student's income was also intended. With regard to the generally acknowledged need to mobilise more students from socio-economically disadvantaged backgrounds – which ties in with the issue of excellence versus efficiency –, the question is raised if the existing mix of flat-rate and targeted support is appropriate to achieve this aim.

And as the indirect support in the form of tax benefits favours those students whose parents have a high income, one might ask if this type of support is really appropriate.

References

Ebcinoglu, F. (2006): *Die Einführung allgemeiner Studiengebühren in Deutschland. Entwicklungsstand, Ähnlichkeiten und Unterschiede der Gebührenmodelle der Länder* [The introduction of tuition fees in Germany – Stage of development, similarities and differences between the Länder's tuition fee models]. HIS Kurzinformation A4/2006. Hanover: HIS.

Fraunhofer Institut (2006): *Familienbezogene Leistungen und Maßnahmen des Staates*. Published on the website of the BMFSFJ (Federal Ministry for families, senior citizens, women and youth). Retrieved on 4 April 2007 from http://www.bmfsfj.de/bmfsfj/generator/RedaktionBMFSFJ/Internetredaktion/Pdf-Anlagen/kompetenzzentrum-leistungen,property=pdf,bereich=,sprache=de,rwb=true.pdf.

Isserstedt, W. / Middendorff, E. / Fabian, G. / Wolter, A. (2007): *Die wirtschaftliche und soziale Lage der Studierenden in der Bundesrepublik Deutschland 2006. 18. Sozialerhebung des Deutschen Studentenwerks durchgeführt durch HIS Hochschul-Informations-System GmbH* [Economic and Social Conditions of Student Life in the Federal Republic of Germany 2006. 18th Social Survey of the Deutsches Studentenwerk, carried out by HIS Higher Education Information System GmbH]. Bonn / Berlin: Bundesministerium für Bildung und Forschung.

Leszczensky, M. / Orr, D. (2004): *Staatliche Hochschulfinanzierung durch indikatorgestützte Mittelverteilung. Dokumentation und Analyse der Verfahren in 11 Bundesländern* [State funding of higher education through indicator-based allocations – Documentation and analysis of procedures in 11 German states]. HIS Kurzinformation A2/2004. Hanover: HIS.

OECD online database: Data for 2004 retrieved on 16 February 2007 from http://stats.oecd.org/WBOS/Default.aspx.

Statistisches Bundesamt (2006): Fachserie 11, Reihe 4.3.2. *Bildung und Kultur, Monetäre hochschulstatistische Kennzahlen* [Education and culture, Monetary indicators on higher education]. Wiesbaden: Statistisches Bundesamt.

Statistisches Bundesamt (2007): Fachserie 11, Reihe 4.1. *Bildung und Kultur, Studierende an Hochschulen, Vorbericht, Wintersemester 2006/2007* [Education and culture, Students at higher education institutions. Pre-report, winter semester 2006/07]. Wiesbaden: Statistisches Bundesamt.

6 Country report of the Netherlands

Author: Hans Vossensteyn
Center for Higher Education Policy Studies (CHEPS)

Contents

6.1 Introduction

This report includes a case study on the public and private contributions to the costs of higher education in the Netherlands. It particularly analyses the funding and expenditure streams that are necessary and done to make students getting a higher education and paying all their related expenses. The report takes particularly an analytical perspective on the various monetary streams to pay the costs of higher education, focussing on the costs for teaching, not for research. As such it analyses the public funds made available for supporting the teaching function of higher education institutions as well as all public funds made available for students to pay for the costs of study and for living expenses. In addition, this report thoroughly analyses the private sources used to make students pay for study costs and living expenses. Altogether this implies two types of analyses. The first takes place at macro level, including public expenditure for teaching and students in higher education added with aggregated data on students' own income and expenditure. The second analysis takes place at micro level, where data on income and expenditure of students is analysed in a more detailed way and leading into 8 prototype students differentiated by socio-economic background and whether they are living at home with their parents or independently.

As a result the report draws on various sources and study methods. First it relies on publicly available statistics and reports on the expenditures for higher education. Second the study uses micro data to make more detailed analyses. In order to divide the prototype students according to socio-economic background, we apply Eurostat EU-SILC data on household income.

6.2 Student financing in the Netherlands

This report focuses on the public and private contributions to higher education teaching in the Netherlands. In this chapter we start off with a brief description of Dutch higher education and then we will discuss student financing in the Netherlands, including tuition fees and student support policies.

6.2.1 The Dutch higher education system

The Dutch higher education system is a binary system and consists of 13 universities and around 50 hogescholen.[60] The hogescholen enrol about two-thirds of the total number of Dutch higher education students. In 2004/05 there was a total of 546,200 students and in 2006/07 574,140 (366,440 in HBO and 207,700 in universities). Of these the proportion of part-time students was almost 16% in 2004/05 and about 15% in 2006/07. With regard to the living situation, 29% of the Dutch fulltime students live at their parental home and 71% live away from home. The situation is different for HBO students, where 40% lives with their parents, whereas only 22% of university students live at their parental home.

Besides the 13 traditional research universities, a number of small "designated institutions" are part of the university sector: a university for business administration, four institutes for theological training and a humanistic university, as well as several international education institutes.

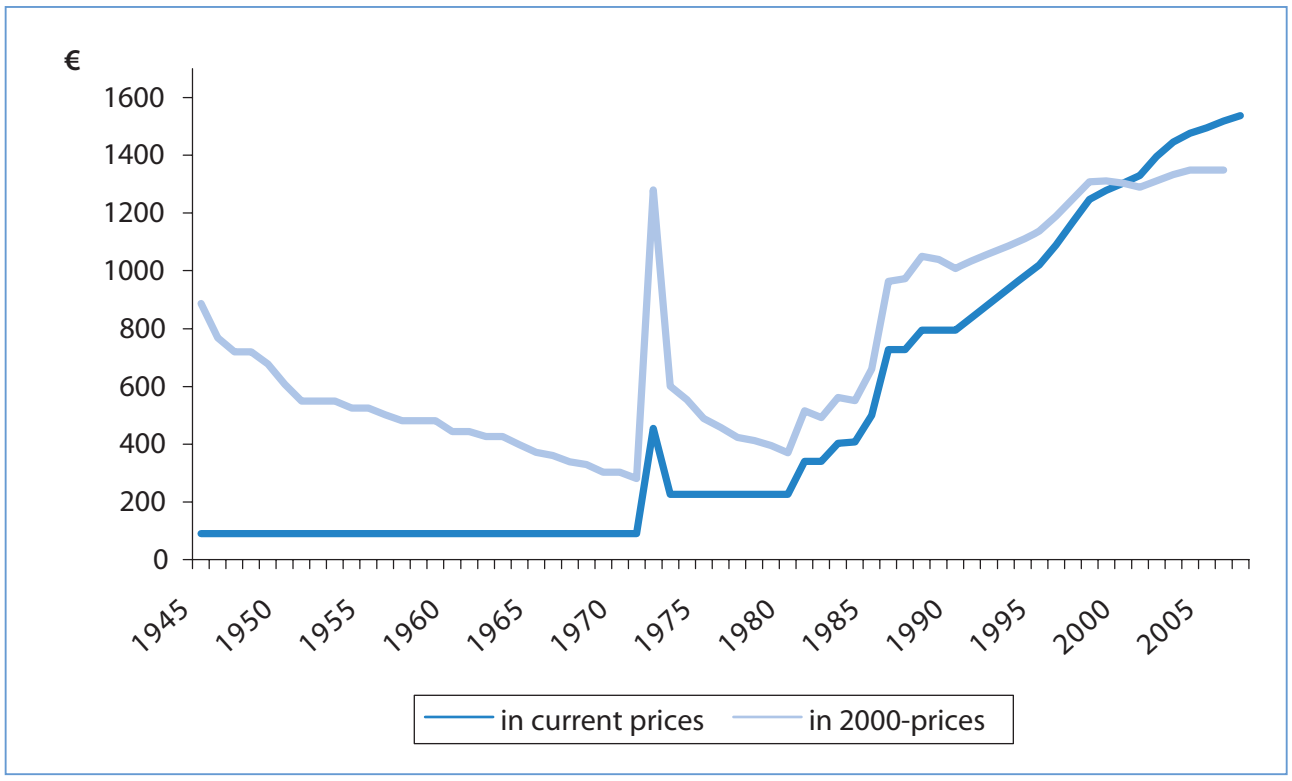
60 Outside the Netherlands, the *hogescholen* are officially allowed to promote themselves as universities of professional education.

These are formally part of the higher education system, but are usually not included in the educational statistics and only to a limited extent are they influenced directly by overall higher education policy. Next to hogescholen and universities, higher education in the Netherlands is also provided through the Open University, located in Heerlen. The Open University offers a wide range of courses, which may lead to both formal university and higher vocational education degrees. No other formal sectors of post-secondary education exist in the Netherlands. However, the Netherlands has a large number of private (not publicly funded) teaching institutes and organisations that offer recognised certificates, diplomas and degrees in various professional fields like accountancy, business administration, etc. Quite often these are structured as 'external studies' in the sense of correspondence and or distance learning courses with limited face-to-face interaction.

6.2.2 Tuition fees in Dutch higher education

In the Netherlands, students in publicly funded higher education have had to pay a uniform tuition fee, regardless of the costs related to different study programmes, since 1945. The government annually sets the tuition rate. During the 1980s university students paid slightly higher fees than students in the HBO sector, but in the early 1990's this was equalized. Students make their tuition payments directly to the higher education institutions, which have full autonomy over this revenue stream. In 2003, tuition fees made up about 17% of institutional revenues in the HBO sector and about 15% of the overall university teaching budget (Tweede Kamer der Staten-Generaal, 2003). This demonstrates that public subsidies to higher education are considerable and private contributions moderate. Figure 9 shows the development of the level of tuition fees in the Netherlands since 1945.

Figure 9 Development of tuition fees (€, in current prices and in real 2000-prices)



Source: Ministerie van OCW, Central Statistics Agency (CBS) time series.

The real value of the fees declined in the 1945-1971 period. In that period students had to pay NLG 200 (€91) per academic year in nominal terms. After an initial increase to NLG 1,000 (€454) in 1972 - 1973, the level was set at NLG 500 (€227) between 1974 and 1980. Since then, tuition levels have gra-

dually increased up to €1538 in 2007/08. Figure 1 shows that particularly in the period since 1986 the increases in the level of fees often exceeded the rate of inflation. As a result, a larger share of the costs of higher education has been gradually shifted to students and their families, which indicates that the Dutch government did not use the instrument of tuition reduction to expand access to higher education.

6.2.3 Student support in Dutch higher education

Since 1945, successive Dutch governments gradually developed a system of student support, though with a change of focus over the following six decades (De Regt, 1993). In the early days the major drive was to open up opportunities for small numbers of talented low-income students. Until the mid 1980s, even during the period of massification of higher education in the 1970s, student support remained limited to small bursary and loan programmes. Financial support consisted mainly of tax benefits and family allowances for students' parents.

After long debates, only in 1986 a new and relatively generous system of student aid was implemented by the Student Finance Act (WSF). This system transformed all indirect support like tax benefits and family allowances into direct financial support to students themselves. The system established a compromise between students' access and financial independence, transparency and simplicity of the system, and affordability for the government (Hupe en Van Solm, 1998). The major characteristics of the system that still largely is in place are reflected in the following basic elements:

- A basic grant (basisbeurs) for all full-time students, varying between students who live with their parents and those who do not;
- A means-tested supplementary grant for a limited number (about 30%) of students;
- Loans that can be taken up on a voluntary basis, carrying a below-market interest rate;
- Parental contributions or students' own income. The parental contributions are strongly interrelated with the (parental) means-tested supplementary grants and loans;
- Finally, students can earn up to €10,631 per annum (in 2006) before they start losing any of their grant entitlements.

All components together add up to a given amount that students are expected to need for study and living costs according to annual estimations of the Ministry of Education, Culture and Sciences. From this perspective, no (full-time) students should face any financial barriers for entrance into higher education. The structure and amounts of student support are presented in Table 53.

Table 53 Monthly amounts (in €) of student support, expected parental contributions and normative total budget of students (2005-2007)

	2005		2006		2007	
	Away	Home	Away	Home	Away	Home
Basic grant	233	76	248	89	253	91
Supplementary grant / parental contribution	241	223	226	207	225	206
Loans	259	259	266	266	277	277
Tuition loans					128	128
Total normative budget	**733**	**558**	**740**	**562**	**883**	**702**
Free earning amount	10,425		10,528		10,631	

Source: IB-Groep and Ministry of Education, Culture and Science.

6.2.4 Changes in the student financing mechanism

After 1986, on the basis of demographic developments the government expected a decline in the number of students and thus believed that a relatively generous system for students would be feasible from the viewpoint of public finances. But the opposite happened, and partly as a result, a large number of additional changes have taken place since then (Vossensteyn, 2002):

- Tuition fees were increased in real terms.
- Basic grants were reduced several times due to growing numbers of students and limited public budgets.
- Supplementary grants were increased to compensate for tuition increases, inflation, and reductions in the basic grants. This is to guarantee access for students from disadvantaged backgrounds (about 30%, based on a means-test).
- The duration of grants was reduced in two successive steps (1991 and 1996) to the nominal duration of courses (4-6 years).
- Student loans gained in importance. As with supplementary grants, student loans also covered reductions in the basic grant, increases in tuition fees and inflation. In addition, students have been permitted to replace (assumed) parental contributions with student loans since 1995.
- Performance requirements were imposed. Since 1993 students had to meet performance requirements in order to remain eligible for grants. Under the so-called 'progress-related grant' (Tempobeurs) students had to pass 25% of the annual study credits otherwise their grants would be converted into interest-bearing loans (Hupe and Van Solm, 1998). In 1996, the progress requirements were intensified through the 'performance-related grant' (Prestatiebeurs). Since then, all grants have been awarded initially as loans and only if students pass 50% of the exams in the first year and complete their degree within the nominal duration of the programme plus 2 years (6 or 7 years in total) are their initial loans converted into a grant. In 2000, the time-limit to complete a degree was relaxed to 10 years for all programmes, particularly to allow students to be involved in extra-curricular activities like student activism and part-time work (Ministerie van OCenW, 1999).

- Due to the developments addressed above the emphasis on parental contributions and students' own resources gradually increased. In addition, students' expenditure patterns have gone up, exceeding the standard budget available through student support. Finally, students seem to be debt averse. Consequently there is more pressure on parents and students who are more likely to have part-time jobs (Vossensteyn, 1997).

Most of the changes implicitly meant budgetary reductions and were aimed at encouraging students to pursue more efficient study patterns. Furthermore, the focus of the support policies has shifted: from opening up opportunities for lower income groups until the mid-1980s, followed by creating a basic income provision for all students in 1986, after which the system reverted once again to supporting underprivileged students.

Before getting into the detailed analyses of students' income and expenditure levels we will discuss the costs of teaching in the Netherlands at macro level.

6.3 Costs of study in higher education: a macro perspective

In this chapter we discuss the Dutch expenditures on higher education teaching from a macro perspective: what public and private contributions are being made to allow higher education students to study. This involves all public transfers to higher education institutions and students for study-related costs and living expenses. This also includes all private contributions from students and their families to pay for these costs. The methodology for this analysis is presented in the main report. Only where the methodology needs clarification for specific characteristics of the Dutch student financing system, this will be mentioned.

The macro data on public expenditures on higher education teaching are the official OECD data for the Netherlands that refer to 2004. These are drawn from the OECD Olis data files (www.oecd.int/olisweb). The student income data used for the macro analysis will be taken from the Studentenmonitor 2005 (Van den Broek et al., 2006) which uses survey data from the academic year 2004-2005. The number of students used for our calculations is the total number of fulltime students in 2004/05, which is 454,390.

On the public expenditure side, the total public subsidies include the general teaching allocations from the government to higher education institutions, the expenditure on student grants, public transfers for student facilities (some small subsidies for dormitories, restaurants, psychological help, etc.) and some more specifically calculated subsidies. First these latter include an estimated public subsidy on student loans. There is no interest subsidy on student loans in the Netherlands as students pay the interest rate the government pays on public loans plus 1%. Based on previous research, the indirect subsidy through debt remission and default is set at 7.5% of the total amount of loans. Kaiser and Vossensteyn (2000) estimated the "social risk" of student loans (default) at 8% and in a more recent study by Vossensteyn (in Usher, 2005) it was slightly adjusted to 7.5%. That is the proportion also used for this study.

A second estimated subsidy concerns tax exemptions. In cases where fulltime students are not entitled to student support and their parents pay part of their costs, part of these costs can be deducted from taxes. This goes for about 5% of the fulltime students (CBS, 2007). Parents can deduct at maximum €3,960 per year as paid living costs and study costs for their children (Belastingdienst, 2007). There are no clear data on the total amount of such tax deductions claimed and what the amount of public subsidies involved. Therefore these will be estimated in the following

way: It is assumed the parents of all students not receiving student support (5%, i.e. 22,720) will claim tax deductions at the maximum possible. Most of these students are mature students that ran out of student support eligibility and are likely to live away from home. All in all this may be a slight overestimation of the number of claiming parents and of the amounts claimed. Therefore we assume a high-medium income level of the parents with a tax rate of 42% (the second highest tax level, the other being 52%). This results in an estimated net tax benefit of €1,663 per student per year.

Students do not benefit from hidden health insurance subsidies. Either they are insured through their parents or they have to insure themselves, leading to a cost covering surcharge in student grants.

Based on the methodology defined for this study, Table 54 provides the macro analysis of the public and private expenditures on tertiary education in the Netherlands.

Table 54 Public and private expenditure on teaching for fulltime students in higher education (2003/2004-2005, in thousand €)

Public expenditure			Private expenditure		
	Total/ €1000	€ / student		Total / €1000	€ / student
Teaching allocations	4,021,185	8,849.63	**Student income**	4,945,581	10,884.00
Direct support (cash)			**Minus direct support (cash)**		
Grants	806,600	1,775.13	Grants	806,600	1,775.13
Student tax exemptions	0	0.00	Subsidies on loans	73,853	162.53
Subsidies on loans	73,853	162.53	**Minus direct support (non-cash)***		
Direct support (non-cash)			Subsidies f. transportation	370,782	816.00
Subsidies for health care	0	0.00			
Subsidies for facilities	1,200	2.64	**Minus indirect support (cash)**		
Subsidies for transportation	370,782	816.00	Tax exemptions	37,787	83.16
Indirect support (cash)			**Minus indirect support (non-cash)**	-	-
Child benefits	0	0.00			
Tax exemptions	37,787	83.16			
Indirect support (non-cash)	0	0.00			
Total public expenditure	**5,311,407**	**11,689.09**	**Total private expenditure**	**3,656,559**	**8,047.18**
As % of total expenditure	**59.2%**	**59.2%**	**As % of total expenditure**	**40.8%**	**40.8%**

Sources: CHEPS, based on Dutch data from the OECD OLIS data, A. Van den Broek et al. (2006), CBS (2007).

* Unlike in the other countries, the public transport card (i.e. non-cash direct support) is included in the students' reported income. Therefore, this item has to be subtracted here.

Notes: Public teaching allocations are OECD data times 0,832 to correct for fulltime students only. Tax subsidies may accrue to 5% of the fulltime students that do not receive student support. Their parents have an estimated net tax benefit of 1663 per year, assuming a tax rate of 42%. The amount for scholarships includes premiums for health care insurance to be paid by students who are privately insured.

6.4 Students' income and expenditure: a micro perspective

In this chapter, we explore students' income and expenditure levels and composition. Based on national survey data we will present an overview of the "typical" income and expenditure patterns of different groups of students and the extent to which students' financial arrangements are subsidised with public means. The overall objective of this Socrates study is to distinguish between various prototype students in order to trace potential differences in income and expenditure structures – and the share of the public subsidy in this – between students from different socio-economic backgrounds and with a different living status.

The methodology in the analysis follows the one for the other countries involved in this study. In case of specific Dutch characteristics these will be explained. Those interested in the overall income and expenditure picture of students can look at Eurostudent data and publications.

This study only concentrates on the in depth analysis of different types of students, distinguishing eight categories of students or 8 prototype students. These are constructed by looking at students living with their parents (home) or those living away from home (away) for students from four different socio-economic background groups based on monthly parental income. Concerning the latter we use the Eurostat (EU SILC) data to compose three cut-off points and thus four income groups. The results are presented in the next section.

6.4.1 Income and expenditure of 8 prototype students in the Netherlands

In this section the situation of students' income and expenditure will be discussed in view of students from their different origins and living situation. We will analyse the potential differences in the level and composition of students from different socio-economic background and those living with their parents or living away from home. Parental income is being used to determine students' socio-economic status. In the Eurostudent data Dutch students have been asked for the parental income per month. Therefore we also transfer the Eurostat SILC data to monthly amounts, dividing the reported amounts by 12 and correcting them for "holiday payments" that are transferred to employees only once per year (8%). Eurostat SILC data show that Dutch households can be broken down into 4 income quartiles using the following cut-off points:

- €28,564 (divided by 12 months and minus 8% holiday payments) = €2,190 p/month
- €36,263 (divided by 12 months and minus 8% holiday payments) = €2,780 p/month
- €45,818 (divided by 12 months and minus 8% holiday payments) = €3,513 p/month

As socio-economic background is not only indicated by parental income, the results of all analyses have also been done for 4 groups of students with different parental education levels. In addition, a composite socio-economic class indicator has been used to make 4 different groups of students. The three socio-economic background indicators showed to be highly correlated. The three analyses resulted in strikingly similar patterns and therefore we here only present the data on the basis of parental income groups as was the original plan of the study.

The four SES groups we referred to are the following:

Low	= net monthly parental income below €2190 (N = 1181)
Medium-low	= net monthly parental income from €2191 to €2780 (N = 311)

Medium high = net monthly parental income from €2781 to 3513 (N = 1173)
High = net monthly parental income above €3513 (N = 2354)

Both income and expenditure of students will be discussed in separate subsections. Both income and expenditure for different prototype students will also be related to the amount of public support the respective students on average receive.

6.4.1.1 The income situation of students from different SES groups

The income situation for students from various SES groups distinguishes between the following income components: grants, student loans, own earnings, parental or partner contributions, family contributions in kind, other and non-cash public transfers like facilities and a public transport card). Table 55 -Table 57 show this overview. By means of an F-test it has been checked whether the differences between various income groups are significant or not. These results are also included in the tables. For reasons of convenience, there are three tables: one for students living at home with their parents, one for students living away from home and one for all students together.

Table 55 Income distribution for students from different SES groups, students living at home

	Students living at home					*F-value*	*Signif.*
Income SES	**Low**	**Lower medium**	**Higher medium**	**High**	**Total**		
Grants	1836	1436	1071	908	1242	79.2	***
Public loans	921	697	914	875	886	0.3	
Earnings	3117	3345	3089	2829	3016	0.8	
Family contributions in cash	660	932	1230	1464	1144	13.0	***
Family contributions in kind	1537	2015	2259	2625	2186	44.0	***
Other	1848	1577	1532	2017	1804	1.4	
Direct non-cash support							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	862	888	882	859	868		
Total	**10784**	**10892**	**10980**	**11579**	**11148**		
Public subsidies							
Direct support (cash)							
Grants	1836	1436	1071	908	1242		
Loan subsidies	69	52	69	66	66		
Direct support (non-cash)							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	862	888	882	859	868		
Indirect cash support							
Tax exemptions	63	83	83	103	83		
Total	**2833**	**2462**	**2108**	**1938**	**2262**		
Publ. subsidy as % of income	**26.3%**	**22.6%**	**19.2%**	**16.7%**	**20.3%**		

Source: CHEPS calculations based on data from the "Studentenmonitor 2006"; (A. Van den Broek et al., forthcoming).
Significance levels: *** = 0.001; ** = 0.01; * = 0.05; + = 0.1.

Table 55 shows a significant linear pattern in which students living at home from low income families get more grants than students from more affluent families. The inverse tendency can be spotted for parental or partner contributions and family support in kind. Students living at home from different socio-economic backgrounds do not differ significantly in the amount of loans taken up, their earnings or other income.

Calculating the proportion of public subsidies given to students living at home according to their socio-economic background shows that students from lower SES groups get 26.3% of their income from public subsidies, whereas students from high SES groups receive 16.7% of their income through public subsidies. Though in both cases the proportion is not very high, it shows substantial differences with low-SES students benefiting most. The picture for students living away from home is explored in Table 56.

Table 56 Income distribution for students from different SES groups, students away from home

	Students living away from home					*F-value*	*Signif.*
Income SES	**Low**	**Low-medium**	**High-medium**	**High**	**Total**		
Grants	2941	2390	2324	2045	2321	44.1	***
Public loans	2665	2504	2373	2247	2381	2.6	
Earnings	2971	2800	3385	2909	3017	2.1	+
Family contributions in cash	1663	1938	2103	3001	2454	54.0	***
Family contributions in kind	1260	1651	1918	2653	2132	112.5	***
Other	1941	1800	1978	1614	1774	2.1	+
Direct non-cash support							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	817	861	827	829	828		
Total	**14261**	**13946**	**14911**	**15300**	**14910**		
Public subsidies							
Direct support (cash)							
Grants	2941	2390	2324	2045	2321		
Loan subsidies	200	188	178	169	179		
Direct support (non-cash)							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	817	861	827	829	828		
Indirect cash support							
Tax exemptions	63	83	83	103	83		
Total	**4024**	**3525**	**3414**	**3148**	**3413**		
Publ. subsidy as % of income	**28.2%**	**25.3%**	**22.9%**	**20.6%**	**22.9%**		

Source: CHEPS calculations based on data from the "Studentenmonitor 2006"; (A. Van den Broek et al., forthcoming).
Significance levels: *** = 0.001; ** = 0.01; * = 0.05; + = 0.1.

Like students living at home, also students away from home show a significant linear relationship between the amount of grants and SES. Students from low income families get significantly more grants than students from more affluent families. Again, the inverse significant tendency can be spotted for family support in cash and in kind. Students from different socio-economic backgrounds do not differ significantly in the amount of loans taken up. There is a slight signi-

ficance in their earnings and other income. Interesting to see is that students living away from home take up substantially higher loans that students living at home. This is related to the fact that they need more money.

Table 56 also shows that student away from home receive higher proportions of their income through public subsidies with again a distinct difference between lower and higher SES students. The lowest SES students receive about 28% of their income from public subsidies and high SES students a bit over 20%. So poor students are subsidized more, but not that strong.

The overall picture of all students together is shown in Table 57.

Table 57 Income distribution for students from different SES groups, all students

	All students					*F-value*	*Signif.*
Income SES	**Low**	**Lower medium**	**Higher medium**	**High**	**Total**		
Grants	2549	2059	1857	1761	1988	68.0	***
Public loans	2046	1876	1830	1905	1919	0.9	
Earnings	3023	2989	3275	2889	3017	2.0	
Family contributions in cash	1308	1589	1778	2617	2049	79.9	***
Family contributions in kind	1358	1778	2045	2646	2149	151.1	***
Other	1908	1722	1812	1715	1783	0.7	
Direct non-cash support							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	833	871	847	836	840		
Total	**13027**	**12886**	**13446**	**14372**	**13747**		
Public subsidies							
Direct support (cash)							
Grants	2549	2059	1857	1761	1988		
Loan subsidies	153	141	137	143	144		
Direct support (non-cash)							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	833	871	847	836	840		
Indirect cash support							
Tax exemptions	63	83	83	103	83		
Total	**3601**	**3156**	**2928**	**2846**	**3057**		
Publ. subsidy as % of income	**27.6%**	**24.5%**	**21.8%**	**19.8%**	**22.2%**		

Source: CHEPS calculations based on data from the "Studentenmonitor 2006"; A. Van den Broek *et al.*, forthcoming).
Significance levels: *** = 0.001; ** = 0.01; * = 0.05; + = 0.1.

Also for all students, Table 57 shows that low-SES students receive significantly higher grants and significantly lower family support in cash and in kind than higher-SES students. Students from different socio-economic backgrounds do not differ very much with respect to the amounts of loans they take up, how much they earn or receive in other income. Lower SES students receive a larger share of their income from public subsidies than higher SES students. Nevertheless, students receive between one-fifth and a quarter of their income by means of public subsidies.

6.4.1.2 The expenditure situation of students from different SES groups

The expenditure situation for students from various income groups and living situation distinguishes between costs of study and maintenance. Study costs include tuition fees, study books and study materials and equipment. Living expenses consist of accommodation, nutrition, leisure, travel and other. Table 58 - Table 60 show this overview. By means of an F-test it has been checked whether the differences between various SES groups are significant or not. These results are also included in the tables. For reasons of presentation, there are three tables: one for students living at home with their parents, one for students living away from home and one for all students together.

Table 58 Expenditure distribution for students from different SES groups, students at home

	Students living at home					*F-value*	*Signif.*
Expenditure SES	**Low**	**Lower medium**	**Higher medium**	**High**	**Total**		
Costs of study	2148	2129	2166	2144	2150	0.1	
Maintenance	6208	5983	5940	6639	6271	1.1	
Direct non-cash support							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	862	888	882	859	868		
Total	**9220**	**9002**	**8990**	**9645**	**9292**		
Public subsidies							
Direct support (cash)							
Grants	1836	1436	1071	908	1242		
Loan subsidies	69	52	69	66	66		
Direct support (non-cash)							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	862	888	882	859	868		
Indirect cash support							
Tax exemptions	63	83	83	103	83		
Total	**2833**	**2462**	**2108**	**1938**	**2262**		
Publ. subsidy as % of income	**30.7%**	**27.4%**	**23.4%**	**20.1%**	**24.3%**		

Source: CHEPS calculations based on data from the "Studentenmonitor 2006"; (A. Van den Broek et al., forthcoming).
Significance levels: *** = 0.001; ** = 0.01; * = 0.05; + = 0.1.

Table 58 shows no significant differences for the expenditure patterns of students from different SES-groups living at their parental home. Interestingly, public subsidies show a linear decreasing proportion for different income groups, with almost 31% for the poorest students to 20% of the richest students. In Table 59, the situation for student living away from home is explored.

Table 59 Expenditure distribution for students from different SES groups, away from home

	Students living away from home					*F-value*	*Signif.*
Expenditure SES	Low	Low-medium	High-medium	High	Total		
Costs of study	2255	2113	2169	2252	2227	3.5	*
Maintenance	10764	11365	10603	11673	11210	6.2	***
Direct non-cash support							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	817	861	827	829	828		
Total	**13838**	**14342**	**13601**	**14756**	**14267**		
Public subsidies							
Direct support (cash)							
Grants	2941	2390	2324	2045	2321		
Loan subsidies	200	188	178	169	179		
Direct support (non-cash)							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	817	861	827	829	828		
Indirect cash support							
Tax exemptions	63	83	83	103	83		
Total	**4024**	**3525**	**3414**	**3148**	**3413**		
Publ. subsidy as % of income	**29.1%**	**24.6%**	**25.1%**	**21.3%**	**23.9%**		

Source: CHEPS calculations based on data from the "Studentenmonitor 2006"; (A. Van den Broek et al., forthcoming).
Significance levels: *** = 0.001; ** = 0.01; * = 0.05; + = 0.1.

Both the costs of study and maintenance differ significantly between the four different SES groups but not in a linear pattern. For study costs, low and high SES groups spend more than middle income students, whereas for maintenance the low-medium and high income students spend most.

The proportion of public subsidies to students living away from home differ not as much as for students living at home. Nevertheless, also here the poorest students receive substantially higher proportions of public subsidies (29%) than richer students.

Table 60 shows the overall picture fro all students independent from their living status.

Table 60 Expenditure distribution for students from different SES groups, all students

	All students					*F-value*	*Signif.*
Expenditure SES	Low	Low-medium	High-medium	High	Total		
Costs of study	2216	2118	2168	2225	2203	2.7	*
Maintenance	9134	9433	8852	10414	9660	9.4	***
Direct non-cash support							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	833	871	847	836	840		
Total	**12186**	**12425**	**11869**	**13478**	**12706**		
Public subsidies							
Direct support (cash)							
Grants	2549	2059	1857	1761	1988		
Loan subsidies	153	141	137	143	144		
Direct support (non-cash)							
Subsidies for facilities	3	3	3	3	3		
Subsidies for transportation	833	871	847	836	840		
Indirect cash support							
Tax exemptions	63	83	83	103	83		
Total	**3601**	**3156**	**2928**	**2846**	**3057**		
Publ. subsidy as % of income	**29.6%**	**25.4%**	**24.7%**	**21.1%**	**24.1%**		

Source: CHEPS calculations based on data from the "Studentenmonitor 2006"; (A. Van den Broek et al., forthcoming).
Significance levels: *** = 0.001; ** = 0.01; * = 0.05; + = 0.1.

Table 59 shows that significant differences in expenditure levels between the students from different SES groups. Costs of study appear higher for the lowest and highest SES groups and maintenance is lowest for the high-medium and lowest SES groups. So the patterns are not linear and do not correspond to general expectations of lower SES students having lower expenditure patterns. In total, students get between 21% and 29.6% of their expenditures covered through public subsidies. Highest SES groups receive the least public subsidies, both in relative and in absolute terms.

Overall the micro analysis shows that the expenditure levels of students are lower than their income levels. This to a large extent is determined by support in kind. Furthermore, it can be concluded that income levels do show a linear pattern with lower SES students having less income than subsequent SES groups. As expected, lower SES students receive more public support whereas higher SES students receive more family support (in cash as well as in kind). The relative public subsidy levels compared to student income show higher subsidization rates for lower SES students than for higher SES students. All in all, both income and expenditure levels do not show enormous differences between SES groups. The major differences are between students that live at home or live away from home. It appears that the financial situation of students does not differ a lot between various categories of students, at least in terms of their averages. So the Dutch system of support, including parental contributions results in a rather egalitarian situation. The most needy students get a bit more public support and they are capable of having about equal living standards as other groups of students.

References

Belastingdienst (2007): *Particulieren, Aftrek van uitgaven voor levensonderhoud van kinderen:* www.belastingdienst.nl.

Broek, A. van den/ Wiel, E. van de/ Pronk, T./ Sijbers, R. (2006): *Studentenmonitor 2005, Studeren in Nederland, Kernindicatoren, studievoortgang, studieuitval en internationale mobiliteit*. Nijmegen: ITS/ResearchNED.

Broek, A. van den et al. (forthcoming): *Studentenmonitor 2006, Studeren in Nederland, Kernindicatoren, studievoortgang, studieuitval en internationale mobiliteit.* Nijmegen: ITS/ResearchNED.

CBS (2007): *Statline*: www.cbs.nl.

CBS (2007): *Aandeel leningen in de studiefinanciering fors gestegen*. Webmagazine, Woensdag 7 November 2007.

European Commission: Eurostat (2007): EU-SILC UDB 2005 – version 2 of June 2007 (cross-sectional data). Luxemburg: Eurostat.

Eurostat (2007): Price indices.

IB-Groep (2007): *Studiefinanciering in het hoger onderwijs*: www.ib-groep.nl.

Kaiser, F./ J.J. Vossensteyn (2000): *Publieke en private bijdragen aan tertiair onderwijs, Grondslagen van verschillen en consequenties voor toegankelijkheid. Rapport voor het Ministerie van Financiën*. Enschede: CHEPS, Universiteit Twente.

OECD (2007): National data on the Netherlands: www.oecd.int/olisweb.

Usher, A. (2005): *Global debt patterns: An International Comparison of Student Loan Burdens and Repayment Condition*. Toronto: Educational Policy Institute. http://www.educationalpolicy.org/CANADA/Default.htm.

7 Country Report of Norway

Author: Vibeke Opheim
NIFU STEP – Norwegian Institute for Studies in Innovation, Research and Education

Contents

7.1 Introduction

7.1.1 Background and country description

The Norwegian education system has been described as soundly structured and generally highly equitable.[61] In terms of selection, access and transition it compares well with other countries. The integration of general and vocational courses within the same institutions and the lack of dead ends within the system together with a smooth transition to working life enable young people to continue learning and increasing their skills (OECD 2006).

Today there are few urban/rural differences in participation rates. But, as in many countries, a much higher proportion of students come from families where both parents had also experienced tertiary education (40% of such young people attend tertiary institutions) than where one or both of them had only experienced primary schooling (only 8% of young people from these families).

Most Norwegian students enter public higher education institutions and study at fulltime. However, instead of continuing directly from upper secondary education to higher education many choose to take a year away from the educational system and to work or travel or take a year at a non-academic educational institution ('Folkehøyskole'). This implies that Norwegian students on average are older when they enter higher education and when they graduate than students in many other OECD countries.

The majority of Norwegian students in tertiary education graduates from tertiary type A-programmes. In 2005, 41 per cent of the population of 25-34 year olds had attained tertiary education in 2005. Of these, 39 per cent had attained tertiary type A education or advanced research programmes, while only 2 per cent had attained tertiary type B education (OECD 2007: Table A1.3a).

Financial support for students is provided by The Norwegian State Educational Loan Fund (NSELF). The loan fund was established in 1947. Means testing of the parents' economy was disbanded in the early 1970s (NOKUT 2007). The student aid consists of a mix of grants and loans to cover costs of living. Tuition fees are not charged by public institutions. Loans are not means-tested, but are subject to a ceiling. Grants are means-tested, and may be reduced if the student receives social benefits, possesses substantial assets or earns more than NOK 108,680 per year (figures for 2005). Loans are interest-free during the study period and all students are entitled to financial aid for a maximum of eight years. Initially, the basic amount is given as a loan but, upon completion of studies, part of it is converted into a grant (to a maximum of 40%) - the actual proportion depends on students' success in completing their studies. Students living with their parents are not entitled to grants but may receive loans. Loan repayments are not contingent upon individuals' earnings. The student loan interest is payable at the interest rate on government certificates which have redemption periods from zero to three months. An additional one per cent per annum is charged to partially cover administrative costs and losses (NSELF 2004). Thus, during the repayment period (normally 20 years) there are no interest subsidies to the student loan.

In terms of economic conditions Norway is a rich country. The Norwegian economy has for the last years experienced a period of solid economic growth. The national budget in 2004 was nearly 130 billion kronor, around 15 billion €. The Education budget in the same year was equal to

61 The background description is partly based on the report "Equity in Education. Norway Country Note" (OECD 2006).

6.8% of the GDP, one of the highest figures in the OECD (OECD 2006). In other words; Norway has an expensive education system.

The funding model used to allocate funds to higher education institutions (HEIs) has three main components: 1) an "education component" of 25 per cent of the total allocation, based on the number of credits, number of graduates and number of international exchange students; 2) a "research component" of 15 per cent of the total allocation, and 3) a "basic component", which is 60 per cent of the total allocation. With regard to the research component, one-half of the funds are redistributed on the basis of performance and one-half is related to quality and strategic considerations, which include funding of positions for doctoral students. In contrast to the education component, there is a ceiling limiting the HEIs' revenue generation. In the 2005 budget the research component is based on the production of scientific publications and the degree of funding from the EU and the Research Council of Norway (Frølich 2006).

Norway is ranked is the fifth most equitable country in the OECD on the Gini Index2 – a measure indicating its relative income equity in economic terms. The unemployment rate in 2004 was 4.7%. However, the low economic differences also imply that the economic rate of returns to education is relatively low (Opheim 2004, OECD 2007, NOU 2003). When measuring the public and private costs of education, the low rate of return to higher education should be taken into account.

7.2 Data and methods

The main data and statistical sources used in this report are as listed:

- The Student Level of Living Survey, Statistics Norway 2005. This is the Norwegian data for the Eurostudent Survey (2005) (Ugreninov and Vaage, 2006)
- OECD: Education at a Glance 2007 (OECD 2007)
- Statistics and figures from the Norwegian Ministry of Education and Research (KD/UFD)
- Statistics and figures from the Norwegian State Educational Loan Fund (NSELF)
- Statistics from the Norwegian Social Science Data Services (NSD, DBH)[62]

7.3 Construction of indicators/variables

7.3.1 Family contributions

In the Eurostudent data, the students were asked to report how much they have received from their family (parents and/or partner) this year. However, the Eurostudent data is probably underestimating the parents' annual economic contributions. This is because the students are not asked to calculate the annual support from the parents, only to answer the question "Have you received any economic support from your parents or close family so far this year?" The survey was conducted in winter/spring 2005, thus the survey may only reflect the distribution/size of parental support of the first part of 2005 and not provide any accurate measure of annual contributions. Statistics Norway has on the bases of the Eurostudent data made some calculations of annual pa-

62 In Norwegian: Database for statistikk om høgre utdanning (DBH).

rental support, where they have multiplied the figures by five (Løwe and Sæther 2007). Considering that the majority of the data collection took place between February and April we find it more reasonable to multiply the figures from the Eurostudent data by four. When estimating family contributions as part of the students' total income in the macro- and microeconomic analyses, this method has been applied.

7.3.2 Socio-economic background (SES)

Socio-economic background (SES) is measured as the parents' level of education. The Norwegian Eurostudent data contains no information of parental income or occupation. We separate between four groups; 1) compulsory education or less, 2) upper secondary education, 3) one parent with higher education, and 4) both parents higher education. Parental education is defined as the education level of the most highly educated parent. Students who have no parents with known level of education (information on both parents are missing) are excluded from the analysis.

Age is based on typical entry age plus/minus 3 years. In Norway the typical entry age is 21 (OECD 2007). In the analyses students aged 24 or less are included. Out of the total number of 2263 students included in the Norwegian Eurostudent data, this includes 1225 (54 %) of the students.

Only full-time students in public higher education institutions are included in the analysis. By only including students at public institutions an additional 144 students are excluded from the analysis. By only including full-time students an additional 41 students are excluded from the analysis. In addition, 17 students are excluded from the analyses due to missing information on parents' level of education. This leaves us with 1027 full-time students in the age group 19-24 who study at public higher education institutions.

In the analysis, the students are grouped by parental education and accommodation status. However, as only a few Norwegian students live at home with their parents during their studies these groups are rather small; one of the groups is too small for analysis.[63] Table 61 and Table 62 show the number of full-time students in the age group 19-24 who study at public higher education institutions, by parental education and whether or not they live with their parents.

As shown in Table 61, the group of students who have parents with low levels of education and who live with their parents only consists of 3 persons. In the analysis, the results for this group of students are excluded. Thus, the microeconomic analysis presents results for 7 student prototype groups (instead of 8).

63 Increasing the age group to 19-25 year olds does not increase the number of students with parents with low levels of education who live with their parents.

Table 61 Full-time students in the age group 19-24 who study at public higher education institutions by parental education and accommodation status

	Compulsory education or less	Upper secondary education	One parent with higher education	Both parents higher education
Living away from parents' home	13	363	267	285
Living with parents	3	34	33	29
Sum	16	397	300	314

Source: Eurostudent 2005

Table 62 shows the total number of students, without selection of age etc., by parental education and accommodation status. As we see, the number of students living with their parents is only slightly higher in this group.

Table 62 Total number of students by parental education and accommodation status

	Compulsory education or less	Upper secondary education	One parent with higher education	Both parents higher education
Living away from parents' home	130	903	500	480
Living with parents	9	56	48	51
Sum	139	959	548	531

Source: Eurostudent 2005

7.4 Macroeconomic analysis

The macroeconomic analysis presents an overview of the total amount of costs spent on higher education annually and a comparison of the public and private expenditures on higher education. There is a distinction between direct and indirect support, where direct support is support provided directly to the students and indirect support is provided for the parents. A second distinction is between cash support and non-cash support (in kind). Public expenditures in the forms of direct cash support includes grants, tax exemptions, and subsidies on loans; direct non-cash support includes subsidies for health care, facilities, and/or transportation; indirect cash support includes child benefits and tax exemptions (for parents). To calculate the private expenditures on higher education, students' income is used as proxy for expenditures. Student income includes grants, loans, family contributions, paid work, transfers in kind, and any other income (after tax deductions). In Norway, all support is provided as direct support to the students; there is no indirect support. Most of the student support is provided as grants and loans through the State Educational Loan Fund, and in addition some support is distributed as subsidies for facilities such as student housing construction through the student welfare organisations.

The reference year is 2005 for the self reported estimated data (from the Eurostudent data) and 2004 for the register data. Calculations of total expenditures for higher education teaching are based on the Norwegian National Budget for 2005 (Ministry of Education and Research).

Table 63 Total expenditure on higher education (in NOK 1000).

Public		Private	
Teaching allocations	18,256,486	**Student income**	134,823
Direct support (cash)		**Minus direct support (cash)**	
Grants	3,452,000	Grants	- 21,397
Student specific tax exemptions		Student specific tax exemptions	-
Subsidies on loans	652,315	Loan subsidies	- 3,772
Direct support (non-cash)		**Minus indirect support (cash)**	-
Subsidies for health care		**Minus indirect support (non-cash)**	-
Subsidies for facilities	141,205		
Subsidies for transportation			
Indirect support (cash)			
Child benefits			
Tax exemptions			
Indirect support (non-cash)			
Total	**22,502,006**	**Proxy value per student**	**109,655**
% Total expenditure	**52 %**	**% Total expenditure**	**48 %**

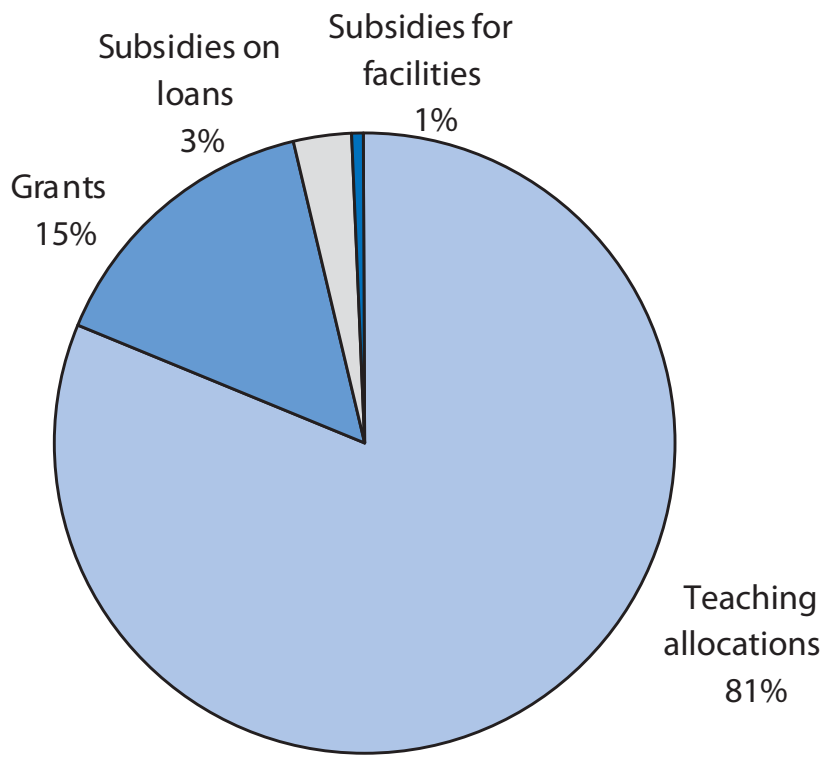
Table notes:

- Figures for total teaching allocations are taken from The National Budget 2005 (St.meld. nr. 3, 2005-2006). Calculations based on total expenditures allocated to higher education including public expenditures to private university colleges (0282) and minus expenditures allocated to university administrative expenses (0281). Subsidies for facilities such as student housing construction and student welfare (0270) (including public subsidies to student kindergartens) are included in the total expenditures. Only expenditures allocated from the Ministry of education and research (UFD) are presented.[64]
- Figures for total public expenditures on grants are taken from the State Educational Loan Fund (2004-2005) (NSELF 2006).
- Figures for total public expenditures on subsidies on student loans are calculated out of the total sum of distributed student loans to students in higher education from the State Educational Loan Fund in 2004-2005: NOK mill 7,075 and a loan subsidy rate of 9.2 per cent. The loan subsidy rate is calculated out of the total loan subsidy rate for 3 years of student loans with an annual interest rent of 4.5 per cent (see tables X1 and X2 in the appendix). There are no rent subsidies to the student loan for the duration of the repayment period (normally 20 years), only for the duration of the studies.
- The number of students in Norwegian higher education in 2005 from Statistics Norway is 195,289. The number of full-time equivalent students in 2005 from The Norwegian Social Science Data Services (NSD) is 189,006. Based on the number of full-time equivalent students in 2005, the total public expenditures on higher education per student is NOK 119,054.
- Information on private expenditures is based on data from the Eurostudent survey (Eurostudent 2007). All private expenditures are calculated as mean average for all full-time students (Eurostudent: N=1958).
- Information of the students' total annual income is partly collected from the national tax register for the calendar year 2004.[65] In addition, the students' total annual income includes grants, student loans (collected from the student loan register) and parents' contributions (self-reported, see description in the microanalysis).
- Information of the average sum of student grants and student loans is collected from the student loan register for the calendar year 2004.

64 In addition, some subsidies for facilities are provided by other ministries (for instance additional subsidies to student kindergartens are allocated from the Ministry of Children and Family affairs, however, these subsidies are not singled out as a separate post in The National Budget 2005).

65 Total general income is the sum of all taxable pay, income from self-employment and capital income (www.skatteetaten.no) minus tax and rent deduction.

Figure 10 Distribution of public expenditure on higher education



7.4.1 Comments to the macroeconomic analysis

Table 63 presents an estimate of the total public and private expenditures on higher education in 2005. In Figure 10 the distribution of the public expenditures is illustrated. The total public expenditures on higher education in 2005 is estimated to NOK 22,502 mill. (equals € 2,813 mill.).[66] As illustrated in Figure 10 most of these expenditures (81 per cent) went to teaching allocations which includes teaching-related financing of the higher education institutions. Subsidies for student welfare (to the student welfare organisations) are also included in the teaching allocations. The remaining public expenditures were costs to student grants (15 per cent), subsidies on loans (3 per cent), and a tiny slice to subsidies for facilities (1 per cent). The Norwegian system contains no indirect support to students in higher education. Divided by the number of full-time equivalent students in 2005 from The Norwegian Social Science Data Services (NSD), the public expenditures on higher education per student equals NOK 119,054.

The total private expenditures measured by using the students' total income as proxy for expenditures, and subtracted the public subsidies (such as grants and student loans subsidies) gives a total private expenditures per student of NOK 109,665.

When all higher education expenditures are summarised, the proportion of the total expenditures covered by the public and private is quite similar. While 52 per cent is covered by public expenditures, 48 per cent is covered by private expenditures.

66 € 1 ≈ NOK 8 (November 2007).

7.5 Microeconomic analysis

In the microeconomic analysis, the level of income and expenditures among different groups of students is presented and contrasted with the respective public subsidy in this. The students are grouped in seven prototype groups according to their parents' level of education and accommodation status. This section is based on the Eurostudent data, collected by Statistics Norway in 2005 (Ugreninov and Vaage, 2006).

7.5.1 Expected differences between the different prototype students?

As presented in the introduction, students may receive a maximum of NOK 80,000 in annual student support (figures for 2005). Initially, the basic amount is given as a loan but, upon completion of studies, part of it is converted into a grant (to a maximum of 40%). The actual proportion depends on students' success in completing their studies. A student who takes up the full annual student support of NOK 80,000 and who follows normal study progression (no study delays) will end up with an annual sum of NOK 32,000 in student grants and NOK 48,000 in student loan. There are no differences between families from different socio-economic backgrounds in level of state support.

As previously described, the Norwegian student support system is part of the national education policy of viewing the students as economically independent of their families. Thus, according to these rules we should not expect to find any differences between students from high and low social backgrounds in the level of income and expenditures; none of them pay tuition fees and they are all eligible for equal amount of student support. The only groups where we should expect to find any differing economic situation are between students living together with their parents and those who live away from their parents' house. Students living with their parents are not entitled to grants but may receive loans.

When turning to the data, we will compare how the theoretical discussion and estimates fit with the estimates from the registers and survey data. In a later part of the analysis we will study to what extent there exist economic differences in income and expenses between students from different socio-economic family backgrounds, measured through parents' level of education. To what extent is there a social balance in the students' budgets?

Tables Table 64 - Table 66 present the students' income and expenditures by parental education and accommodation status.

7.5.2 Analyses and results

Table 64 Cash flow approach to microeconomic analysis: income of students living away from parents

Income	Low SES	Lower-medium SES	Higher-medium SES	High SES	F
Grants	27,635	24,304	25,887	26,046	7.459***
Public loans	34,923	40,180	41,029	43,582	9.104***
Private loans					
Earnings	53,308	58,472	55,562	46,194	4.901***
Family contributions (x 4)	4,923	16,160	14,232	23,951	1.349
Total income	**120,788**	**139,116**	**136,711**	**139,772**	
Public subsidies (of the above):					
Grant	27,635	24,304	25,887	26,046	
Estimated loan subsidies	3,220	3,705	3,783	4,018	
Sum public subsidies:	**30,855**	**28,009**	**29,670**	**30,064**	
% of total income	**26**	**20**	**22**	**22**	
N=939-945	N=13	N=360-363	N=264-267	N=285	

* = p<0.05, ** = p<0.01, *** = p<0.001.

Table 65 Cash flow approach to microeconomic analysis: income of students living together with parents

Income	Low SES	Lower-medium SES	Higher-medium SES	High SES	F
Grants		7,158	7,792	8,592	0.167
Public loans		31,780	32,626	28,633	0.244
Private loans					
Earnings		63,358	55,716	47,820	1.579
Family contributions		10,624	4,485	9,710	0.513
Total income		**112,920**	**100,620**	**94,755**	
Public subsidies (of the above):					
Grant		7,158	7,792	8,592	
Estimated loan subsidies		2,930	3,008	2,640	
Sum public subsidies:		**10,089**	**10,801**	**11,232**	
% of total income		**9**	**11**	**12**	
N=99	**N=3**	N=34	N=33	N=29	

* = p<0.05, ** = p<0.01, *** = p<0.001.

Table notes:

- Public loans are student loans from the Student Loan Bank (NSELF). Very few Norwegian students take out private loans to finance their studies. All students enrolled in higher education are eligible for receiving a rent subsidized student loan.
- Information of the students' total annual income is partly collected from the national tax register for the calendar year 2004.[67]
- Information of the students' economic family contributions is based on the students' self reported estimates collected by the Eurostudent data. The survey was conducted in winter/spring 2005, thus the survey may only reflect the distribution/size of parental support of the first part of 2005 and not provide any accurate measure of annual contributions. To correct for this the estimates have multiplied by four. Similar calculations have been conducted by Statistics Norway (Løwe and Sæther 2007).
- The Eurostudent data contain no information of students' income from savings, overdrafts, credit card debts or other debts. This could be additional sources of income for the students. However, most students report income from NSELF or from paid work as their main sources of income (Ugreninov and Vaage 2006).
- Only a low number of students are living with their parents. The results for these groups of students should therefore be treated with caution. The number is particularly low among respondents in the lowest socio-economic background group, only 3. Therefore the results for this group are not presented.

Table 66 Cash flow approach to microeconomic analysis: expenditures of students living away from parents

Expenditures	Low SES	Lower-medium SES	Higher-medium SES	High SES	F
Cost of study:					
Tuition fees	0	0	0	0	
Study related costs	6,377	5,795	5,671	6,256	0.475
Cost of living:					
Accommodation	39,975	43,149	42,125	44,876	1.242
Maintenance costs	48,571	59,260	60,815	64,311	
Others	21,748	37,588	36,247	35,079	
Total	116,671	145,793	144,857	150,522	
Public subsidies (of the above):					
Grant	27,635	24,304	25,887	26,046	
Estimated loan subsidies	3,220	3,705	3,783	4,018	
Sum public subsidies:	**30,855**	**28,009**	**29,670**	**30,064**	
% of total expenditure	**26**	**19**	**20**	**20**	
N=928	N=13	N=357-363	N=262-267	N=279-285	

* = p<0.05, ** = p<0.01, *** = p<0.001.

67 Total general income is the sum of all taxable pay, income from self-employment and capital income (www.skatteetaten.no) minus tax and rent deductions.

Table 67 Cash flow approach to microeconomic analysis: Expenditures of students living together with parents

Expenditures	Low SES	Lower-medium SES	Higher-medium SES	High SES	F
Cost of study:					
Tuition fees		0	0	0	
Study related costs		6,109	5,358	5,516	0.805
Cost of living:					2.318
Accommodation		147	152	121	
Maintenance costs		46,964	36,765	39,273	
Others		33,576	27,673	21,051	
Total		86,797	69,948	65,961	
Public subsidies (of the above):					
Grant		7158	7792	8592	
Estimated loan subsidies		2930	3008	2640	
Sum public subsidies:		**10089**	**10801**	**11232**	
% of total expenditure		**12**	**15**	**17**	
N=99	N=3	N=34	N=33	N=27-29	

* = p<0.05, ** = p<0.01, *** = p<0.001.

Table notes:

- Study related costs include annual costs to study related material, literature and study related special equipment.
- Accommodation costs include annual costs for rent, electricity and housing loan repayments. Some of the students who live together with their parents report paying rent to their parents.
- Maintenance costs include costs for food, health, travel (general transportation and holiday travels), clothing and shoes.
- Other costs include costs for sports and sport equipment, cantina, café and restaurant visits, alcohol and tobacco, music, tickets, books (not study related) and newspapers, TV, furniture and housing equipment, travel, car or scooter maintenance, personal care, entertainment, and other expenses. Expenditures for computers are excluded.
- Only a low number of students are living with their parents. The results for these groups of students should therefore be treated with caution. The number is particularly low among respondents in the lowest socio-economic background group, only 3. Therefore the results for this group are not presented.

7.5.3 Comments to the microeconomic analysis

When comparing the students' income and expenditures in tables 3 and 4 some interesting and perhaps contra intuitive results are discovered. Among students who live away from their parents there seems to be a clear, although not strong, correlation between the students' income and expenditures and the level of parental education. Those with high SES have both higher annual income and expenditures compared to those with parents with lower levels of education. The income differences are mostly due to differences in family contributions. However, we also find a tendency to increasing amount of student loans with increasing parental education level which may seem to be contra intuitive according to the argument that students from lower socio-economic backgrounds are those who would be most in need for economic support such as student loans.

This finding is similar to findings from previous Norwegian studies (Opheim 2002; Fekjær 2000), and has been related to social differences in risk perception, loan aversion and expected educational monetary outcome; students from lower social backgrounds may perceive taking out a student loan in order to finance their studies as a greater economic risk compared to students from higher social backgrounds. This may be explained by general high loan aversion among students from lower social backgrounds and/or lower expectation to the monetary returns to their education. Parallel social differences in student perception are found in studies from other countries as well (Vossensteyn 2005).

The expenditure differences are partly a result of differences in expenditures on maintenance. Students from higher socio-economic backgrounds have higher annual expenditures on maintenance than that of students from lower backgrounds. They also spend slightly more on accommodation and 'other costs' but they do not have higher study related costs. This may suggest social differences in life style among students from different socio-economic backgrounds (although the differences may be related to other factors, e.g. geographical backgrounds; students living in urban areas have higher expenditures than students at smaller university colleges who live in more rural areas).

Among students living with their parents, the income and expenditure patterns are different than among students who live away from their parents. Not surprisingly we find that these students have lower total income and lower expenditures compared to the students who have moved away from their parents. The lower total income is due to lower grants and loans among these students. However, the level of income from earnings (paid work) is not lower among students living with their parents; neither do we find any tendencies to social differences in the earnings among students who live with their parents.

Turning to the expense pattern among students living with their parents, the findings do indicate some social differences in the students' level of expenses. Students from higher socio-economic background seem to have slightly lower total expenses compared to students from lower backgrounds. Students from higher socio-economic backgrounds spend less on accommodation and 'other costs'. This is contrary to the tendency we observed among students living away from their parents. The findings could indicate that students from lower social backgrounds who live with their parents have to contribute more to the household economy than students from higher social backgrounds. Still, the number of Norwegian students living with their parents is low, and this should be taken into account when interpretation the findings.

When comparing the share of public subsidies among the different groups of students, we find only small differences between the different student prototypes. Among students living away from their parents, students from the lowest SES group have a slightly higher share of public subsidies as a percentage of their total income and expenses; but this is mostly due to their lower total income and total expenses and not because they receive more public support than other student groups. Among students living with their parents, we find the opposite tendency; it is students from the highest SES group who receive the highest share of public subsidies as percentage of their total income and total expenses, but again this is mostly related to differences in total income and total expenses and not so much to differences in the amount of received public subsidies. Thus, we find no clear tendency of higher public subsidies for students from lower SES groups among the Norwegian students. Still, this is in line with the public policy of student finance – viewing the student as independent of their family background and providing equal levels of student support for all students.

7.6 Conclusions

7.6.1 High level of public expenditures in Norway?

Similar to the other Nordic countries, Norway has a relatively expensive education system (OECD 2006). This is partly due to a high public higher education sector with no tuition fees and a non-targeted system of student finance. Still, when estimating the total costs of higher education, including both direct and indirect costs as well as cash and non-cash support, the total expenditures to higher education in Norway may not be higher than that of many other countries.

Having a system where most expenditure is direct and in cash implies probably a higher degree of transparency, which may have implications for both students' choice, students' perception of the costs of entering higher education and perhaps also for equity in education.

What is perhaps less transparent, both in Norway and in other countries, is the return to higher education. The private costs of education may be related to the (expected) outcome of higher education. This may be difficult for students to estimate. There could also be social differences in how students estimate the cost and benefits of education (Vossensteyn 2005). In Norway the returns to education is generally low. When analysing and discussing the public and private costs of education the returns to education should be taken into account.

7.6.2 Are Norwegian students financially independent of their parents?

It could be discussed to what extent Norwegian students really are economically independent of their parents, as many students do report to have received some support from their parents. The microeconomic analysis also indicates higher levels of family contributions among students with higher SES which probably contribute to cover the cost of living for some groups of students. Still, parents in Norway are not obliged to support their student offspring economically and the majority of Norwegian students report to manage without any economic support from their parents. The Norwegian student finance system is supposed to provide students with sufficient support to cover their costs of living while studying without them having to rely on their parents for additional support.

7.6.3 Is the student finance system sufficient for the independent students?

Another discussion is to what extent the Norwegian student finance system fulfils its goal of providing sufficient support for students to cover their expenses. Most students have additional income either from paid employment or from their parents or from other income sources. This may indicate an insufficient level of support from the student finance system. However, it could also indicate that students who have the opportunity to gain additional income from paid employment or other sources do so, either to reduce the student debt or to increase their living standards. Our results could indicate social differences in access to different sources of income. While students with higher SES receive higher levels of family contributions, students with lower SES work more in addition to their studies. This is probably not so surprising. Even with a rather generous system

of student support there still might be a discussion to what extent the system actually covers the needs for all groups of students.

If the social differences in sources of income are related to social differences in study progression and/or study outcome, it is a larger challenge to the policy goals of equity in education.

References

Eurostudent (2007): http://www.eurostudent.eu/abt2/ab21/Eurostudent/. Hannover: HIS Hochschul-Informations-System.

Fekjær, S.N. (2000): *Studielån og sosial bakgrunn: Rike barn låner mest?* In: Samfunnsspeilet, pp. 9-15.

Frølich, N. (2006): *Value for money? Accountability and transparency within higher education*. Paper presented at the 22th EGOS Colloquium, Bergen, 6 July to 8 July 2006.

Løwe, T. & Sæther, J.P. (2007): *Studenters inntekt, økonomi og boforhold. Studenters levekår 2005*. Oslo–Kongsvinger: Statistics Norway.

NOKUT (2007): http://www.nokut.no/sw335.asp. Oslo: NOKUT.

NOU (2003): *I første rekke: forsterket kvalitet i en grunnopplæring for alle. (*Official Norwegian Reports 2003:16). Oslo: Statens forvaltningstjeneste, Informasjonsforvaltning.

NSELF (2004): *Forskrifter og nærmere regler 2004-2005.* Oslo: NSELF.

NSELF (2006): *Annual support allocated to student grants and student loans since 1947*: http://www.lanekassen.no/templates/PageWide____8298.aspx. Oslo: The Norwegian State Educational Loan Fund.

OECD (2006): Equity in Education Thematic Review. Norway country note. Paris: OECD.

OECD (2007): Education at a Glance. Paris: OECD.

Opheim, V. (2002): *Kostbar kunnskap. Fordeling og tilbakebetaling av studielån etter inntekt, utdanning og sosial bakgrunn*. Oslo: Norsk institutt for studier av forskning og utdanning.

Opheim, V. (2004): *Equity in Education. Country Analytical Report on Norway.* Oslo: NIFU STEP.

St.meld. nr. 3 (2005-2006): *Statsrekneskapen medrekna folketrygda for 2005*. Oslo: Norwegian Ministry of Finance.

Ugreninov, E./ Vaage, O.F. (2006): *Studenters levekår 2005.* Oslo: Statistisk sentralbyrå.

Vossensteyn, H. (2005): *Perceptions of student price responsiveness*. Enschede: CHEPS.

Appendix: Student loan subsidy calculations

Figures for total public expenditures on subsidies on student loans are calculated out of the total sum of distributed student loans from the State Educational Loan Fund in 2004-2005: NOK mill 13,574 and a loan subsidy rate of 9.2 per cent. The loan subsidy rate is calculated out of the total loan subsidy rate for 3 years of student loans with an annual interest rent of 4.5 per cent (based on the average nominal interest rent for the academic years 2003, 2004, and 2005). The interest rate is set for each quarter by the State Educational Loan Fund. One quarter elapses between the observation period and the date on which the interest becomes due. See Table 68. Calculations of total loan subsidies for 3 years of student loans are presented in Table 69.

Table 68 Average market interest rent in the State Educational Loan Fund for the academic years 2003-2005

01.10.2005	2.8
01.07.2005	2.8
01.04.2005	2.8
01.01.2005	2.9
01.10.2004	2.8
01.07.2004	3
01.04.2004	3.6
01.01.2004	4.2
01.10.2003	5.9
01.07.2003	6.8
01.04.2003	8
01.01.2003	8.1
Average:	4.5

Table 69 Calculations of total loan subsidies for 3 years of student loans

Loan with an annual interest rent of 4.5 per					
Year	**Balance from Previous Year**	**Amount Borrowed (beginning of year)**	**End Of Year Debt with interest**	**Amount Paid**	**End of Year Balance**
1	0.0	40,907	42,737.6	0.0	42,737.6
2	42,737.6	40,907	87,387.7	0.0	87,387.7
3	87,387.7	40,907	134,035.9	0.0	134,035.9

Taking up an annual student loan of NOK 40,907 with no interest rent for three years would sum up to a loan of NOK 122,721. Taking up an annual student loan of NOK 40,907 with an annual interest rent of 4.5 per for three years would sum up to a loan of NOK 134,036. Thus, the total loan subsidy for three years of (average) student loans is (NOK 134,036 – 122,721=) NOK 11,315 (≈€ 1414). This equals a total loan subsidy rate of 9.2 per cent.

8 Country Report of Spain

Authors: Andrea Detmer
José-Ginés Mora Ruiz
Centre for the Study of Higher Education Management (CEGES), Technical University of Valencia

Contents

8.1 Introduction

This report aims to examine the higher education funding distribution in Spain with a focus on its public/ private components. Expenditure in teaching- related activities and those directly affecting students are assessed from a macroeconomic and a microeconomic perspective. The first one analyses the overall public/private distribution of funding for higher education students. The second one explores this distribution for students coming from different socio-economic backgrounds and living in different accommodation conditions.

This report is developed in the framework of the EU project "Public/ private funding of higher education: a social balance". The methodology applied is designed to allow comparability with the results from the other five participant countries.

Initially, a brief description of the Spanish higher education system and its funding mechanisms is presented, followed by the macro and microeconomic analyses.

8.2 The Spanish higher education system

8.2.1 Governance of the system

Higher education administrative responsibilities in Spain are distributed among the central Ministry for Education and Culture (MEC), governments from the 17 autonomous regions and the 71 universities existing in the system.[68] The central government is in charge of defining national policies and the main regulatory mechanisms. It also funds research activities, allocates students grants and administrates the recently established loans programme. Regional governments on the other hand, have the main responsibility for universities' financial and organizational matters. They allocate lump sums to public universities, which in some regions are increasingly being determined using performance- based models. Universities have economic and financial independence to perform their functions, being each university's budget approved by its Social Council. They have a strong democratic internal structure, being the power over crucial decisions shared by collegial bodies, where academic, non-academic staff and students are represented.

This way of distributing rights and duties shapes a system in which although public universities are formally autonomous they are still subject to many historical regulations that are disappearing too slowly. For instance, only since November 2007, when a Royal Decree that regulates higher education studies was passed, universities are allowed to define individually their study programs.

In the dawn of the new millennium, Spanish universities face a new operating environment, involving: a) a new legal framework, which was drawn up by the central government towards the end of 2001 and reformed in 2007; b) the agreement among all European governments for transforming the structure of higher education in European countries (the Bologna Declaration); and c) the decreasing number of students as a consequence of the dramatic decline in the nation's birth rate.

68 www.crue.es

8.2.2 Composition of the system

Higher education in Spain consists almost exclusively of universities. Currently, there are 48 public and 23 private universities. In total, near 1.4 million students are enrolled in undergraduate and graduate programmes (Table 70). In Spain, no official distinction is made between full-time and part-time students.

Table 70 Enrolment academic year 2004-2005 in public and private universities according to type of study programme

Level of study	Public universities		Private universities		Total	
	Enrolment	% of public	Enrolment	% of private	Enrolment	% of total
Undergraduate	1,191,201	87.67%	65,599	87.49%	1,256,800	87.66%
Postgraduate	167,556	12.33%	9,376	12.51%	176,932	12.34%
Total	1,358,757	94.77%	74,975	5.23%	1,433,732	100%

Source: "La Universidad Española en cifras", Rectors Conference of Spanish Universities, 2006

Formally, all universities may deliver programmes of any level and are engaged in research activities, though in practice there are significant differences among institutions. The structure of programmes offered is currently changing in order to be compatible with the European Higher Education Area system. The traditional scheme of university levels consisted of: Short-cycle programmes, leading to vocational degrees; long-cycle programmes, leading to professional or academic degrees (Licenciado, Engineer and Architect); and third cycle, leading to doctoral degrees.[69]

In terms of access to the system, in 2005 the net entry rate to universities was 43%, presenting a considerable gender disparity (37% men and 51% women). This difference leads to a greater proportion of women obtaining tertiary education qualifications in all levels (e.g. 60% long cycle degree) except for advanced research degrees (49%) (year 2004) (OECD 2007). Regarding the system's efficiency, survival rate in tertiary education was 75% in 2004 (as compared to the OECD average of 70%) (OECD 2007).

8.2.3 Funding higher education

Spain spent 1.2% of its GDP in tertiary education in 2004 (OECD 2007), more than doubling the figure of 1985, but still remaining below the OECD average of 1.4%. There are special features of the distribution of total resources worthy to emphasize. First, in the past decades one of the key weaknesses of the system, the shortage of buildings and equipment, has been targeted. In 2000, Spain allocated 20.6% of its total spending to capital investment (compared to the OECD average of 11.6%). Second, most of the current expenditure in Spanish higher education institutions is spent on staff payment. Over this aspect universities have little control, since salaries are set by the central government and, to a lesser extent, by regional governments. This means that only a small

69 Source: International Association of Universities, World Higher Education Database (WHED).

percentage of current resources are set aside for expenses other than staff, in particular, funds to purchase goods and services which allow universities to develop quality policies. Third, the role of private sector funding for higher education increased during the 1990s from 20% in 1991, to 26% in 1999, developing other *third-stream* activities.

Overall, the Spanish public university system has four main sources of funding:

- Regional government subsidies. Each autonomous region is responsible for the general funding and investments of the public universities in its region.
- Tuition fees. Student fees are not particularly high (on average, 631€ per academic year, but there are considerable differences between the 17 autonomous regions) and they represent around 18% of total costs. For public universities, each autonomous region establishes the fees for courses that lead to official university degrees, within a range established by the central government. The Social Council of each university establishes the fees for all other (i.e. university-specific) courses. Since private universities are not eligible for public funding (although they can apply for competitive research funds), educational costs are totally covered by students through tuition fees. Each private university sets its own fees.
- Revenue from research activities and other services. These funds come mainly from knowledge transfer, continuing education, contracts, patents, collaboration agreements with other institutions or individuals and the creation of foundations and other entities. The central government and the European Union, through their competitive Call for Proposals are an important part of these sources.
- Student aid. The central government is responsible for most grants and scholarships (except in the Basque Country, where the regional government is fully responsible of the student aid system). Some regional governments have established small additional grant and loan programs.

8.3 Macroeconomic analysis

This section analyses the expenditure in higher education in Spain directly affecting teaching activities and students. The focus is on the distribution of public and private contributions. Public expenditure includes transfers to universities for teaching-related activities and students. Therefore, teaching allocations are the key public expenditure transferred via universities. Research funding and capital investments, for instance, are not considered in the analysis. Since only public universities are entitled to receive direct public funding for teaching activities, private universities are not included in this study. Sources for public expenditures data are national and OECD statistics.

Private expenditure, on the other hand, is estimated based on the Eurostudent survey, applied to students in higher education. Expenditure is calculated as a proxy of their declared income, as explained in the methodological chapter.

The analysis is developed for year 2004; when specific information is not available for that year, adjustments with inflation rates have been applied.

8.3.1 Public expenditure

Public expenditure is grouped into five categories: Teaching allocations, direct support (cash), direct support (non-cash), indirect support (cash) and indirect support (non-cash). Since this analysis is developed in the framework of a comparative international project, some of the categories presented are not particularly relevant to the Spanish case, however, are included for further comparability.

Teaching allocations

Public expenditure for higher education teaching-related activities has been considered mainly through teaching allocations. These represent the total direct public expenditure for educational institutions, excluding those funds specifically allocated for R&D activities, ancillary services and for capital expenditures. Financial assets and liabilities as well as other expenses in higher education, such as administration costs are also excluded. The source for teaching allocations is the OECD and its estimation is presented in the following table.

Table 71 Teaching allocations in Spain in 2004

Type of expenditure	Amount (1000 €)
Direct expenditures for educational institutions	6,118,510
minus direct expenditure for R&D activities	0
minus direct expenditures for educational institutions designated for ancillary services	0
minus direct expenditures for educational institutions designated for capital	- 1,583,290
Teaching allocations in Spain in 2004	**4,535,220**

Source: OECD Education Online Database

Direct support (cash)

In Spain, the direct public support offered to students is given through grants. These are awarded mainly by the Ministry for Education and Culture (94%) and in a small proportion, by the autonomous regions (6%) (Spanish Universities Rectors Conference 2006). Grants mainly target students from public universities (97%) being eligible those enrolled in on-site and distance education programs. In order to qualify for these, students must meet certain academic and economic conditions. Grants offered to students from public universities are distributed in a 94% for short and long cycle students and in a 6% for third cycle students (doctoral degrees) (ibid). In this macroeconomic analysis, all public grants awarded to students from public universities are considered.

Table 72 Public grants awarded to short, long and third cycle students according to type of university and funding institution in 2004 (thousand €)

Grants by source and educational level	Public universities	Private universities	Total
Short and long cycle students	435,857,733	11,673,270	447,531,003
Ministry for Education and Culture (MEC)	419,217,248	8,674,680	427,891,928
Autonomous Region	16,640,484	2,998,590	19,639,075
Third cycle students	30,182,608	1,579,162	31,761,769
Researcher personal training MEC	20,382,662	505,856	20,888,518
Autonomous Region research personal training	9,799,946	1,073,306	10,873,252
Public funds	466,040,340	13,252,432	479,292,772
Percentage of total	97.24%	2.76%	100.00%

Source: "The Spanish University in figures, 2006; Academic, productive and financial information of Spanish universities. University Indicators. Academic year 2004-2005". Spanish Universities Rectors Conference. Madrid, 2006.

Grants offered by the Ministry for Education and Culture aim to support students' maintenance and study costs needs. Different grants are offered for: exemption of fees (together with other aids), exemption of fees (only this grant), teaching material, urban transport, displacement, residence, compensatory, hardship, displacement (ship/flight), and mobility. Although the range of grants is broad, in terms of funds, they are mostly intended to cover the cost of tuition fees.

In Spain, public spending within tertiary education on student grants (8.3% of the total spending on tertiary education) is far below the EU average (16.5% of total spending in 2001). In terms of its coverage, according to the OECD, grants for the partial or full exemption of fees are awarded to 31% of university students (2006).

Regarding public loans for higher education students, they were not available until the current academic year 2007-2008. Previously, students requiring financial assistance to undertake or continue their studies, could apply to the grants offered by the Ministry for Education and Culture, regional governments or some offered by universities (the latter ones not included in this analysis). Alternatively, there are an increasing number of private banks offering preferential loans for higher education students; these are not publicly subsidised.

In 2007 a new income-contingent loan program has been implemented, the 'Préstamos renta', to support Spanish citizens enrolled in Master programs in Spain or in other countries forming part of the European Higher Education Area. This measure has been launched simultaneously with a Royal Decree which presents a new structure for higher education programs, entailing, among others, to a stronger legal national recognition of Master degrees. The loan covers tuition fees and if specially required, maintenance costs. The annual budget for the first year of functioning is €50 million[70] and €300 million are in the 2008 central government budget. This type of direct support is not included in this analysis since it has been running only for some few months and the real subsidy in terms of interest rates and grace periods is not feasible to estimate yet.

70 www.mec.es

Direct support (non-cash)

Direct non-cash support offered to higher education students includes subsidies for health care, facilities and transportation. In Spain, the fact of being a higher education student does not lead to special access or benefits in social services as is the case of other European countries. Regarding the health system, all residents (students and non-students) have free access to the social security system which includes public health. In terms of public transport, there is a discount card to obtain urban transport benefits for youngsters. It is offered to all residents under 26 independently if they are students or not. Consequently, there is no direct support in non-cash offered to higher education students in Spain.

Indirect support

Similarly, the Spanish system does not offer indirect support to higher education students or to their families. Indirect support considers for example child benefits and tax exemptions. In this sense, there is a lack of incentives, which are available in other European countries for people to get enrolled (or even to keep enrolled for a longer period than the official one) in higher education studies.

8.3.2 Private expenditure

Private expenditure in higher education is estimated using students' declared income as a proxy. Arguments supporting this assumption include that students can declare more accurately their income than their expenditure and that usually they do not save or become indebted during their study period.[71]

The source for students' income is the Eurostudent survey applied in 2006.[72] Students were asked to respond about their income coming from the following sources: Parents and family, earnings, unemployment insurance, grants, public and private loans, exemption fees and other student aids, and other monthly and annually received income. National and foreign students enrolled in public universities, in study programs type 5A and 6 according to the ISCED classification were considered for this macroeconomic analysis. In order to estimate the students' income, average income from the above mentioned categories were summed up in annual terms.

Values from Eurostudent 2006 survey, i.e. total income and grants, were adjusted by inflation[73] to be expressed in € of 2004 and be comparable with the official figures of 2004 public expenditure. Then, annual average per capita income was multiplied by enrolment in public universities in 2004, according to the figures presented in Table 70.

71 Further discussion on this assumption can be found in the methodology chapter of this document.

72 The Eurostudent survey 2006 in Spain was funded by the General Direction of Universities (DGU) of the Ministry for Education and Culture. The chief researcher of the Eurostudent 2006 project was Prof. Santos Ruesga. The Spanish team of the project "Public/ private funding of higher education: a social balance" is grateful to the DGU and Prof. Ruesga for providing the Eurostudent 2006 database

73 Annual inflation rates for Spain: 2005: 3.4%; 2006: 3.6%. Source: Eurostat.

8.3.3 Public / private distribution analysis

The following table presents a summary of the public and private expenditures in higher education as explained in the previous sections.

Table 73 Total expenditure in higher education[74] in 2004

Public expenditure in 2004		Private expenditure in 2004	
Category	**Amount (1000 €)**	**Category**	**Amount (1000 €)**
Teaching allocations	4,535,220	Student income	7,915,040
Direct support – grants	466,040	minus direct support – grants	- 383,899
Indirect support	0	minus indirect support	- 0
Total public	5,001,260	Total private	7,531,141
Total public as proportion of total public + private	40%	Total private as proportion of total public + private	60%

Source: Own calculations based on: (i) OECD Education Online Database; (ii) "The Spanish University in figures, 2006; Academic, productive and financial information of Spanish universities. University Indicators. Academic tear 2004-2005". Spanish Universities Rectors Conference; and (iii) Eurostudent 2006.

In order to analyse these figures it must be taken into account that the methodology was designed considering all real costs of being a higher education student, including living and study-related costs. This implies that living costs that would be assumed by individuals even if they were not students are included. Therefore, private expenditure represents the costs for being a higher education student in absolute terms and not the *additional* costs for the fact of being a student. Similarly, opportunity costs assumed by students for being enrolled in higher education studies, basically in the form of foregone incomes are not considered in this analysis since it has a cash-flow approach rather than a theoretical-economic one. Same logic applies to opportunity costs for governments, for example, as alternative investment options.

All in all, in Spain, 60% of expenditure in higher education for teaching and learning related activities is contributed by students and their families. This value seems high in relation to other figures representing the public/private composition of higher education funding. However, it is crucial to stress that this approach aims to identify the proportion of real costs that the system faces for higher students to have that status, *including their living costs*.

From a global perspective, the OECD presents the relative proportions of public and private expenditure on tertiary education institutions. In this case, 77% of funds come from public sources, while the largest proportion of private funds comes from households, representing almost 20% of the total. The methodology used is very different from the one applied in this study being a key difference the fact that normal living expenses are not included. Accordingly, public/private proportions vary considerably.

74 Note on grants: in the left- hand side of the matrix, public expenditure, values from national sources are presented; in the right-hand side, differently, the source of grants per capita is the Eurostudent survey, which was multiplied by the corresponding enrolment in 2004. The amount for grants in the private side is cancelled since it is included in the total student income.

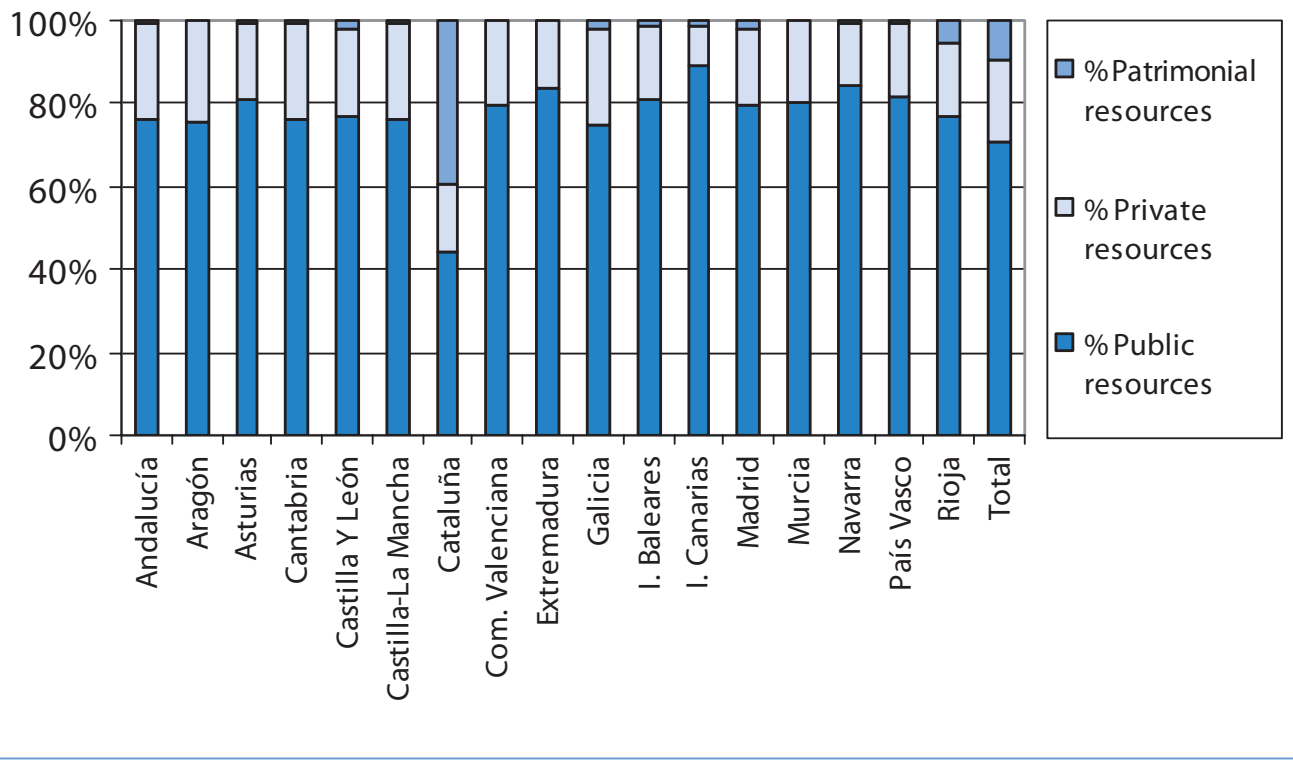
Table 74 Distribution of public and private sources of funds for tertiary education by OECD in 2003

Public sources	Private sources			Private: of which subsidised
	Household expenditure	Expenditure of other private entities	All private sources	
77%	19%	4%	23%	2%

Source: "Education at a Glance", OECD 2006.

From an inter-regional perspective, the different public/private compositions of higher education funding vary among Spain's 17 autonomous regions. Excluding Catalonia, which has a different funding structure (due to an institutional loan program for capital investments), differences among regions are considerable, varying in up to 18 points in the proportion of their public resources and 15 in their private ones. On average, public resources represent 71% of the total expenditure, private resources 19% and patrimonial ones 10% (Figure 11). This may raise some inter-regional equity issues for both public administrations and students, since most of the private funding comes from the latter ones.

Figure 11 Structure of net funding sources of Spanish public on-site universities in 2004



Source: University Coordination Council, Funding Commission, 2007

Similarly to the OECD figures, those from the Spanish University Coordination Council have a different methodological background in relation to the present study, in terms of the categories for expenditure and the elements included in the analysis. Student living costs are not included; consequently, figures for the public proportion of expenditure are much higher than those presented in this study.

This analysis presents a cash- flow approach which, differently from other studies on the topic, includes student living costs in order to compare the real expenditure for a certain population to be higher education students. 60% of the total expenditure comes from the students and

their families; 40% of the public sector, via the Ministry for Education and Culture and the regional governments.

In order to judge whether this distribution between public and private expenditure is suitable for the system or not, a further analysis observing the benefits for students and for society is suggested. A comprehensive analysis considering total expenditures as investment in higher education and rates of return to that investment, including externalities, for both, public and private components, may give further policy orientations.

What is clear is that the Spanish higher education and social system offers support in a direct way, via grants and only recently, via loans to Master students. No further incentives are presented for prospective higher education students to enter the system or for those already in the system, to remain in it. While other countries present a broad range of indirect support in the form of tax exemptions, transport discounts and even child allowances, Spain applies none of these mechanisms.

Taking into account the decrease in enrolment in higher education due to a decline in fertility rates and also due to a stabilisation of the enrolment rates, the question arises of whether the public sector needs to take a different approach in its funding policies to generate the advanced human capital required for the country to become a competitive knowledge economy. Developing a new and stronger student aid system was a goal of the current government which has been postponed for the moment.

8.4 Microeconomic analysis

The microeconomic section of this public/ private funding study aims to analyse the higher education funding distribution among students coming from different socio-economic groups and living in different types of households.

The analysis is based on the Eurostudent survey applied in 2006. In order to determine the income groups to be analysed, a sample considering a broader population and not only those already enrolled in higher education was used. This with the aim of obtaining a more objective viewpoint of any inequalities that may be present in the system. Using the European Union Statistics on Income and Living Conditions (EU-SILC) database 2005, income quartiles were determined. Only households with children were considered since these represent the potential households with higher education students. The cut-off points from the EU-SILC income quartiles were used to determine four income groups in the Eurostudent sample.

Table 75 EU-SILC cut-off points to determine income groups

Percentile	Net annual household income	Monthly annual household income
25%	€14,243	€1,187
50%	€21,934	€1,828
75%	€32,302	€2,692

Source: Own calculations based on EU- SILC 2005

Then, students were grouped according to their type of accommodation. The original variable, which presented 5 categories ((i) living with parents, (ii) with own family but at parents' or parents in law, (iii) independent with own family, (iv) student hall and (v) others) was transformed into one with two categories: living at home (original (i) and (ii)) and living away from home (original (iii), (iv) and (v)).

Only students that fulfilled certain conditions were included in the analysis: studying in public universities (93%), between 18 and 24 years old[75] (64%), having no severe disability (99,5%) and having Spanish nationality (99%).

By filtering the sample with the mentioned variables and including only those respondents with information on their accommodation status and net household income, the sample was reduced to its 25%. The composition of the 8 groups analysed is presented in Table 76.

Table 76 Student groups determined by socio-economic background and accommodation status

Living condition	Students living at home		Students living away from home		All students	
Social background	Total number	Percentage of total	Total number	Percentage of total	Total number	Percentage of total
Low	48	15.38%	33	10.58%	81	25.96%
Lower- medium	59	18.91%	20	6.41%	79	25.32%
Higher- medium	58	18.59%	31	9.94%	89	28.53%
High	41	13.14%	22	7.05%	63	20.19%
Total	206	66.03%	106	33.97%	312	100.00%

Source: Own calculations based on Eurostudent 2006 survey

The distribution among students from the Eurostudent survey in the four new income groups is relatively uniform. Therefore, income distribution between all households with children (from EU-SILC) and households with higher education students (Eurostudent) is relatively similar. This suggests that income would not be a critical variable for students to access higher education.

Income and expenditure were calculated for students in the 8 groups. Income has been grouped in 6 categories; grants, public loans, earnings, family contributions in cash, family contributions in kind and others. In Spain, there were no public loans at the time of the survey and no contributions in kind were asked in it. The category 'others', includes all other sources of income asked in the survey, i.e. income from unemployment insurance, fees exemption and other student aids (different from grants), other monthly and annually received income and total loans.[76]

Table 77 presents a summary of the declared income by source and by students' socio-economic and accommodation status. Differences in grants and in family contributions in cash are statistically significant, while differences in earnings and others are not significant by students' condition.[77] Clearer trends are observed in the group of students living at home than for those living away from home.

75 The methodology defined for this international study was to consider those students in typical freshman age plus/minus 3 years, however, the survey applied in Spain asked age by range. The most suitable was between 18 and 24 years old.

76 The question on loans included income from private and public loans. Since no public loans were available for students, data refers only to private loans, which are included in the category 'others'. Only 8 out of 312 students declared to receive income from loans.

77 An auxiliary variable was created to determine the significance of values between the 8 groups determined by socio-economic situation and living situation.

Table 77 Students' annual income by source and socio-economic and accommodation status in 2006 (€)

Source of income	Students living at home				Students living away from home				F	Signif.
	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High		
Grants	544	388	322	207	909	632	632	164	5.80	0.0166
Public loans	0	0	0	0	0	0	0	0	na	na
Earnings	2,232	1,428	1,621	3,229	2,764	120	1,219	1,516	1.22	0.2701
Family contrib. in cash	949	932	1,409	1,626	2,353	3,666	3,499	4,424	78.81	0.0000
Family contrib. in kind	0	0	0	0	0	0	0	0	na	na
Others	205	263	276	384	270	125	588	266	0.22	0.6366
Total income	**3,930**	**3,010**	**3,629**	**5,446**	**6,296**	**4,543**	**5,939**	**6,370**		

Source: Own calculations based on Eurostudent 2006 survey.

Regarding students' expenses[78], two categories were used: maintenance[79] and living costs. Table 78 presents the summary of students' expenditure by accommodation and socio-economic status. Differences between the 8 groups for maintenance and cost of study are not statistically significant.

Table 78 Students' annual expenditure by type and socio-economic and accommodation status in 2006 (€)

Type of expenditure	Students living at home				Students living away from home				F
	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High	
Maintenance	376	507	499	605	585	444	526	569	0.53
Cost of study	732	666	649	831	680	758	778	606	0.06
Total	1,108	1,173	1,147	1,436	1,265	1,201	1,304	1,174	

Source: Own calculations based on Eurostudent 2006 survey.

Table 77 and Table 78 present students' income and expenditure from a cash flow perspective. Part of their income as well as their expenditure represents public subsidies. In the Spanish case, these are delimited to direct cash-support in the form of grants. There are no public subsidies allocated via direct non-cash or indirect support. Table 79 shows the average public subsidies that higher education students receive according to their accommodation and socio-economic status. There is a clear trend for students living at home to receive more public subsidies as they come from families from lower socio-economic backgrounds. In the case of students living away from home, it is even more evident for students in the extreme income groups, but uniform for the middle classes.

78 In the Eurostudent survey, students were asked separately how much they and their families spent for the students' expenses in the different categories. These were added to estimate students' maintenance and study costs.

79 Maintenance costs include expenditures declared for accommodation, bills, food, clothes and personal hygiene, transport, medical expenses and other expenses. Cost of study includes fees, study materials and other payments to universities.

Table 79 Public subsidies by students' accommodation and socio-economic status in 2006 (€)

Socioeconomic group	Students living at home	Students living away from home
Low	544	909
Lower- medium	388	632
Higher- medium	322	632
High	207	164

Source: Own calculations based on Eurostudent 2006 survey.

Table 80 Public subsidies in relation to students' expenditure by accommodation and socio-economic status in 2006 (€)

Socio-economic group	Students living at home			Students living away from home		
	Expenditure	Public subsidies	Public subsidies /expenditure	Expenditure	Public subsidies	Public subsidies /expenditure
Low	1,108	544	49%	1,265	909	72%
Lower medium	1,173	388	33%	1,201	632	53%
Higher medium	1,147	322	28%	1,304	632	48%
High	1,436	207	14%	1,174	164	14%

Source: Own calculations based on Eurostudent 2006 survey.

Table 81 Public subsidies in relation to students' income by accommodation and socio-economic status in 2006 (€)

Socio-economic group	Students living at home			Students living away from home		
	Income	Public subsidies	Public subsidies /income	Income	Public subsidies	Public subsidies /income
Low	3,930	544	14%	6,296	909	14%
Lower medium	3,010	388	13%	4,543	632	14%
Higher medium	3,629	322	9%	5,939	632	11%
High	5,446	207	4%	6,370	164	3%

Source: Own calculations based on Eurostudent 2006 survey.

Table 80 and Table 81 present the relation between expenditures and income in relation to the public subsidies received. While expenditure and income do not vary significantly between students from different socio-economic backgrounds, there are clear inverse trends between public subsidies allocations and their background: the lower the socio-economic status, the higher the proportion of public subsidies in relation to their expenditure and to a lesser extent, their income. For students living away from home, trends are more marked than for those living at home, in the case of expenditures. In general, this would seem well aligned with equity public policies in high-

er education. Nevertheless, it must be taken into account that public subsidies in this case refers only to grants and further support and/or incentives may be required as well.

References

Consejo de Coordinación Universitaria, Ministerio de Educación y Ciencia (2007): *Data and Figures of the University System, year 2006-2007*.

European Commission: Eurostat (2007): EU-SILC UDB 2005 – version 2 of June 2007 (cross-sectional data). Luxemburg: Eurostat.

Eurostudent (2005): *Eurostudent report 2005. Social and Economic Conditions of Student Life in Europe 2005. Synopsis of Indicators*.

International Association of Universities, World Higher Education Database (WHED) (2007): *Spain Education System*.

Ministerio de Educación y Ciencia (2007): *Proyecto de Ley Orgánica por la que se modifica la Ley Orgánica 6/2001, de 21 de diciembre, de Universidades*.

OECD (2004): *Handbook for Internationally Comparative Education Statistics: Concepts, Standards, Definitions and Classifications*.

OECD (2006): *Education at a Glance*.

Spanish Universities Rectors Conference (2006): *The Spanish University in figures, 2006; Academic, productive and financial information of Spanish universities. University Indicators. Academic year 2004-2005*. Madrid, 2006.

Universidad Autónoma de Madrid (2005): *Eurostudent report 2005. Social and Economic Conditions of Student Life in Europe 2005. National Profile, Spain*.

University Coordination Council, Funding Commission (2007): *Funding of the Spanish University System*. Madrid.

Website Ministry for Education and Culture: www.mec.es.

Website Spanish Universities Rectors Conference: www.crue.es.

9 Overall analysis

Whilst the results presented in each of the country reports already reveal some interesting information on each higher education system's specific cost-sharing approaches, only an international comparison can truly highlight what can be deemed to be characteristic of each system.

For the sake of comparability, the reference year for the international comparison is 2004; where necessary, each country's data have been adjusted for inflation. So as to make sure that exchange rates and different purchasing powers do not distort the comparison, purchasing power standards are used where actual values are referred to. However, as it is important to the research consortium that the data are not quoted out of context and therefore likely misunderstood, the comparisons on macro and micro level do not refer to the actual amounts per country, but to the respective percentage shares and/or index values. This helps to avoid misinterpretations and reflects the project's core research interest.

9.1 Comparison on macro level

Before even looking at the relative shares that the state and the private households take on in higher education funding, the overall public spending on higher education in terms of OECD data on expenditure on tertiary education as a share of the respective total public expenditure or GDP is compared. From the following table it becomes clear that there are two ways of looking at this: Either by looking at all public expenditure for tertiary education – including public subsidies to households – or by focusing on the funding of tertiary education institutions.

Table 82 Public expenditure on tertiary education as reported by the OECD (values for 2004)

Country	All public expenditure on tertiary education* as % of total public expenditure	Expenditure on tertiary education institutions as % of GDP	Expenditure on tertiary education institutions (ISCED 5A and 6) as % of GDP
Czech Republic	2.1	1.1	1.0
United Kingdom	2.3	1.1	1.1**
Germany	2.5	1.1	1.0
Netherlands	2.9	1.3	1.3
Norway	5.3	1.4	1.4**
Spain	2.5	1.2	1.2**
OECD average	3.1	1.4	1.2

* includes public subsidies to households that may be spent on maintenance (not handed on to tertiary education institutions)
** no differentiation by type of tertiary institution

Source: OECD Education at a glance 2007, tables B2.1, B2.2 and B4.1

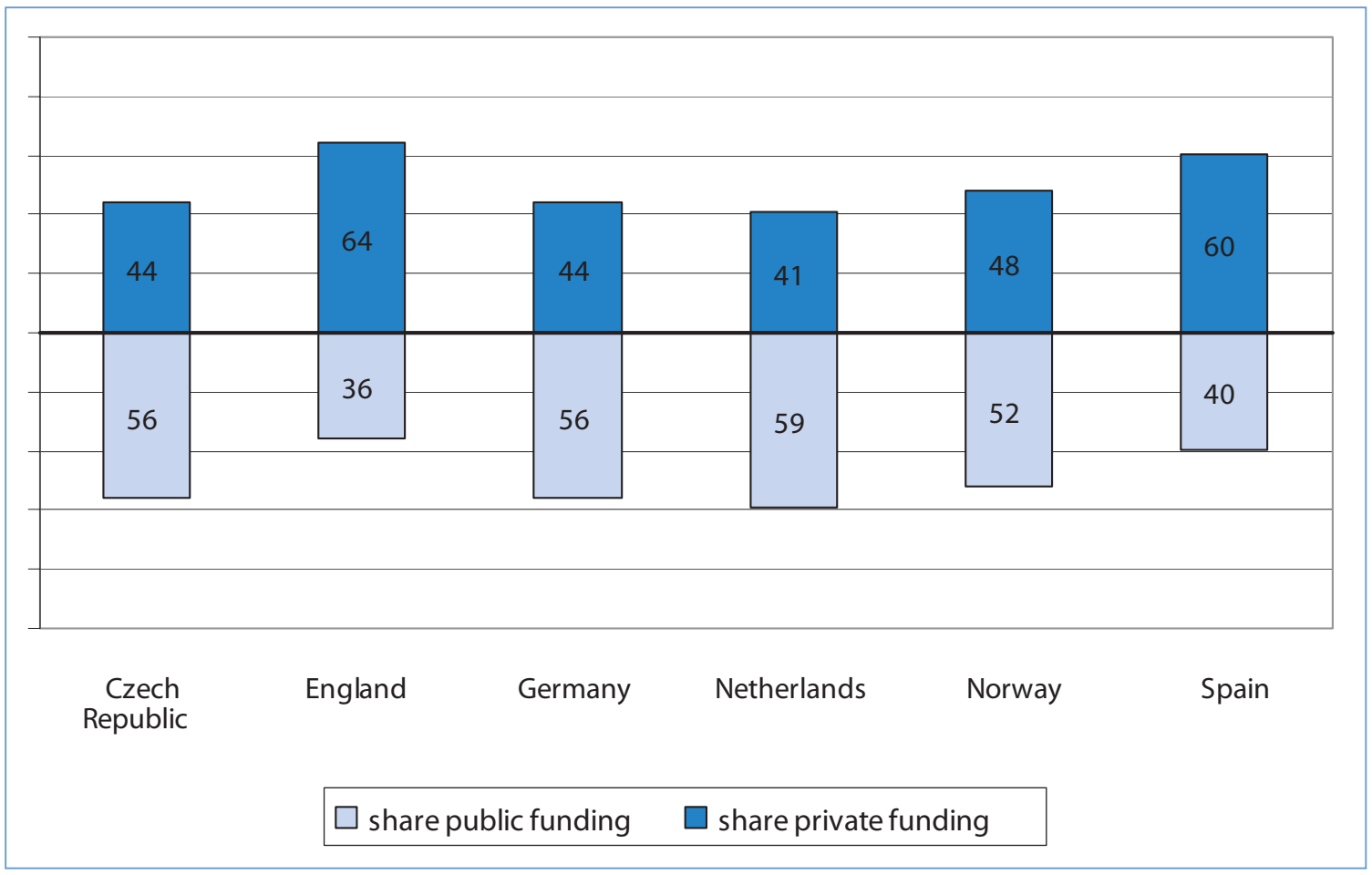
The first perspective (all public expenditure on tertiary education as a percentage of total public expenditure) implies that public expenditure for tertiary education in Norway is around twice as high as in the other countries – and except Norway, all countries observed here do not reach the OECD average. When the second perspective is taken (expenditure on tertiary education institu-

tions as percentage of GDP), the differences between countries are not as great any more (between 1.0 and 1.4% of GDP), though Norway still is in the top position here.

The approach taken in this study is somewhat different: Its advantage is that other than the OECD indicators, this study also takes support forms into account that are not normally noticed, such as tax exemptions for parents with student children. Although of a rather indirect nature, such items also play a role in public support for higher education – and a quite substantial role in some countries. Owing to these differences in the research approach, the values derived in this study differ considerably from the values established by the OECD, of course (cf. OECD 2007, indicator series B).

Based on the results of this study, then, the respective shares for all public and private funding can be compared between the countries (as pointed out in chapter 2, this refers only to teaching-related expenditure, not to research). This comparison shows that the share of public funding is considerably lower in England and Spain than in all the other countries in this survey.

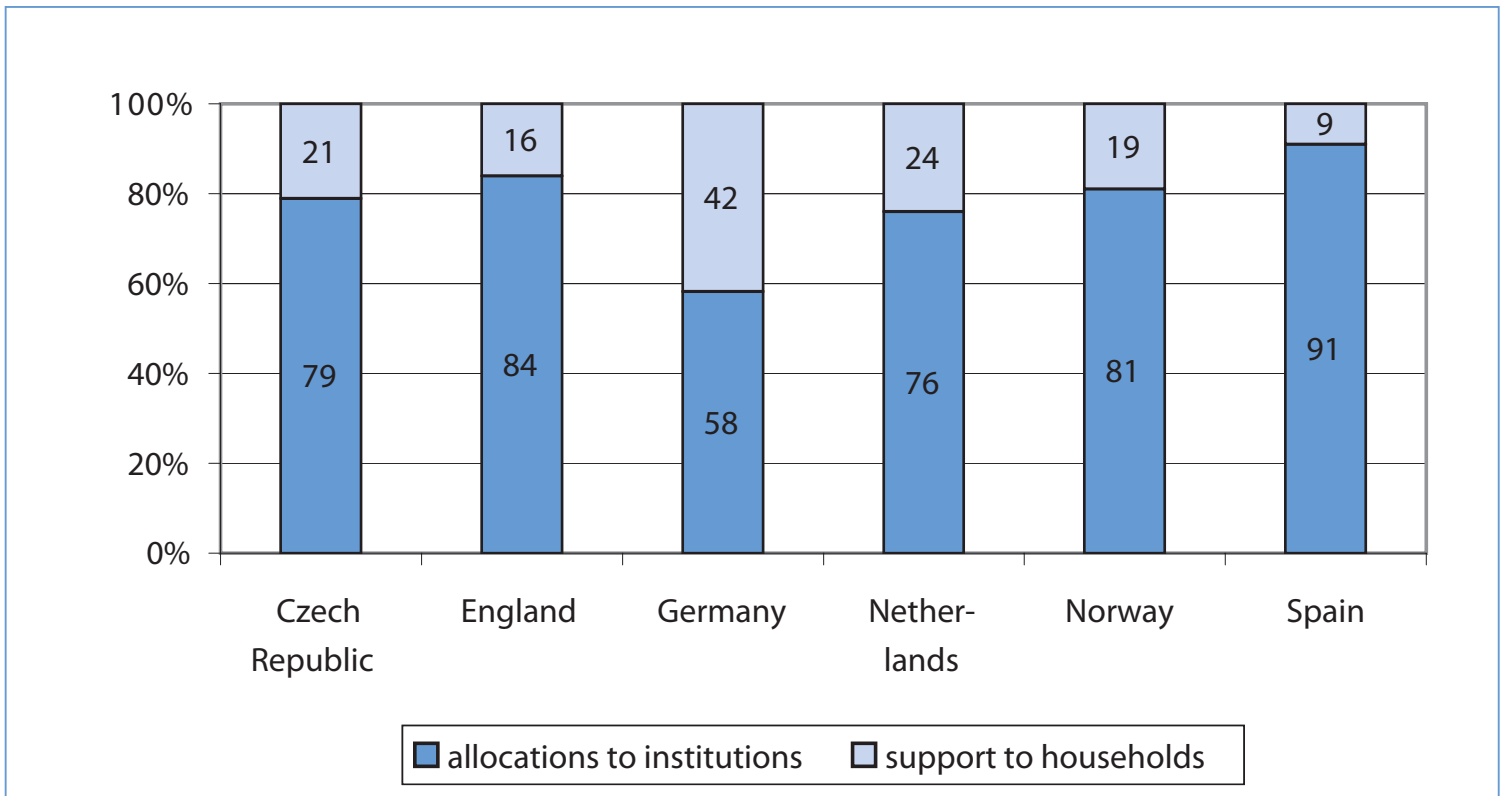
Figure 12 Overall shares of teaching-related funding for higher education borne by the public and the private side



Source: Own calculations

Informative country-specific diagrams on the flows of financial support and private contributions in higher education for all parties involved can be found in Eurydice's Key Data on Higher Education in Europe from 2007. They also hint at the different types of support at work, but they do not specify the amounts in question. In this project, emphasis was laid on taking *all* education-related public support items to households into account (rather than, for instance, just student grants), i.e. all items of support to students and their parents for which the student status plays a decisive role. To get an idea of the importance of such support in each country, it is therefore interesting to point out the breakdown of all public expenditure into teaching allocations as opposed to all items of support to students and their parents. Figure 13 takes a closer look at this.

Figure 13 Share of allocations to institutions and support to private households in public teaching-related expenditure (in %)



Source: Own calculations

As is shown in the above graph, teaching allocations to higher education institutions play a markedly smaller role in the public expenditure on higher education in Germany than in all other countries, whilst their share is particularly high in Spain. In turn, this means that higher education-related subsidies to households accumulate to a very substantial share of public expenditure in Germany, whilst they are of little importance in Spain.

Given the tremendous differences in their shares within public expenditure, it is then, of course, interesting to see what the respective public subsidies to households are composed of. Table 83 shows in more detail which items the public expenditure is composed of in each of the countries, and how much of the total public expenditure each of these items accounts for. In this table, it becomes clear how the differences observed in terms of public subsidies to households come about. Public subsidies are divided into direct subsidies that are granted to the students themselves, and into indirect subsidies which are aimed at the students' parents. Both types of support can be cash (increasing disposable income) or non-cash (decreasing expenditure) – though indirect non-cash support has not been found in any of the countries concerned.

Direct cash support could include grants, tax exemptions granted specifically to students and subsidies on loans. In terms of the share of this type of support form in all public funding, direct cash support plays an important role especially in the Netherlands and Norway, where grants are the most important item of direct support. In England and Spain, this type of support is also quite important: In Spain, grants are actually the only existing form of public support, and in England, subsidies on loans play a more important role than grants (in terms of funding amounts). By contrast, direct cash subsidies are of relatively smaller importance in the Czech Republic and Germany.

Support to students can also take on non-cash form: This refers to subsidies for health (and care) insurance, facilities and transport. In Germany and the Czech Republic, this form of support plays quite an important role, too, and to a lesser degree also in the Netherlands and in England, whilst such subsidies are (almost) non-existent in Norway and Spain. Student-specific sub-

sidies for health and care insurance[80] are found in the Czech Republic and in Germany; subsidies for facilities (e.g. in the form of subsidised meals in refectories, or cheaper than average accommodation in student dormitories) are found in the Czech Republic, Germany and to a very small extent also in Norway. Students profit from subsidies for transportation especially in the Netherlands, but also in Germany. Finally, students can be exempt from a specific housing-related payment in England.

Indirect support (i.e. support geared at the students' parents, whether in the form of benefit payments or tax reductions/exemptions) is found to a very limited extent in the Netherlands, but mainly in the Czech Republic and in Germany. In these two countries, this reflects the underlying understanding of students as being dependent on their parents. Consequently, this type of support is quite substantial concerning its share in the overall public support, especially so in Germany.

Table 83 Composition of public funding (in %; slight rounding differences may occur)

	Czech Republic	England	Germany	Nether-lands	Norway	Spain
Teaching allocations	78.5	83.7	58.5	75.7	81.1	90.7
(including teaching-related research)						
Direct support (cash)						
Grants	5.1	4.2	6.4	15.2	15.3	9.3
Student-specific tax exemptions	0.2	-	-	-	-	-
Subsidies on loans	-	8.5	1.2	1.4	2.9	-
Direct support (non-cash)						
Subsidies for health insurance	5.1	-	10.6	-	-	-
Subsidies for facilities	3.3	-	4.0	-	0.6	-
Subsidies for transportation	-	-	0.8	7.0	-	-
Other direct non-cash support	-	3.7	-	-	-	-
Indirect support (cash)						
Child-related payments	3.1	-	15.0	-	-	-
Tax exemptions	4.7	-	3.4	0.7	-	-
Indirect support (non-cash)						
(not found in the six countries)	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Own calculations

To stress the importance of direct and indirect support to households, these are separated from the teaching allocations in Figure 14: This graph reflects the composition of the support made to households in the three categories (direct cash, direct non-cash and indirect support), leaving expenditure on higher education institutions out of the picture.

First of all, this figure makes it quite obvious that the share of cash support to students in the overall support to households varies greatly between the countries: In Spain, this is the only mode of support, and in Norway, England and the Netherlands, this is still by far the most impor-

80 This means that just because of their student status, students are exempt from payments (or have to pay smaller amounts) than their non-student peers would have to make for health (and care) insurance.

tant support form, whilst in Germany and the Czech Republic, cash support to students amounts only to 19 and 31% respectively, and in Germany, this is actually the least important form of support concerning its size.

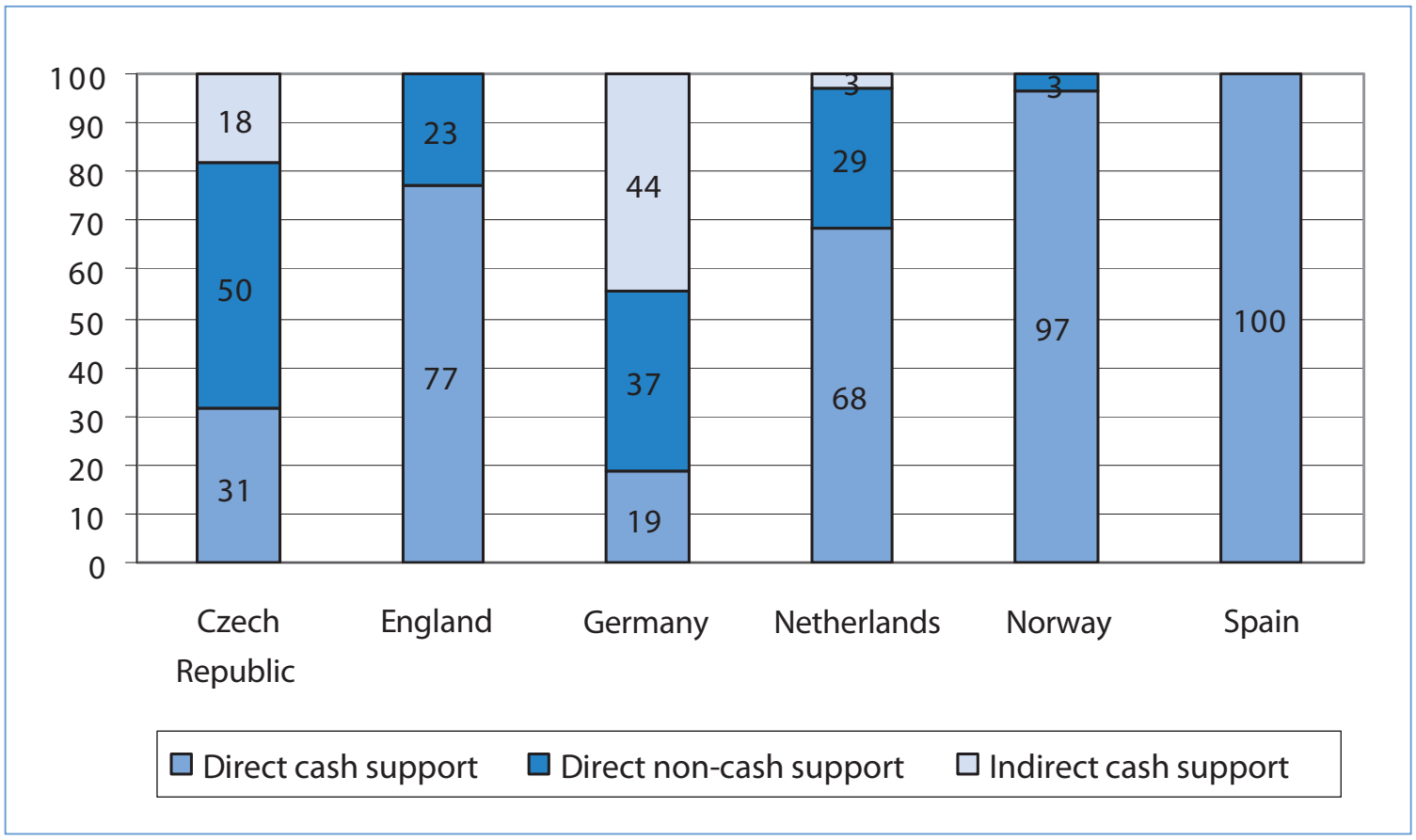
Non-cash support to students is the most important form of support in the Czech Republic, making up 50% of support to households. By contrast, it equals only 3% of support in Norway.

This graph also stresses that support geared at students' parents is found only in Germany and the Czech Republic (and to a very limited extent in the Netherlands), where this is tied to the picture of the student as being dependent on his/her parents. What is really striking, though, is that this form of support is actually the most important one in Germany, amounting to 44% of all support to households.

All in all, these observations can be narrowed down to the following typology:

- Predominance of direct cash support: Spain and Norway
- Mix of direct cash and non-cash support (high cash support share): England and Netherlands
- Mix of all support forms (low share of direct cash support): Germany and Czech Republic

Figure 14 Composition of public support to households by type of support (in %)



Source: Own calculations
Note: Rounding differences may occur.

Another way of comparing the data would be to look at the public and private funding relating to an average for the six countries studied here. To make sure that such values are not distorted by different sizes of the respective higher education systems, they would have to be broken down to expenditure per capita. Now, as had been explained in chapter 2.5, the research consortium has deliberately refrained from including the actual data on expenditure per capita in this part of the report to prevent them from being quoted out of context and thus misinterpreted. However, to enable some international comparison, index values can be used: An average of expenditure per capita is constructed for all six countries, and then set at 100; for each of the countries, their respective income is then expressed related to this average. This allows to observe which of the countries spend more or less than this six-country average per student.

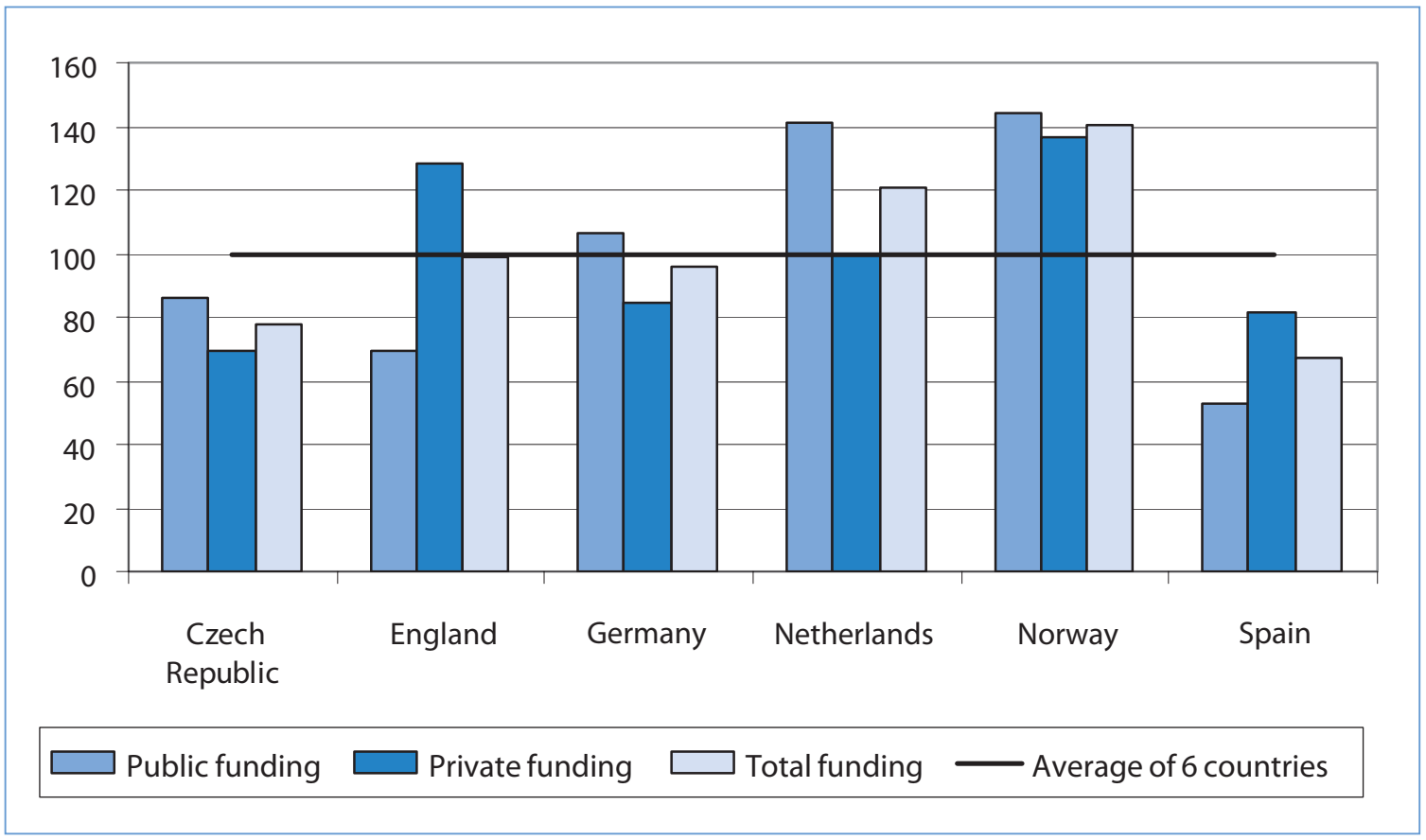
Table 84 Comparison of funding per capita between countries against an average for all six countries (index values; average set at 100)

Index values	Czech Republic	England	Germany	Nether-lands	Norway	Spain	Mean
Public funding	85.8	69.4	106.5	141.3	144.4	52.6	100.0
Private funding	69.3	128.4	84.9	99.7	136.3	81.4	100.0
Total funding	77.6	98.5	95.8	120.8	140.4	66.8	100.0

Source: Own calculations

It is very important to note here that there is no such thing as an "ideal" figure for expenditure per capita. Indeed, what is spent in each country in terms of public and private expenditure may be quite appropriate in the respective system – one always has to take the context into account. This tabulation is only used to point out the differences that exist between the countries. So if the expenditure for a country is above or below average, this only says something about the comparison to the other five countries; it does not necessarily mean that the expenditure should be decreased or increased.

Figure 15 Comparison of funding per capita between countries against an average for all six countries (index values; average set at 100)



Source: Own calculations

Concerning public funding, more than the six countries' average is spent per student in Norway, the Netherlands and Germany. Private funding per student is above average in Norway and England and average in the Netherlands. When both funding sources are added, funding is above average in Norway and the Netherlands and near average in England and Germany. It is noteworthy that whilst the total funding is average for England, this country displays the greatest difference between public and private funding compared to the six countries' average.

9.2 Comparison on micro level

The macro analysis has shown fundamental differences in cost-sharing ratios between countries – now the micro analysis is to add the perspective of (potential) differences even within countries by a student's socio-economic status (SES). As had been explained in chapter 2.4.3, four socio-economic background groups are established in each country. To ensure that a student's living situation does not distort the picture, a distinction is made by where the student lives (with the parents or away). Altogether, eight groups are thus compared with each other by country.[81]

First of all, the figures for total income, expenditure and public subsidies can be compared to each other (direct non-cash subsidies were added to the reported income and expenditure here, cf. explanations on the research approach in chapter 2.4.3.2). The income (and expenditure and public subsidy respectively) that is reported for a student with low SES living at home is used as the basis for comparison and set at 100 (Norway is an exception: Since there are no data for students with low SES living with their parents, the students with lower medium SES living at home are referred to as the basis for comparison). For each country, the values for students from other SES groups and those living away from home are compared to this index.[82]

The general tendencies that can be observed are as follows:

- As would be expected, students living away from home have higher income and profit to a greater extent from public subsidies than students living at home. Given that they have to pay rent, it is hardly surprising that they also have higher expenditure. However, the differences are not always in the same dimension: For instance, in the Czech Republic, the income of students living away from home is around twice as high as the income of those living at home, whilst it is around 60% higher in Spain and only about 20 – 30% higher in most of the other countries.
- In all countries it is striking that within each housing type group, the income is about the same regardless of SES (except for students living at home in the Czech Republic and in Spain).
- Where SES differences for public subsidies are concerned, the general tendency is that the lower the SES, the higher the subsidy. However, whilst this is a very clear trend for England, the Netherlands and Spain, this is not so marked in the Czech Republic and Germany, and in Norway, there is even an adverse trend concerning students living at home. Given that the income is practically the same for students within each country, a difference in the amounts of public subsidies paid out would indicate that the composition of students' income from different sources must differ by SES (cf. chapter 9.2.1).

81 As had been agreed in the research approach, each country has tested the significance of the differences between the student prototype groups by means of an F-test. However, there were slight variations in how this was applied, sometimes referring to all eight groups, sometimes differentiating by living situation first; or sometimes referring to single items, sometimes to sums. Therefore, it is difficult to include these results in this overall analysis, so the data should not be over-interpreted (though of course one can always refer back to the significance values stated in the country reports). All the same, the main tendencies observed and reported here still allow for making general conclusions.

82 Please note that this does not allow for a direct comparison between countries, because the total expenditure levels in question differ between countries, and the changes shown in the index only refer to each country. So for instance, when an index value for income in one country and SES group is, for instance, 142, and 284 for another country in the same SES group, one cannot say that the income is twice as high in the other country for this group. Each of these values has to be referred to the respective income of a student from a low SES living at home; and only the *relationships* of the respective income levels can be compared between countries.

Table 85 Differences by living situation and SES for income, expenditure and public support (comparison based on values for low SES students living at home, set at 100)

		Student living at home				Student living away from home			
Country	**SES**	**Low**	**Lower medium**	**Higher medium**	**High**	**Low**	**Lower medium**	**Higher medium**	**High**
Czech Republic	Total student income	100	111	118	184	192	187	202	220
	Total student expenditure	100	93	87	111	113	109	109	129
	Total public subsidies	100	93	96	90	132	116	130	126
England	Total student income	100	103	99	107	121	126	123	127
	Total student expenditure	100	112	97	90	110	107	112	109
	Total public subsidies	100	67	64	61	112	115	89	64
Germany	Total student income	100	105	100	100	124	125	126	131
	Total student expenditure	100	106	99	100	128	130	132	136
	Total public subsidies	100	97	93	97	123	121	110	110
Nether-lands	Total student income	100	101	102	107	132	129	138	142
	Total student expenditure	100	98	98	105	150	156	148	160
	Total public subsidies	100	87	74	68	142	124	121	111
Norway	Total student income	n.a.	100	89	84	107	123	121	124
	Total student expenditure	n.a.	100	81	76	134	168	167	173
	Total public subsidies	n.a.	100	107	111	306	278	294	298
Spain	Total student income	100	77	92	139	160	116	151	162
	Total student expenditure	100	106	104	130	114	108	118	106
	Total public subsidies	100	71	59	38	167	116	116	30

Source: Own calculations

Despite the interesting observations made above, the figures reported here may not tell the whole picture, as they refer to overall sums. Therefore, the respective items for income, expenditure and public support shall be looked at in greater detail.

In the following, the data presented in tables on income, expenditure and public support always refers to both housing situations. By contrast, a graph depicting only the situation of students living away from home (which is the most common housing situation in all countries except Spain) is then added to visualize the shares of the respective items in income, expenditure and public support.

9.2.1 Comparison of student income

In Table 86, the respective differences between income items are observed: For each item, the amount for a student from the low SES is set at 100; the amounts observed for the students from the other SES groups are then compared with this index. So other than in the previous table – which was to show the differences also by living situation –, here we use different index values per living situation to focus on the differences within these two main groups.

Table 86 Differences in income items by SES (comparison based on values for low SES per housing type, set at 100)

	Student income	Student living at home				Student living away from home			
Country	SES	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High
Czech Republic	Grants	100	99	81	97	100	91	122	122
	Public loans	100	n.a.	62	783	100	211	27	55
	Earnings	100	113	121	225	100	128	145	135
	Family contr. cash	100	123	139	185	100	84	97	111
	Family contr. in kind*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Other	100	60	45	160	100	207	87	282
	Direct non-cash support	100	100	100	100	100	100	101	100
	Total student income	100	111	118	184	100	97	105	115
England	Grants	100	59	59	55	100	102	69	39
	Public loans	100	97	83	83	100	103	94	81
	Earnings	100	117	114	132	100	99	89	76
	Family contr. cash	100	153	176	243	100	134	208	320
	Family contr. in kind	100	89	128	105	100	215	190	235
	Other	100	116	104	101	100	87	83	89
	Direct non-cash support	n.a.	n.a.	n.a.	n.a.	100	100	100	100
	Total student income	100	103	99	107	100	104	101	104
Germany	Grants	100	54	33	17	100	67	40	19
	Public loans	100	54	30	12	100	65	36	15
	Earnings	100	137	124	101	100	105	97	84
	Family contr. in cash and in kind	100	120	128	146	100	133	176	215
	Other	100	95	78	83	100	120	97	110
	Direct non-cash support	100	100	100	100	100	100	100	100
	Total student income	100	105	100	100	100	100	101	105

	Student income	Student living at home				Student living away from home			
Country	SES	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High
Nether-lands	Grants	100	78	58	49	100	81	79	70
	Public loans	100	76	99	95	100	94	89	84
	Earnings	100	107	99	91	100	94	114	98
	Family contr. cash	100	141	186	222	100	117	126	180
	Family contr. in kind	100	131	147	171	100	131	152	211
	Other	100	85	83	109	100	93	102	83
	Direct non-cash support	100	103	102	100	100	105	101	101
	Total student income	100	101	102	107	100	98	105	107
Norway	Grants	n.a.	100	109	120	100	88	94	94
	Public loans	n.a.	100	103	90	100	115	117	125
	Earnings	n.a.	100	88	75	100	110	104	87
	Family contr. in cash and in kind	n.a.	100	42	91	100	328	289	487
	Other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Direct non-cash support	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Total student income	n.a.	100	89	84	100	115	113	116
Spain	Grants	100	71	59	38	100	69	70	18
	Public loans	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Earnings	100	64	73	145	100	4	44	55
	Family contr. cash	100	98	149	171	100	156	149	188
	Family contr. in kind	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Other	100	128	135	187	100	46	218	98
	Direct non-cash support	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Total student income	100	77	92	139	100	72	94	101

Source: own calculations

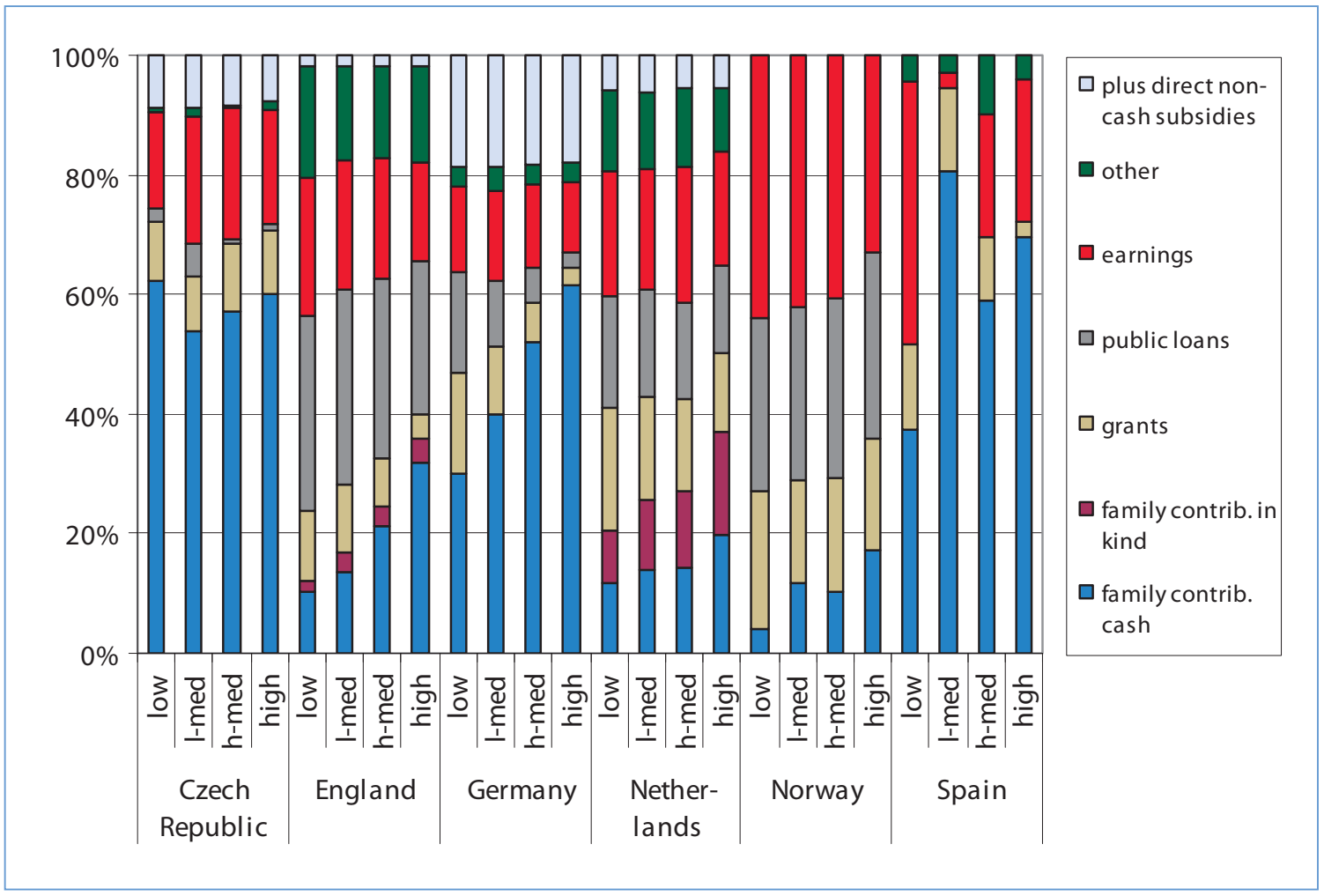
* For the Czech Republic, the data for the international comparison do not include any information on income in kind, whilst such information was estimated within the national report. Therefore, any income-related calculations made in the overall analysis would not exactly match those made within the Czech country report.

The observations made on the income differences are as follows:

- Concerning grants, there is a clear tendency that the higher the SES, the lower the grant – regardless of the living situation (though of course, unsurprisingly, students not living at home do tend to get a higher grant than those living with their parents, as was shown in the country studies). Whilst the differences are very marked in Germany and Spain, the differences are lower in England and the Netherlands, and in the Czech Republic and Norway, even data contradicting this general tendency can be observed.
- As for the public loans, that general tendency is still discernible here, but there are some exceptions. In Germany, the tendency is most clear, in England and the Netherlands it is still visible, but for Norwegian students not living at home, the opposite is true: the higher their SES, the higher the amount of the loan. These differences have to be seen in the context of whether students can choose to take out a loan (as opposed to a combined loan/grant) and/or if the loan is means-tested.
- Concerning student's own earnings as part of his/her income, the general trend is that they go down with increasing SES, but there are quite a few exceptions to this.
- By contrast, family contributions clearly are markedly higher for students with higher SES, and it would not be unusual for a student with very well-off parents to receive twice as much support from them than a student with the lowest SES would.

To also get an idea of the relative importance of each of the income items, each income item can be expressed as a percentage of total income, and then these values can be compared by living situation and SES. A full table with data for each SES and living situation is given in the annex, whilst Figure 16 gives an overview of the respective shares for students living away from home.

Figure 16 Composition of income for students living away from home by country and SES (in %)



Source: Own calculations
Note: For Germany, family contributions (depicted as in cash only) comprise contributions in cash and in kind in one sum.

The relative importance of income items differs considerably between countries. In those countries where the students are still considered to be dependent on their parents (the Czech Republic, Germany and Spain), family contributions play an essential role. For instance, they account for around 60% of a student's budget in the Czech Republic. Even in the other three countries, where students are deemed to be independent of their parents, the family contribution nonetheless still play a role, albeit a smaller one; the respective shares are by far the smallest in Norway (4-17%).

In all countries, family contributions increase in line with socio-economic status; but the differences in income shares are much higher in Germany and Spain than in the Czech Republic, the Netherlands and Norway.

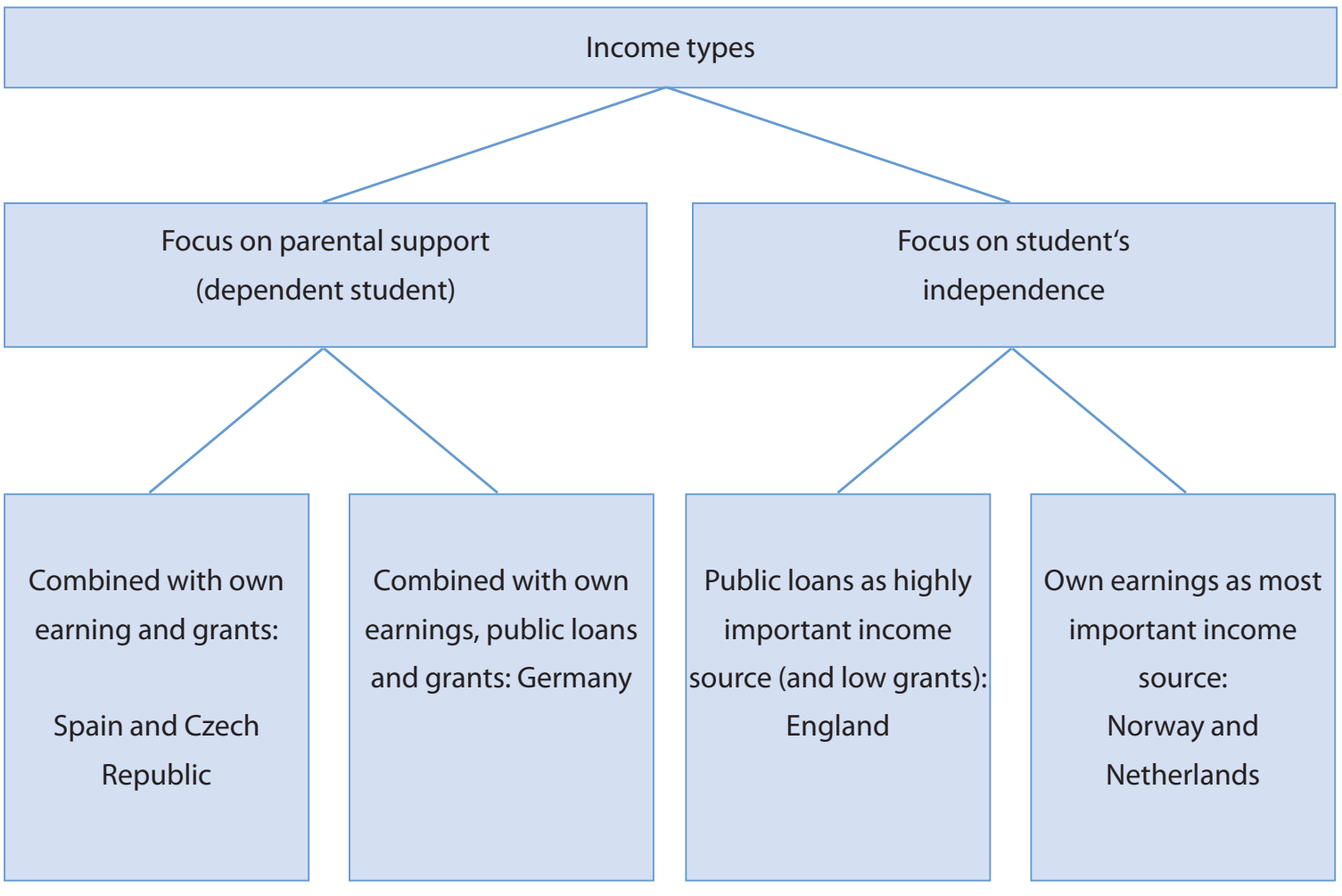
Where students are considered to be independent individuals, publicly offered loans account for an important share of the students' income: This is the case for England, the Netherlands and Norway. This ideological background may also be the reason why the share of the loan in a student's income does not differ by SES. By contrast, the comparatively small loan amounts in Germany decrease by SES, since this component is almost exclusively made up of the BAföG, which is needs-based.

Grants are to be found in all countries (they account for the highest share in the Netherlands and Norway compared to the other countries), and they usually differ by SES (higher grants for lower SES).

The share that students have to contribute to their income by own earnings is by far larger in Norway than in all the other countries, and there is usually not much difference between SES groups (except for Spain).

The share that public non-cash support to students accounts for in Germany is fairly high – almost 20% - and nearly 10% for the Czech students.

Figure 17 Basic typology of student income types



To concentrate on some main features (beyond the existence of non-cash public support to students), the basic typology shown in Figure 17 helps to distinguish between different income types observed in the six countries.

9.2.2 Comparison of student expenditure

As was done for income, the expenditure items of students are also compared with the help of indicators which are set at 100 for students with the lowest SES (separately for those living at home and those living away from home).

Table 87 Differences in expenditure categories by SES (comparison based on values for low SES per housing type, set at 100)

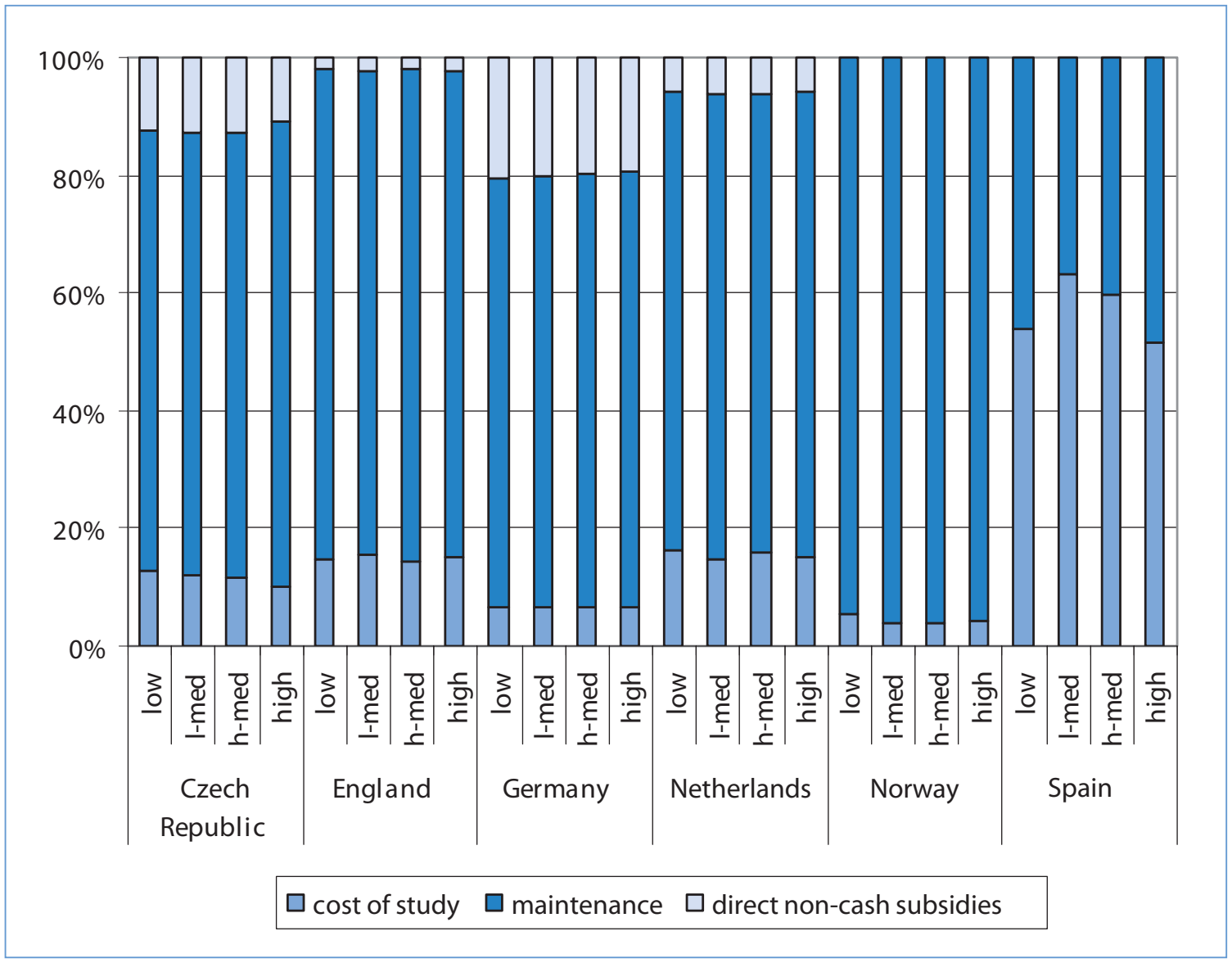
		Student living at home				Student living away from home			
Country		**Low**	**Lower med.**	**Higher med.**	**High**	**Low**	**Lower med.**	**Higher med.**	**High**
Czech Republic	Cost of study	100	93	66	68	100	92	87	88
	Maintenance	100	92	90	124	100	97	98	121
	plus direct non-cash subsidy	100	100	100	100	100	100	101	100
	Total student expenditure	100	93	87	111	100	97	97	114
England	Cost of study	100	101	102	100	100	101	99	100
	Maintenance	100	114	96	88	100	96	102	98
	plus direct non-cash subsidy	n.a.	n.a.	n.a.	n.a.	100	100	100	100
	Total student expenditure	100	112	97	90	100	97	101	99
Germany	Cost of study	100	98	93	92	100	100	102	104
	Maintenance	100	109	100	101	100	101	103	108
	plus direct non-cash subsidy	100	100	100	100	100	100	100	100
	Total student expenditure	100	106	99	100	100	101	103	106
Nether-lands	Cost of study	100	99	101	100	100	94	96	100
	Maintenance	100	96	96	107	100	106	99	108
	plus direct non-cash subsidy	100	103	102	100	100	105	101	101
	Total student expenditure	100	98	98	105	100	104	98	107
Norway	Cost of study	n.a.	100	88	90	100	91	89	98
	Maintenance	n.a.	100	80	75	100	127	126	131
	plus direct non-cash subsidy	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Total student expenditure	n.a.	100	81	76	100	125	124	129
Spain	Cost of study	100	91	89	113	100	111	115	89
	Maintenance	100	135	133	161	100	76	90	97
	plus direct non-cash subsidy	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Total student expenditure	100	106	104	130	100	95	103	93

Source: Own calculations

Concerning the students' expenditure, it is remarkable that just like for income, the overall amount reported hardly differs by SES, as is shown in Table 87. One might have expected that the maintenance costs would go up for students with a higher SES, but except for Norwegian students li-

ving away from home and Spanish students living at home, this is hardly the case (though when comparing only between the highest and the lowest SES, this tendency would also be true for the Czech Republic concerning both housing situations).

Figure 18 Expenditure categories for students living away from home by country and SES (in %)



Source: Own calculations

In Figure 18, the respective shares of the expenditure categories are visualised for students living away from home. Of course, direct non-cash subsidies can only be expressed as a share of students' expenditure where they exist – and in Germany, they play a fairly important part, as has already been seen beforehand (full data for students from both living situations can be found in the annex). In Norway and Spain, this kind of support does not exist at all.

9.2.3 Comparison of public support items

Finally, the different types of public support are also compared by SES and living situation – first, in a table showing the differences per subsidy type and living situation, then in a figure comparing the shares of each subsidy type against the total subsidy made available.

Table 88 Differences in public support categories by SES (comparison based on values for low SES per housing type, set at 100)

		Student living at home				Student living away from home			
Country	Support type SES	Low	Lower med.	Higher med.	High	Low	Lower med.	Higher med.	High
Czech Republic	Direct cash	100	100	83	102	100	92	122	123
	Direct non-cash	100	100	100	100	100	100	101	100
	Indirect cash	100	86	100	77	100	79	81	74
	Total public support	100	93	96	90	100	89	98	96
England	Direct cash	100	67	64	61	100	102	77	52
	Direct non-cash	n.a.	n.a.	n.a.	n.a.	100	100	100	100
	Indirect cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Total public support	100	67	64	61	100	102	79	57
Germany	Direct cash	100	54	34	16	100	67	40	19
	Direct non-cash	100	100	100	100	100	100	100	100
	Indirect cash	100	114	113	132	100	130	130	152
	Total public support	100	97	93	97	100	99	90	90
Netherlands	Direct cash	100	78	60	51	100	82	80	70
	Direct non-cash	100	103	102	100	100	105	101	101
	Indirect cash	100	131	131	163	100	131	131	163
	Total public support	100	87	74	68	100	88	85	78
Norway	Direct cash	n.a.	100	107	111	100	91	96	97
	Direct non-cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Indirect cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Total public support	n.a.	100	107	111	100	91	96	97
Spain	Direct cash	100	71	59	38	100	69	70	18
	Direct non-cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Indirect cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Total public support	100	71	59	38	100	69	70	18

Source: Own calculations

Based on the assumption that public support to students is targeted by SES, one would expected public support to be higher for students with lower SES, and concerning the total amount of public support, this can indeed be observed. However, there are some differences regarding the type of public support.

Direct cash support may consist of grants, student-specific tax exemptions and loan subsidies; but in all of the countries, grants play the most important role within this category. For this type of support, the rule that the higher the SES, the lower the support holds true, but there are some interesting exceptions: In the Czech Republic, support for students living away from home seems to increase by the level of SES, and the same goes for students from Norway who live with their parents. It can also be seen that where the support decreases by SES level, the decrease does not always follow a very smooth line – however, owing to the difficulties in comparing the data from different countries, this observation should not be over-interpreted. All the same, what is still

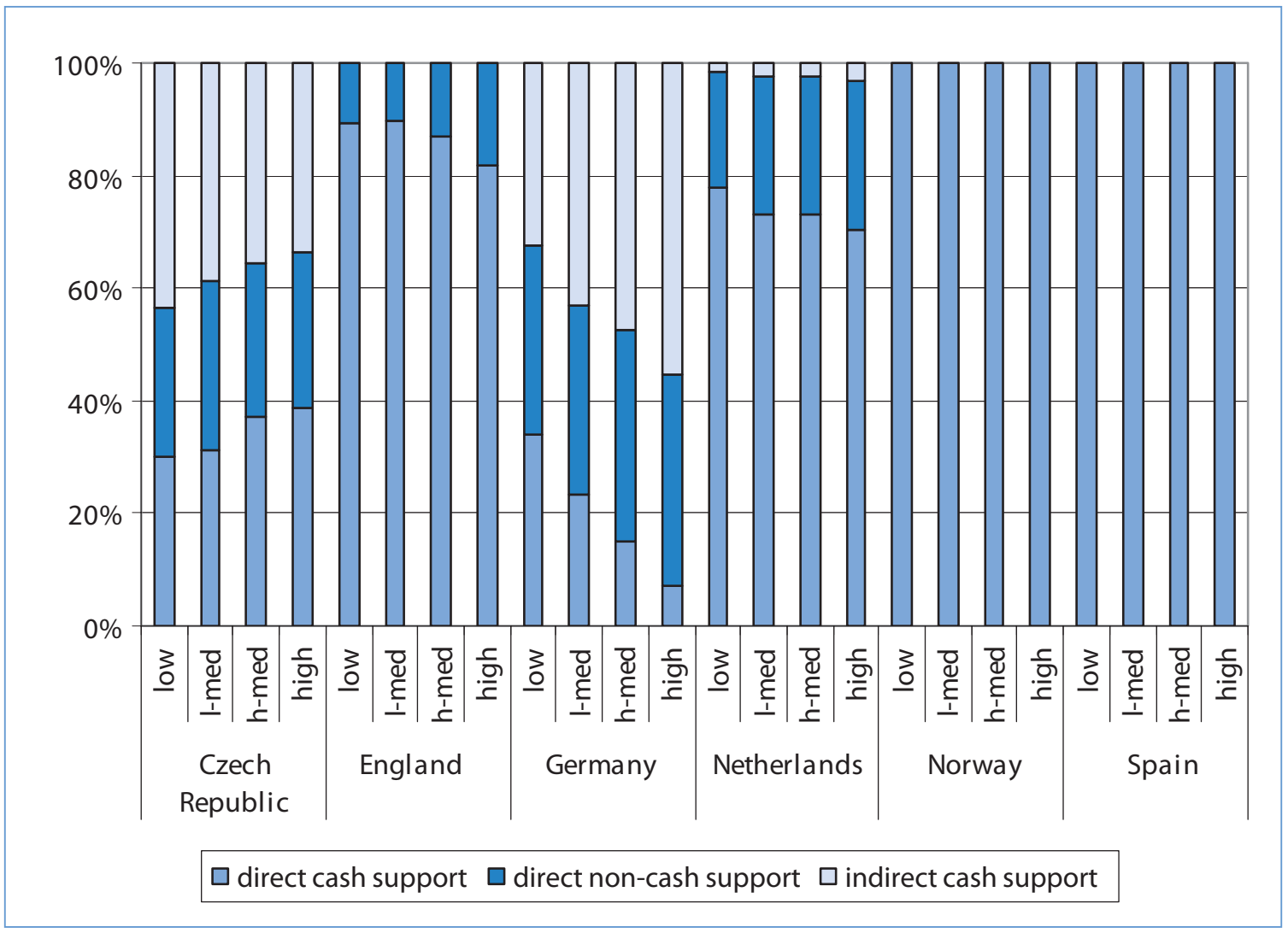
noteworthy is that the support for students from high SES is *much* lower compared to the support for students from low SES in Germany than in other countries.

Where they exist, direct non-cash subsidies (i.e. subsidies for health insurance, facilities and transport) do not differ by SES – or only marginally. However, this may also have something to do with the underlying assumptions for its calculation: For instance, it was assumed that there are no different patterns by SES concerning the extent to which, for instance, subsidised facilities like refectories are used by the students.

Indirect support – child allowances and other benefits paid to parents, but also tax exemptions for students' parents – only exists in some of the countries: In Norway and England, there is no such support, since students there are considered to be independent of their parents. Though this is essentially true for the Netherlands, too, some (limited) support is granted to students' parents there. In Spain, there is no indirect support, either, though not for the same reason. Whereas the indirect support is higher for students from a lower SES in the Czech Republic, there is a clear trend in Germany and in the Netherlands that the higher the SES, the higher the share of indirect support. This underlines the differences in modes of support – flat-rate, increasing or decreasing income differences: In Germany, the increase in support by SES is largely (and in the Netherlands, exclusively) due to tax exemptions from which the well-off parents profit most.

Because of the sometimes contradictory effects of different types of support – especially visible in Germany – the result may be that there are no big differences in the overall support regardless of SES, even though some support items are targeted. One may, therefore, ask which intentions are linked to mixing flat-rate and targeted support mechanisms.

Figure 19 Public subsidy types for students living away from home by country and SES (in %)



Source: Own calculations

As is shown in Figure 19 which reflects the respective shares of the public subsidy types, the share of indirect support is remarkably high in the Czech Republic and even more so in Germany, where students are indeed seen as dependent children of their parents: For German students living away from home with a high SES, indirect support constitutes more than half of all public support. The graph also stresses again the fact that support to households exclusively takes direct cash form in Norway and Spain.

The graph also highlights the fact that for students living away from home, the indirect support takes on an increasingly big share by SES in Germany, whilst this share is decreasing by SES in the Czech Republic. By contrast, the share of direct cash support to student is increasing by SES in the Czech Republic, whilst it is decreasing by SES in Germany, England and the Netherlands.

9.2.4 Ratio of public subsidies in total income and expenditure

As had been explained in chapter 2.4.3.2, the public subsidies can be contrasted with the respective income and expenditure data. So the public subsidy is divided by the income (including "hidden income" in the form of health care subsidies and subsidies for facilities and transportation) or expenditure respectively.

The ratio of public subsidies vs. student income can be interpreted as that part of a student's income that the state pays for. As is shown in Table 89, this ratio usually decreases by SES: The higher the SES, the lower the state support. Norwegian students living with their parents are an exemption to this, though. Besides, there are differences concerning the extent of such decreases: Whilst, for instance, the differences by SES are considerable for Czech students living at home, there are no big differences for students living away from home.

One might assume that the share of state support would be greater for students living away from home, but that is not necessarily the case.

The level of state support also differs considerably between countries: Whilst it accounts for almost half of the students' income in Germany and for a quarter to a half in the Czech Republic, it is only around 10-25% in England and the Netherlands, and it is yet lower for some high-SES students in Spain.

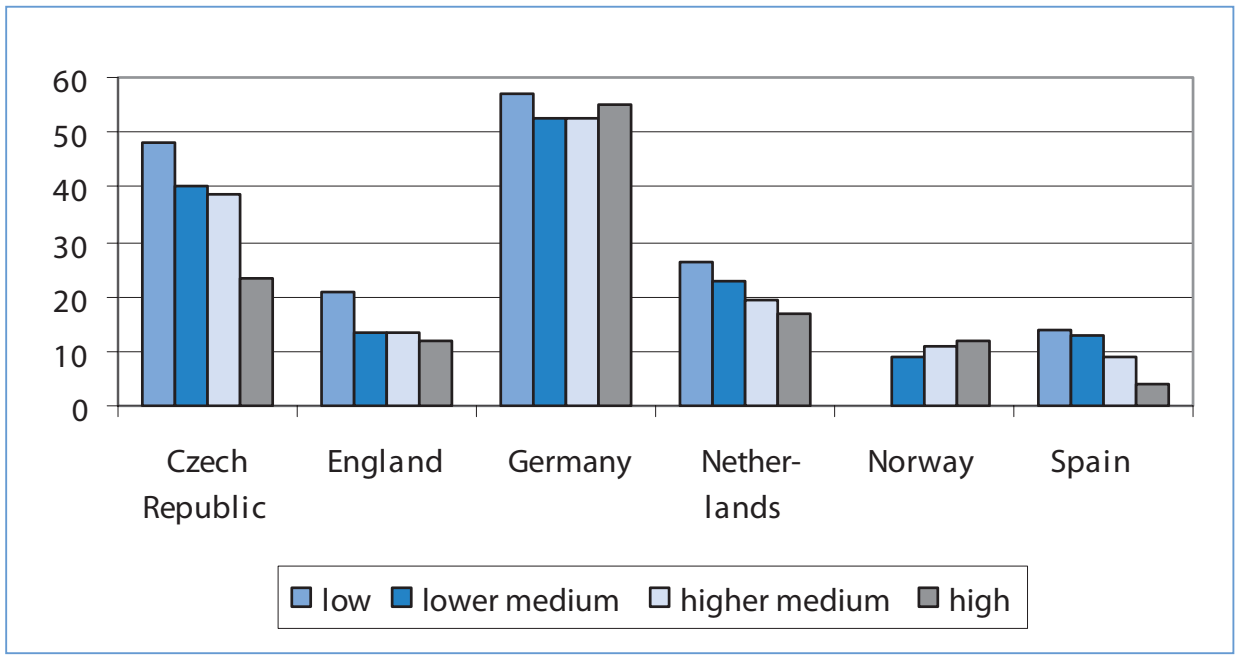
Table 89 Public subsidies as a share of student income by SES and living situation (in%)

	Student living at home				Student living away from home			
SES	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High
Czech Republic	48	40	39	23	33	30	31	27
England	21	13	13	12	19	19	15	10
Germany	57	52	52	55	56	55	49	48
Netherlands	26	23	19	17	28	25	23	21
Norway	n.a.	9	11	12	26	20	22	22
Spain	14	13	9	4	14	14	11	3

Source: Own calculations

Figure 20 and Figure 21 underline the differences concerning this ratio by housing situation; a comparison of these graphs shows particularly well that the share which public support makes up of the student's income is not necessarily higher for students living away from home.

Figure 20 Ratio of public subsidy vs. income for students living at home by country and SES (in %)



Source: Own calculations

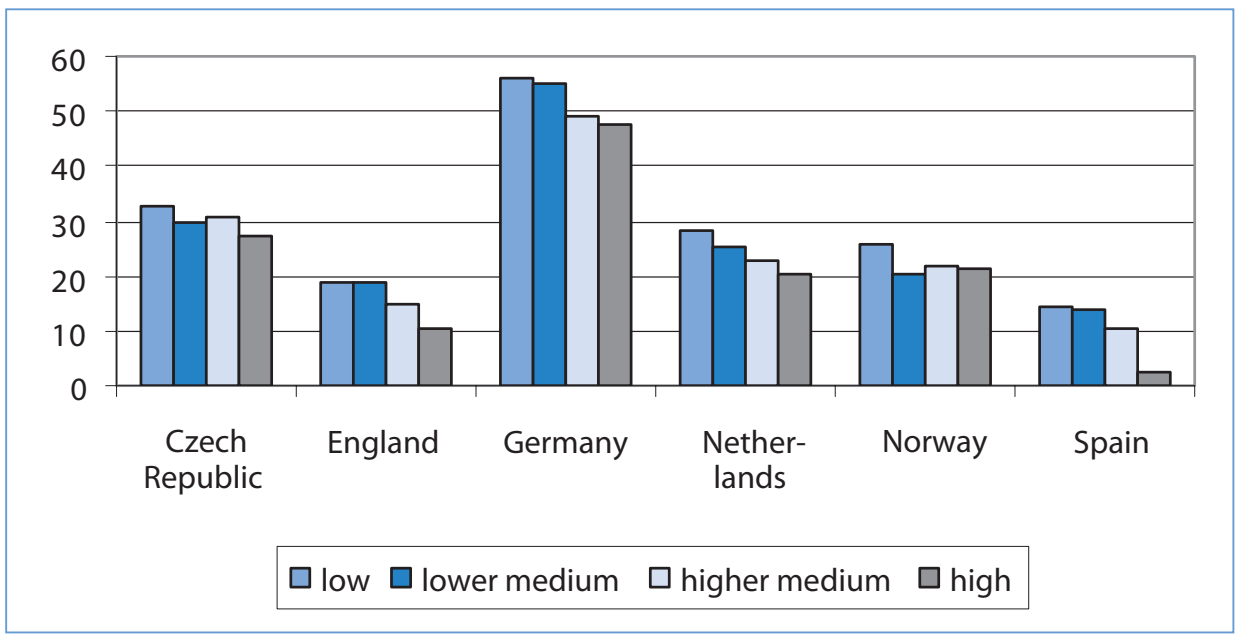
From these graphs it becomes clear that the share of public support in a student's income is considerably higher in Germany and the Czech Republic than in the other countries for students living at home. A rough typology would distinguish between levels of support:

High public support level: Germany, Czech Republic
Medium public support level: Netherlands
Low public support level: England, Norway, Spain

When students living away from home are considered, only Germany really stands out against all other countries, and the typology is slightly altered:

High public support level: Germany
Medium public support level: Czech Republic, Netherlands, Norway
Low public support level: England, Spain

Figure 21 Ratio of public subsidy vs. income for students living away from home by country and SES (in %)



Source: Own calculations

So far, the ratio of public subsidies against income has been looked into, but we can also express the public support as a share of a student's *expenditure*. The ratio of public subsidies vs. student expenditure may thus be seen as the part of a student's expenditure that the state covers for. Since there were usually no major differences between a student's reported income and expenditure, the pattern to be observed here is similar to that for student income.

Table 90 Public subsidies as a share of student expenditure by SES and living situation (in %)

	Student living at home				Student living away from home			
SES	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High
Czech Republic	40	40	44	32	46	42	47	39
England	20	12	13	13	20	21	16	12
Germany	64	59	60	62	61	60	53	51
Netherlands	31	27	23	20	29	25	25	21
Norway	n.a.	12	15	17	26	19	20	20
Spain	49	33	28	14	72	53	48	14

Source: Own calculations

10 Conclusions

The overall aim of this study was to obtain reliable data and information on the distribution of costs of higher education (referring to teaching only, not research) between the public and the private side, including also costs and subsidies that are usually hidden (such as tax exemptions linked to student status) and to differentiate by socio-economic status group. Thus, two perspectives were taken in this study:

From a macroeconomic perspective, the differences in the shares that the state, on the one hand, and the private side (i.e. private households), on the other, bear of the costs of higher education, are established between the six countries. This also includes an analysis of the different forms of support to households.

The microeconomic perspective would then reflect upon the differences in cost-sharing by a student's socio-economic status, giving an insight not only into the scope of public assistance, but also into issues of social disparity and social exclusion.

All these results refer to the six countries studied in this project: the Czech Republic, England, Germany, the Netherlands, Norway and Spain.

Differences could be observed concerning

- the overall level of public support,
- the shares of public and private funding respectively,
- the share of teaching allocations to higher education institutions in all (teaching-related) public funding for higher education
- the modes of public support (flat-rate vs. targeted support),
- the composition of the students' income by SES, and
- the share of public subsidies in a student's income.

10.1 Conclusions from the macro analysis

Shares of public and private side and share of teaching allocations in overall public support

It could be shown that there are considerable differences between the six countries studied in the cost-sharing between the public and the private side – so the state bears more of the total costs of (teaching-related) higher education costs in some countries than in others. For instance, the state's share is particularly small in England (36%) and Spain (40%) in relation to the other four countries (52 - 59%). Comparing the cost-sharing ratios between countries may help policy-makers to decide whether the ratios in question should be maintained.

This ties in with the question of how high the share of teaching allocations in the total teaching-related public expenditure (as opposed to support to students and their parents) should be. In most countries, this is around 80%, but in Spain, the share of teaching allocations is particularly high at 91% and in Germany, it is remarkably low at just 58%. This shows that if only teaching allocations were used as a basis for comparing spending on higher education, the picture on spending would be severely distorted for the German case. Note, though, that this only refers to the teaching allocations in the relative terms of overall teaching-related public funding, not to the total amounts in question. Looking at these results would imply that politicians might want

to reconsider if these shares really do reflect their intentions; whether the share *should* be higher for Germany (and lower for Spain) is, however, up to policy-makers to decide.

Types of public support to households

So the percentage shares allocated to support to students and their parents are not the same in all countries – and the types of support are not, either: We have differentiated between direct support (geared at the students) and indirect support (aimed at the students' parents). Support to students can be in cash form (grants, student-specific tax exemptions, and subsidies on loans) or in non-cash form (subsidies for health insurance, facilities and transportation).

There are three different approaches: In Spain and Norway, direct cash support is (almost) the only form of support available. In England and the Netherlands, direct cash support is by far the most important form of support, though non-cash support to students also plays a smaller role, and indirect support plays a rather negligible role in the Netherlands. In Germany and the Czech Republic, indirect support is used (18% in the Czech Republic) – and even amounts to a striking 44% in Germany. By contrast, direct cash support plays only a relatively small role there (31% in the Czech Republic and 19% in Germany). Given the high percentage that is spent on support to households in Germany (42%), this translates into quite considerable sums. Clearly, the use of indirect support in Germany and the Czech Republic is linked to the picture of a student as being dependent on his/her parents (rather than being an independent grown-up, which is the basic idea in Norway, the Netherlands and England). Subsequent legal issues e.g. of alimony rights are based upon this principle, so changing the system of support may be far from easy. But even if the concept of support to the students' parents is kept, one may well ask if the *extent* to which the state supports students via their parents is really appropriate in Germany, and if the support would not reach students better if the type of support was changed and if the support was aimed more directly at the students themselves.

10.2 Conclusions from the micro analysis

Differences by housing type

In fact, one of the assumptions for the micro analysis has been that what the parents receive in state support is passed on to the students – though this may not always be so in real life.

When comparing the overall figures for a student's income, expenditure and public support by housing situation and socio-economic status (SES), it becomes clear that students living away from home have higher income and receive higher sums of public support than students living with their parents. Given that students not living with their parents have to face higher costs for rent and food, this is unsurprising, and the higher public support for such students would seem appropriate. However, the differences between the two groups are not in the same order in all countries, so it might be worth reconsidering whether the differences made by housing type are appropriate.

In all of the countries studied except Spain, living away from home is clearly the most common case. It is possible that some students deliberately choose to stay with their parents so as to save money; indeed for some students this may be the only way to afford going to university.

Composition of income and expenditure

Within each housing group, the income and expenditure figures do not differ very much concerning the total amounts in most of the countries. This means that in each country, there seems to be a certain sum that is truly indispensable for a students' costs of living and studying that is not much influenced by SES, and there are hardly any differences by SES concerning students' spending on maintenance and costs of study. But whilst the *overall* income is not much influenced by SES, the *composition* of income (i.e. the sources for covering that "indispensable sum") differs considerably by SES: In those countries where students are seen as dependent children of their parents (Czech Republic, Germany and Spain), family contributions in cash and in kind play a much more important role than in the countries that take students to be independent adults, and in all countries can the tendency be found that students with a higher SES receive more such family support than students with a lower SES. It could therefore be expected that the public support items be targeted at compensating for such differences.

In turn, England, the Netherlands and Norway – which take students to be independent – are countries where students' own earnings, public loans and grants play a quite important role.

Concerning grants, the general tendency is that the higher the SES, the lower the amount of the grant. However, the differences by SES are huge in Germany and Spain, but smaller in the other countries.

As for public grants, the question is whether they are means-tested: Where this is the case (as in the German BAföG combination of grant and loan), the pattern that the higher the SES, the lower the public grant is most clear. This is still a trend, but not as pronounced in other countries; and where students are totally free to decide whether or not they want to take out a loan (and about its amount), those from a higher SES may, in fact, (dare to) take out the higher amounts, as can be seen in Norway.

So concerning public grants and loans, the countries have obviously found different answers to the question to which extent the state should make up for differences by SES and thus strive for greater social equity. Generally, there seems to be consensus that students from a lower SES should profit more from grants and loans, and one certainly cannot say that there is the one solution that would be appropriate for all countries – yet each country should certainly review and then decide for itself whether the extent to which socio-economic differences are countered by state support is deemed appropriate.

This is particularly important because as far as students' own earnings are concerned, they often are lower for students from higher SES. When students from a lower SES have to earn and therefore work more to support themselves, they have less time left for studying than their peers from a higher SES, which would put them at a disadvantage – and this would call for more public support to students from lower SES.

Composition of public support

Public support is, however, not limited to grants and loans, but can take on various forms. The former (direct cash support) is the most visible form, and indeed the only one in Norway and Spain. But in the other four countries, students are also supported in non-cash form, i.e. in the form of "object-related support" such as subsidies for transport, facilities and health care. In the Czech Republic, Germany and the Netherlands, indirect support geared at students' parents also plays a role and has also been compared by SES.

The differentiation of these support types has shown that there are different modes of support at work: Flat-rate support that makes no difference by SES, and targeted support. The latter

can be used to counter differences in SES, as is done with grants – but also to accentuate these differences, which is the case for tax relief from which the parents of students from the highest SES profit most, whilst those from the lowest SES do not benefit from them at all. In most countries, each of these modes plays at least a small role, though Norway relies entirely on flat-rate support and Spain only on targeted support aimed at outweighing differences by SES. In countries using mixed models, the effects of one mode of support (e.g. a means-tested grant) may be counterbalanced – at least to a certain degree – by another support mode that works in a different way (e.g. tax exemptions favouring high SES students and/or their parents). In such cases and particularly in countries where many different support items are in use (as in Germany), policy-makers should therefore carefully review whether the scope of each support item is genuinely intended also concerning its potential effect of nullifying other support items, and if the overall outcome mirrors the country's policy intentions with regard to social equity.

In turn, countries relying on just one type and mode of support should also test if the outcome of this support – which, owing to its singular position, becomes all the more important – really does reflect what was politically intended.

In Germany, not only the share of public support in a student's income is extremely high by international comparison, but also the share of support geared at the parents – rather than the students themselves – is a substantial part of the overall support to the households and indeed increasing by SES (33% for low SES up to 55% for high SES), even though only a very limited set of support items has been taken into consideration here. In such a case, one may well ask if this is truly appropriate, and if the extent to which high SES students (and their parents) profit from such support is genuinely wanted: The effect of extra support for low SES students in the form of grants may thus be strongly countervailed by the extra support for high SES students in the form of tax exemptions for their parents. As had been pointed out above, it has been assumed in this study that all the support (linked to student status) that the parents profit from is passed on to the students. However, this may not always be quite realistic especially concerning the more intransparent modes of support such as tax exemptions – and where this is not the case, one may indeed raise the question if it really should be public policy to support well-off parents in this way because their children have student status, or if the support should not be geared at the students more directly.

Share of public support in student's income

When the public support is measured against a student's income (including "hidden income" in the form of subsidies for facilities, transport, health and care insurance), it has been shown that regardless of the housing situation, support is high in Germany, medium in the Netherlands and low in England and Spain. In the Czech Republic, it is high for students living at home, but medium for those who live away from home. In Norway, public support is low for students living at home, but medium for those who live away from home. As these changes are not going in the same direction, it seems worth asking if these changes are truly intended to the extent in which they are observed.

10.3 General conclusions

The analyses carried out on macro and micro level respectively are not linked directly: For the macro analysis, all items of public support that could possibly be expressed in monetary terms

have been included, but this is not the case for the micro analysis: To be truly able to *compare* income etc. of SES groups on the same level, a student prototype has been referred to. For such a prototype, not all theoretically possible items of public support to households apply. Besides, for the sake of comparability between the countries on micro level, the student body was limited to what could be deemed more or less normal in all countries concerned. By contrast, the macro level refers to *all* teaching-related higher education expenditure, regardless e.g. of a student's age. Also, the inclusion of loan subsidies vs. loans was handled differently on macro and micro level in line with the research design laid out in chapter 2.4. Therefore, by nature, the data on macro and micro level do not correspond exactly and should not be referred to each other.

Some of the results from the macro and micro level analysis, however, stress the same facts, such as the different types of support and the very different levels of support to students' parents in a country's overall public support portfolio – from this perspective, it would seem all the more important to look carefully at these points in the countries concerned and review whether the country-specific model is considered appropriate with a view to achieving social equity.

On a whole, some of the differences observed between countries on macro level and between SES groups and countries on micro level are considerable. These observed differences are often due to different underlying core concepts, such as the picture of the student as being in/dependent of his/her parents. As this may tie in with far-reaching legal aspects such as alimony rights, changing these concepts may be far from easy. Yet such changes may become necessary over time when a common European model of social policy is aimed for. At the very least, each model should be reviewed concerning its effect on equity and effectiveness.

10.4 Ideas for further research

It has become very evident that the state bears more of the (teaching-related) higher education costs in some of the six countries studied here than in others. A basic form of further research would, of course, be to include more countries in the analysis to obtain a greater basis for comparison and thus develop a better idea of which public/private cost-sharing ratio could be deemed average for European countries; and a comparison with countries outside Europe could also be interesting, especially where a different funding level in absolute terms is concerned.

One might assume that where the state takes on a larger proportion of higher education costs, this would translate into higher enrolment numbers. It could therefore be of interest to assess if there is a link between the differences in public/private cost-sharing between countries and the tremendous variance in new entrants' ratios for higher education – and if so, if this is a causal relationship.

To get a better idea of a possible relationship between public support to students and actual enrolments by SES, one could explore the data gathered within the EUROSTUDENT project to establish if the differences observed between SES groups within countries may account for the differences in enrolments of students from distinct socio-economic backgrounds. So far, the 2005 EUROSTUDENT data have not allowed for this assessment for all six countries, but this might work with the latest round of study to be published in spring 2008.

Likewise, one might assume that those countries which offer a higher share of public support might have higher success rates – supposing, for instance, that students there may have to work less to support themselves. Therefore, further studies could explore whether a link can be estab-

lished between different concepts of cost-sharing and effectiveness in terms of graduation rates.

The prototype family situation referred to in the micro analysis does not fully reflect what is found in real life: For instance, students from a lower SES group are more likely to be living with just a single parent than those with a high SES. This may also mean that the impact of public support has been assessed inadequately. It could therefore be of interest to add a further facet to the picture painted here by doing country-specific studies on the scope of public support based on the family case that would be most typical for each SES group. This way, it would become clear if public support for any one particular SES group has been over- or underestimated under the method employed here.

It should be pointed out that the study carried out and presented here has the character of a pilot study in that it has, for the first time, attempted to establish the differences in public/private cost-sharing by SES across countries. In spite of the difficulties encountered, such a comparison could be made. Still, it would be desirable to improve the quality and availability of data enabling such comparisons. Therefore, projects aiming at a joint approach of data collection and assessment and striving for harmonisation of data such as the EUROSTUDENT project are considered to be most helpful to improve today's relatively poor data availability and comparability.

References

Bergen Communiqué, May 2005

Bradley, P./ Whitehead, A. (2003): *Excellence, Equity and Access: Squaring the Circle of Higher Educational Funding*. Retrieved on 21 January 2006 from: http://image.guardian.co.uk/sys-files/Guardian/documents/2003/11/26/education.pdf.

European Commission (1999): *Key topics in education. Volume I: Financial support for students in higher education in Europe. Trends and debates*. Luxemburg: Office for Official Publications of the European Communities.

European Commission: Eurostat (2007): EU-SILC UDB 2005 – version 2 of June 2007 (cross-sectional data). Luxemburg: Eurostat.

Eurydice (2007): *Key Data on Higher Education in Europe*. Luxembourg: Office for Official Publications of the European Communities.

OECD (2007): *Education at a glance*. *OECD Indicators.* 2007 Edition. Paris: OECD

Appendix

Table 91 Income composition by SES and housing situation in % of total income

	Student income components	Student living at home				Student living away from home			
Country	SES	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High
Czech Republic	Grants	11	10	7	6	10	9	11	10
	Public loans	1	0	1	4	3	6	1	1
	Earnings	36	37	37	45	16	21	22	19
	Family contributions cash	36	40	42	36	62	54	57	60
	Family contributions in kind	0	0	0	0	0	0	0	0
	Other	2	1	1	2	1	1	1	2
	plus direct non-cash subsidies	14	13	12	8	9	9	8	8
	Total student income	100	100	100	100	100	100	100	100
England	Grants	16	9	9	8	12	12	8	4
	Public loans	28	26	23	22	33	32	30	25
	Earnings	31	36	36	39	23	22	20	17
	Family contributions cash	6	9	11	14	10	13	21	32
	Family contributions in kind	4	3	5	4	2	3	3	4
	Other	15	17	16	14	19	16	15	16
	plus direct non-cash subsidies	0	0	0	0	2	2	2	2
	Total student income	100	100	100	100	100	100	100	100
Germany	Grants	10	5	3	2	17	11	7	3
	Public loans	9	5	3	1	16	10	6	2
	Earnings	18	23	22	18	14	15	14	12
	Family contributions in cash and in kind	36	41	45	52	30	40	52	62
	Other	5	4	4	4	4	4	3	4
	plus direct non-cash subsidies	23	22	23	23	19	19	18	18
	Total student income	100	100	100	100	100	100	100	100

	Student income components	Student living at home				Student living away from home			
Country	SES	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High
Nether-lands	Grants	17	13	10	8	21	17	16	13
	Public loans	9	6	8	8	19	18	16	15
	Earnings	29	31	28	24	21	20	23	19
	Family contributions cash	6	9	11	13	12	14	14	20
	Family contributions in kind	14	19	21	23	9	12	13	17
	Other	17	14	14	17	14	13	13	11
	plus direct non-cash subsidies	8	8	8	7	6	6	6	5
	Total student income	100	100	100	100	100	100	100	100
Norway	Grants	n.a.	6	8	9	23	17	19	19
	Public loans	n.a.	28	32	30	29	29	30	31
	Earnings	n.a.	56	55	50	44	42	41	33
	Family contributions in cash and in kind	n.a.	9	4	10	4	12	10	17
	Other	n.a.	0	0	0	0	0	0	0
	plus direct non-cash subsidies	n.a.	0	0	0	0	0	0	0
	Total student income	n.a.	100	100	100	100	100	100	100
Spain	Grants	14	13	9	4	14	14	11	3
	Public loans	0	0	0	0	0	0	0	0
	Earnings	57	47	45	59	44	3	21	24
	Family contributions cash	24	31	39	30	37	81	59	69
	Family contributions in kind	0	0	0	0	0	0	0	0
	Other	5	9	8	7	4	3	10	4
	plus direct non-cash subsidies	0	0	0	0	0	0	0	0
	Total student income	100	100	100	100	100	100	100	100

Source: Own calculations

Table 92 Expenditure composition by SES and housing situation in % of total expenditure

		Student living at home				Student living away from home			
Country	SES	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High
Czech Republic	Cost of study	18	18	13	11	13	12	12	10
	Maintenance	70	70	73	79	75	75	76	79
	plus direct non-cash subsidies	12	13	14	11	12	13	13	11
	Total student expenditure	100	100	100	100	100	100	100	100
England	Cost of study	16	15	17	18	15	16	14	15
	Maintenance	84	85	83	82	83	82	84	83
	plus direct non-cash subsidies	0	0	0	0	2	2	2	2
	Total student expenditure	100	100	100	100	100	100	100	100
Germany	Cost of study	10	9	9	9	7	7	7	7
	Maintenance	64	66	65	65	73	73	73	74
	plus direct non-cash subsidies	26	25	26	26	20	20	20	19
	Total student expenditure	100	100	100	100	100	100	100	100
Nether-lands	Cost of study	23	24	24	22	16	15	16	15
	Maintenance	67	66	66	69	78	79	78	79
	plus direct non-cash subsidies	9	10	10	9	6	6	6	6
	Total student expenditure	100	100	100	100	100	100	100	100
Norway	Cost of study	n.a.	7	8	8	5	4	4	4
	Maintenance	n.a.	93	92	92	95	96	96	96
	plus direct non-cash subsidies	n.a.	0	0	0	0	0	0	0
	Total student expenditure	n.a.	100	100	100	100	100	100	100
Spain	Cost of study	66	57	57	58	54	63	60	52
	Maintenance	34	43	43	42	46	37	40	48
	plus direct non-cash subsidies	0	0	0	0	0	0	0	0
	Total student expenditure	100	100	100	100	100	100	100	100

Source: Own calculations

Table 93 Public subsidy composition by SES and housing situation in % of total public subsidy

		Student living at home				Student living away from home			
Country	SES	Low	Lower medium	Higher medium	High	Low	Lower medium	Higher medium	High
Czech Republic	Direct cash support	23	25	20	26	30	31	37	39
	Direct non-cash support	30	32	31	33	27	30	27	28
	Indirect cash support	47	44	49	41	43	39	36	34
	Total public subsidies	100	100	100	100	100	100	100	100
England	Direct cash support	100	100	100	100	90	90	87	82
	Direct non-cash support	0	0	0	0	10	10	13	18
	Indirect cash support	0	0	0	0	0	0	0	0
	Total public subsidies	100	100	100	100	100	100	100	100
Germany	Direct cash support	19	11	7	3	34	23	15	7
	Direct non-cash support	41	42	44	42	34	34	38	37
	Indirect cash support	40	47	49	54	33	43	48	55
	Total public subsidies	100	100	100	100	100	100	100	100
Netherlands	Direct cash support	67	60	54	50	78	73	73	70
	Direct non-cash support	31	36	42	44	20	25	24	26
	Indirect cash support	2	3	4	5	2	2	2	3
	Total public subsidies	100	100	100	100	100	100	100	100
Norway	Direct cash support	n.a.	100	100	100	100	100	100	100
	Direct non-cash support	n.a.	0	0	0	0	0	0	0
	Indirect cash support	n.a.	0	0	0	0	0	0	0
	Total public subsidies	n.a.	100	100	100	100	100	100	100
Spain	Direct cash support	100	100	100	100	100	100	100	100
	Direct non-cash support	0	0	0	0	0	0	0	0
	Indirect cash support	0	0	0	0	0	0	0	0
	Total public subsidies	100	100	100	100	100	100	100	100

Source: Own calculations

HIS, Goseriede 9, 30159 Hannover
Postvertriebsstück, Deutsche Post AG, Entgelt bezahlt, 61246

Herausgeber:

HIS-Hochschul-Informations-System GmbH
Goseriede 9, 30159 Hannover

www.his.de

Verantwortlich:

Prof. Dr. Martin Leitner

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