

**Tuition fees and equal access to higher education
in Germany and the EU:
An analysis from a law and economics perspective**

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Preface

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1. Introduction and Method

1.1 Motivation

In an increasingly globalized world, higher education drives growth and national economic competitiveness. Higher education is also a vehicle which transmits social values and preserves cultural heritage. At the same time, individual investment in higher education to a large extent determines individual earnings, professional success and social status. The availability of high quality higher education, in sufficiently high quantities, is thus crucial for a society's economic and cultural development, and also for improving individual citizens' lives. A necessary condition for providing a high quality and quantity of higher education is sufficient funding. In Germany, the political process determines the overall amount of higher education funding. The political process also determines how the costs of higher education are shared between the general public, paying taxes, and individual students, paying tuition fees. Individual students then make their decision to participate in higher education, depending on the costs, including the amount of tuition fees. The structure of higher education funding thus not only influences overall investment in higher education but also the composition of the student body.

Despite its social and individual importance, real German spending on higher education, as a percentage of GDP, which is defined here as spending on teaching but not on research, has stagnated at a sub-optimal level.¹ Furthermore, rates of higher education attainment in Germany remain below both the EU19 average and also the overall OECD average.² At least for the last two decades, the problems of low investment in higher education and low participation in higher education have been on the German policy agenda.³ Unfortunately, in contrast to the political rhetoric and lip service, politicians have only just begun to face the many challenges involved in solving the current problems of the German higher education system.

In an attempt to increase spending per student, six of the sixteen German States (*Bundesländer*) have recently introduced general tuition fees of up to € 500 per semester. To guarantee equal access to higher education, the States have simultaneously introduced systems of income-contingent loans which make access to higher education free and oblige the student to repay the

¹ OECD 2006 table B 2.1 b, *Berthold, Gabriel and Ziegele* 2007 p. 12-13, *Grözing* 1998. *Aghion, Dewatripont, Hoxby, Mas-Colell and Sapir* 2008 p. 47 come to a similar conclusion for Europe in general.

² OECD 2006 Table A 1.3 a. The EU19 average is calculated as the unweighted mean of the data values of the 19 OECD countries that are members of the European Union for which data are available or can be estimated. These 19 countries are Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Ireland, Luxembourg, the Netherlands, Poland, Portugal, the Slovak Republic, Spain, Sweden and the United Kingdom.

³ Compare *Berthold, Gabriel and Ziegele* 2007 p. 12.

loan after graduation conditional on a minimum income. The tuition fee legislation is very controversial. Its supporters argue that given scarce public resources and the many other expensive public tasks required of government, tuition fees are the only way to increase investment in higher education.⁴ Also, they hope that tuition fees will give students incentives to study faster and more efficiently thereby reducing the long average duration of studies in Germany.⁵ The opponents of tuition fees, on the other hand, hold that tuition fees, even combined with income-contingent student loans, undermine equal access to higher education. In addition, they fear that the additional investment in higher education will be crowded out by subsequent reductions in public spending.⁶ This political controversy about the recent introduction of tuition fees will be taken up in the second chapter of this thesis, which will discuss the social desirability of German tuition fee legislation from a law and economics perspective.

The impact of tuition fees on the most important policy variables, overall investment in higher education and access to higher education, depends crucially on the details of their design. In the third and fourth chapter of the thesis, a possible variation to the current design of tuition fees will be discussed. The design of tuition fees is part of broader higher education policy, which is a responsibility of the German States. State politicians are inclined to benefit their own electorate, which is comprised of the residents in the State. One possible way to use higher education funding to benefit State residents is to charge long-term residents lower tuition fees than those charged to migrant students. Such a tuition fee design would be similar to the US State University system, where lower fees are charged to long-term residents than for migrant students.⁷ The social desirability of such a system of differentiated tuition fees according to prior long-term residence with regard to migrant students within Germany will be the focus of chapter three of this thesis. Chapter four will discuss the same policy with regard to students migrating into Germany from other Member States of the European Union.

⁴ Compare e.g. the statement of reasons in the tuition fee legislation by the State government of North Rhine-Westphalia in 'Gesetz zur Sicherung der Finanzierungsgerechtigkeit im Hochschulwesen' of 21 March 2006, [2006] OJ 119.

⁵ See e.g. *Bundesvereinigung der Arbeitgeberverbände* 2004 p. 7, *Centrum für Hochschulentwicklung and Hochschulrektorenkonferenz* 2001, *Straubhaar* 2005.

⁶ A students' initiative against tuition fees, the *Aktionsbündnis gegen Studiengebühren*, coordinates political activities against the introduction of tuition fees and provides information under www.abs-bund.de. Also, the president of the association of all German student unions, Prof. Rolf Dobischat, demands the abolishment of fees because of their social selectivity. See *Pressemitteilung des Deutschen Studentenwerks*, 9 September 2008, www.studentenwerke.de/presse/2008/090908a.pdf.

⁷ *Rizzo and Ehrenberg* 2003.

In Germany, up to now this policy option has only been mentioned as a threat by some State politicians, who are generally opposed to fees. By highlighting the ‘thick end of the wedge’ these politicians have tried to prevent the introduction of the ‘thin edge of the wedge’ represented by the current general tuition fees.⁸ In the discussion, differentiated fees according to prior long-term residence are mainly criticised because they would reduce student mobility. However, in the current institutional framework of higher education funding, student mobility creates a free-riding problem and decreases politicians’ incentives to invest in higher education. Higher education funding is a responsibility of the States. However, German students are allowed to study in any German State under the same financial conditions. As all places at university are highly subsidised, the host State of a migrant student bears the public part of the cost of her education. If migrant students return to their home State after graduation, which is quite likely given that most students have a strong attachment to their home region, the home State will enjoy all the benefits of the higher education. These benefits may include tax revenues but also external benefits, such as high political involvement of higher education graduates. The home State will reap the benefits from higher education investment, but will have saved the cost of funding the places at university. Thus, all States have an incentive to reduce their spending on higher education because they anticipate that students will then study in other States but return to their home State after graduation.⁹ The institutional framework leads therefore to a free-riding problem.

The free-riding incentive exists in Germany, because students are granted equal access to German higher education institutions in all States. A very similar problem also exists in the European Union. Here, the free-riding problem has its origins in European Court of Justice (ECJ) case-law. The ECJ decided in its seminal *Gravier* decision, which dealt with higher enrolment fees for foreign students in Belgium, and subsequent case-law, that differentiation of tuition fees according to nationality violated the EC Treaty.¹⁰ Since then, throughout the EU, host countries have to bear the cost of educating migrant students, as EU Member States are no longer allowed to differentiate tuition fees according to nationality. If a student were charged higher tuition fees in other States than in the home State, students would tend to study at home and would hold politicians responsible for low quality and insufficient quantity of higher education supply. This

⁸ Only the State of Bremen has introduced differentiated tuition fees according to *residence while studying* to incentivise students to register their main residence in the State. These fees were suspended after the legislation has been challenged before the court and proceedings are still pending. *Verwaltungsgericht Bremen*, Decision of 16 August 2006, Az 6 V 1583/06, 6V 1586/06, 6 V 1588/06, available at www.verwaltungsgericht.bremen.de.

⁹ See also *Renzsch*, in *Frankfurter Allgemeine Zeitung*, 15.12.2006, "Föderalismusreform II", who reports that civil servants of many State financial ministries have inofficially admitted to be trying to reduce their costs of higher education by sending more students to other States than they receive.

¹⁰ Case 293/83 *Gravier v City of Liège* [1985] ECR 593.

statement will hold on both the German and on the European level. Thus, the free-riding incentive would be removed if State charged migrant students higher tuition fees than long-term residents. For a normative assessment of differentiated tuition fees, most importantly, the negative impact on student mobility has to be balanced against the positive impact on investment incentives into higher education. The third and fourth chapters of this thesis will seek to contribute to this discussion.

The German constitutional law literature and the economic policy literature both discuss the normative properties of the German tuition fees and income-contingent loans legislation and their possible variations such as differentiated tuition fees according to place of prior residence.¹¹ However, there appears to be little connection between the two discussions. With regard to the European aspect of the problem, the academic discussions are equally separated, but a few interdisciplinary contributions exist.¹² One of the reasons for this gap in the literature may be that it is hard to integrate the usually one-dimensional normative economic accounts usually based on welfare or sometimes constitutional economics into the multidimensional normative world of constitutional law. *Anne van Aaken* has developed a normative approach to tackle this problem of economic analysis of constitutional law.¹³ In this thesis, her approach will be applied to answer the normative questions in this thesis from a law and economics perspective.

This introductory chapter starts out with providing some more background information on the problems of German higher education funding, on low participation in higher education and the constitutional framework for the German introduction of tuition fees (1.2). Then, the existing literature on the main research questions is shortly reviewed (1.3). This literature review is followed by a methodological discussion of the approach developed by *van Aaken* (1.4). Finally, the research questions are further specified and the structure of the thesis is outlined (1.5).

1.2 Background information

To place the tuition fee legislation into perspective within the current economic, political and constitutional developments taking place in Germany and Europe, the following sections will provide further background information. First, the need for increased investment in the German higher education system and increased participation of students from lower socio-economic backgrounds in German higher education will be substantiated. Then, the constitutional and the political framework of the recent tuition fee introduction will be shortly outlined.

¹¹ See below the literature overview in section 1.3.

¹² E.g. *Scholsem* 1989.

¹³ *Aaken* 2003.

1.2.1. Low investment and participation in higher education

Even though there is unanimity in Germany that spending on the higher education system needs to be increased, there is no consensus as to exactly how much investment would be required to secure the competitiveness of the German economy and economic growth in the future.¹⁴ The last attempt to quantify the magnitude of the lacking resources was made in 1992. Preparing for the 1993 National Education Summit, a commission appointed by the States and the Federal Government (*Bundesregierung*) uncovered a deficit between actual funding, and the level of resources required, of around 2 billion Euros in current expenditures, and 6.1 billion Euros in future infrastructure expenditures. This expenditure gap has had, and continues to have, a significant negative impact on the quality of higher education and the number of available places at higher education institutions, which are provided by the German States.¹⁵

This gap may have been narrowed, since between 1995 and 2003 German politicians increased overall real spending on higher education by 14%. However, as student numbers increased by 5% over the same period, spending per student rose by only 8%.¹⁶ The effect of this spending increase is doubtful however. This is because GDP also grew, therefore real spending on higher education, as a percentage of GDP, remained stagnate at around 1.1%.¹⁷ Only 0.1% of this spending came from private sources, the remaining 99.9% coming from public finances. Given the stagnation of higher education investment in relative terms, it seems very likely that the need for more resources existing at the beginning of the nineties remains today.¹⁸

Moreover, the stagnation of funding as percentage of GDP becomes even more problematic when we take into account the fact that economically comparable nations, such as Switzerland and the US, spend more on higher education, relative to GDP, than Germany. In comparison to Germany, they have also increased their rate of spending more. Switzerland increased its spending on higher education, relative to GDP, from 1.1% to 1.6% between 2000 and 2003.¹⁹ In Switzerland, this dramatic increase in spending came exclusively from public sources.²⁰ Between 1995 and 2003, the US also increased its spending per student by 10% and now spends 2.9% of

¹⁴ I would like to point out that this thesis does not deal at all with financing of research. Research and higher education are treated here as separate products that are both produced in the same entity but in separate production processes. Even though this is not a completely realistic assumption as teaching benefits from research and research from teaching, it seems realistic that the two activities are substitutes as regards the working time of academic scholars. For discussions of research funding see *McNay* 1999.

¹⁵ *Aghion, Dewatripont, Hoxby, Mas-Colell and Sapir* 2008 Table 4 p. 31, *Dohnanyi-Kommission* 2003 p. 13 ff; *Schwager* 2005 p.190 ff.

¹⁶ *OECD* 2006 Table B 1.5.

¹⁷ *Ibid.* Table B 2.1.b.

¹⁸ *Berthold, Gabriel and Ziegele* 2007 p. 13.

¹⁹ *OECD* 2006 Table B 2.1.b.

²⁰ *Ibid.* Table B 2.1.b.

its GDP on higher education.²¹ Even in the US, where more than half of the total spending on higher education comes from private sources, the 1995 to 2003 spending increase was primarily due to an increase in public spending.²² German expenditure on higher education is relatively low in comparison to all countries belonging to the OECD: German spending on higher education as percentage of GDP lies below the OECD average of 1.4%.²³

Not only is spending on higher education as percentage of GDP lower in Germany than in many other post-industrialised countries, but also the attainment of higher education amongst the German population is lower. Overall, 23% of the German population hold a degree from an institution of higher education.²⁴ This level of higher education attainment has remained constant over the last thirty years. Over the same time span, other countries such as South Korea, France and Ireland, have dramatically increased the percentage of their population holding a degree from an institution of higher education.²⁵ These countries have now overtaken Germany in the ranking of OECD countries, according to the percentage of the population with a degree of higher education.

In the OECD rankings, South Korea rose from being ranked 25th in 1970 to being ranked third in 2000, whereas Germany fell behind from being ranked 9th to 22nd.²⁶ This negative trend by Germany was halted five years ago, in 2003, when participation rates started rising again. Between 2000 and 2004, the percentage of a cohort obtaining a degree in higher education from a university or university of applied sciences increased from 19.3% to 20.6%.²⁷ This increase does not, however, improve Germany's relative position among OECD countries, as the average OECD participation rate increased by 7.3% over the same period.²⁸

Furthermore, the particularly high income differential between highly skilled and unskilled workers in Germany, indicates that German investment in higher education has not kept pace

²¹ Ibid. Table B 2.1.b.

²² Ibid. Table B 2.2.

²³ Ibid. Table B 2.1.b.

²⁴ The following data all stem from *OECD 2006*. The OECD divides institutions of tertiary education into type A and type B, which are both included in the term higher education used here. Type A includes for Germany universities and universities of applied sciences. Institutions of type B include for Germany all other institutions of tertiary education such as *Fachakademien*, *Schulen des Gesundheitswesens*, *Fachschulen*, *Berufsakademien* and *Verwaltungsakademien*.

²⁵ *OECD 2006* p. 6.

²⁶ Ibid. p. 6.

²⁷ But the amount of people studying in institutions of tertiary education type B, which include all other higher education institutions except universities and universities of applied sciences, roughly stayed the same at around 10%.

²⁸ *OECD 2006* table A 3.1.

with the demand for graduates. Technological changes have increased the demand for highly skilled workers. Concurrently, such technological changes have also decreased the demand for unskilled workers.²⁹ Consequently, income inequality between graduates with a higher education degree, and workers with only a degree of secondary schooling, has increased from 30% in 1998 to 53% in 2004.³⁰ This inequality points to the need to increase the absolute numbers enrolled in higher education. However, even with higher absolute numbers enrolling in higher education, the labour market advantage enjoyed by graduates from higher education institutions will probably persist. Even in countries with much higher percentages of university graduates, university graduates still enjoy lower unemployment rates and higher relative incomes compared to workers with only secondary schooling.³¹

In addition, shrinking cohort sizes make an increase in the higher education participation rate essential just to keep the absolute number of graduates from higher education institutions constant. Shrinking cohort sizes have already started to affect the output of the German higher education system. Between 1995 and 2004, the percentage of a cohort attending university has increased by 24%. Regardless, this increase in the participation rate has only caused an increase in total numbers of graduates by 8%, as over the same time the absolute cohort size shrank by 16%. In comparison, the OECD average increase in total numbers of students was 49%.³² Anticipating that competition between OECD countries will increase, and that demand for highly skilled workers will increase, an even greater increase in participation rates will need to be achieved, just to keep the German economy competitive.

To support future growth and prosperity, in a fast changing globalized economic environment, Germany needs to increase both, its spending on higher education relative to GDP, and its absolute numbers of students in higher education. Attracting higher education graduates from abroad is not an option that would solve the skills problem. This can be clearly inferred from the limited interest shown by East-European engineers to work in Germany after the recent alleviation of immigration restrictions for them.³³ To achieve the goal of higher education investment while cohort sizes are shrinking due to demographic change, increasing spending on universities is not sufficient either. Instead, the participation rate in higher education has to increase at an even greater rate. To achieve a higher participation rate, given the fact that nearly all high school graduates who have the right to attend university already do so, will require an

²⁹ Barr 2004c p. 265.

³⁰ OECD 2006 table A 9.2a.

³¹ Ibid. p. 10.

³² Ibid. table C 2.2.

³³ Gillmann, in Handelsblatt, 14 July 2008, "Hochschulen: Nicht kleckern sondern klotzen!".

active higher education policy.³⁴ One option to increase participation is to relax the prerequisites required for entering higher education. In addition, the number of secondary education graduates should be increased and more encouraged to attend university afterwards. Most importantly, an increase in student numbers presupposes more, and better targeted, financial support for students from weak socio-economic backgrounds.³⁵

This short overview has demonstrated that higher education politics faces several challenges related to increasing investment in higher education: first, spending per student should be increased to raise the quality of higher education; secondly, the participation rate should be increased to keep the number of graduates entering the labour market constant; and thirdly, the participation rate should be increased at an even greater rate in order to increase the absolute number of students, and thus the supply of skilled labour, which is heavily demanded in the German labour market. Increasing the quality of individual higher education and the absolute number of students will require more spending on additional places at university. Increasing the participation rate will require greater spending on financial support.

1.2.2. Constitutional and political framework of tuition fee legislation

Towards the end of the nineties, the problem of low German spending on higher education became more urgent. For the previous thirty years, the German higher education system had been financed entirely from public funds, without charging any general tuition fees. Recognising this, State politicians throughout the various regions, particularly those belonging to the Christian Democratic Party, proposed a major change to the system, and announced a plan to introduce general tuition fees.³⁶ This plan to re-introduce general tuition fees was opposed by the Social Democrats, which at that time led the ruling coalition in the Federal Government. The Social Democrats feared that the introduction of tuition fees would endanger equal access to higher education by all. In order to guarantee equal access to higher education by all, the Federal Government passed a law banning general tuition fees in 2002 ('Federal Law').³⁷

The States challenged the constitutionality of the federal legislation banning tuition fees, before the German Federal Constitutional Court (GFCC - *Bundesverfassungsgericht*) on the grounds that the Federal Government lacked competency under the Constitution. Coming in the wake of World

³⁴ OECD 2006 table C 2.1.

³⁵ Access to higher education is strongly correlated with parental income and parental education according to *Bundesministerium für Bildung und Forschung* 2006 p. 8.

³⁶ *Sigmund*, in *Handelsblatt*, 03 August 2004, "Acht Bundesländer planen Gebühren für das Erststudium "; *Frankenberg* 2004.

³⁷ *Sechstes Gesetz zur Änderung des Hochschulrahmengesetzes (6. HRGÄndG) vom 8. August 2002 (BGBl I S. 3138)*.

War II, the 1949 German Constitution (*Grundgesetz*) outlines not only the allocation of competencies between the States and the Federal Legislatures, but also codifies the protection of certain fundamental rights for the German population. Both, the allocation in the Constitution of competencies between the States and Federal Government, and the provisions guaranteeing certain fundamental rights, constrain the legislative choices both State and Federal politicians can make.

In January 2005, in a seminal judgement, the GFCC overruled the ‘Federal law’.³⁸ The GFCC interpreted Articles 75 (1) 1 of the German Constitution in combination with Article 72 (2) of the Constitution as assigning the legislative competency over higher education spending and tuition fees solely to the German States. Therefore, State legislators now have the undisputed sole right to decide about tuition fees. The 2006 reform of German Federalism confirmed, and even strengthened, the position of the States as the sole holders of legislative competency over higher education policy.³⁹

This right to impose fees has by now been taken advantage of by six States. However, the overall impact has been far greater, as together it is these six States that provide around 70% of the total German places at university. These States charge students a general tuition fee of € 500 per semester.⁴⁰ However, as we will see in the next paragraph, when deciding about higher education investment and tuition fees, States do have to consider the impact of their legislation on equality of opportunity.

In its ruling on the constitutionality of tuition fees, the GFCC also admitted that tuition fees may have a countervailing effect on the goal of ensuring equal access to higher education.⁴¹ The Court considered that equal access to higher education, interpreted as equal *chances* of access to higher education, is protected by a combination of constitutional norms: the general right to equal treatment (Article 3 (1) GG); the right to free choice of occupation (Article 12 (1) GG); and the principle of social democracy (Article 20 (1) GG). To ensure that these constitutional norms are not infringed, the Court made the constitutionality of States’ exercise of their competency over

³⁸ BVerfGE 112, 226.

³⁹ The reform limited the jurisdiction of the Federal Government with regard to higher education to the system of admissions to university and the degree system in Article 74 (1) No. 33 GG. But even if federal legislation with regard to the admissions and degree systems exists, according to Article 72 (3) No. 6 GG the States have the right to enact rules deviating from the federal rules. The possibility to deviate from the only two remaining issues under the jurisdiction of the Federal Government, has placed higher education policy including higher education policy and finance completely in the hands of State politicians.

⁴⁰ For an overview of the current State laws see www.studis-online.de/studinfo/gebuehren/index.php.

⁴¹ BVerfGE 112, 226 paragraph 72.

tuition fees dependent on the condition that the States take political measures to ensure equal opportunities exist for access to higher education.⁴² Therefore, ensuring equal access to higher education is not only a requirement of political rationality, given the demographic development and the current participation rates in Germany as argued above, but also of the Constitutional framework.

The political decision to increase investment in higher education via the charging of tuition fees is the starting point of this thesis. As explained, this decision must be seen in conjunction with the constitutional duty of lawmakers to guarantee equal access according to Article 3 (1) GG in combination with Article 12 (1) GG and Article 20 (1) GG. The legal obligation of politicians to guarantee equal access for students to universities has two possible interpretations. The first interpretation is that selection should only depend on academic merit, and that all students entering higher education should be presented with the same financial conditions. This is the interpretation of equal access as non-discrimination in access. Unfortunately, with regard to parental means, non-discrimination in access is not enough to secure equality between potential students. This leads to the second interpretation of equal access. If all students have to pay the same fees, but some just lack the resources to do so, differences in parental means impede the attainment of the ideal of equal access. The second interpretation of equality therefore interprets equal access as equal chances of access, also referred to as equal opportunities in access, for the group of all potential students, which includes all children in a cohort. To fulfil the obligation of securing equal chances of access, all German States charging general tuition fees also provide a system of income-contingent loans which finance tuition fees.

Income-contingent loans only have to be repaid by graduates if they pass a certain income threshold. Thus, income-contingent loans are a way to insure students against the risk of having to re-pay the loan while being unemployed. Students, who do not profit from their higher education by enjoying a high life-time income, do not have to repay the loan and thus pay no tuition fees after all. Income-contingent loans differentiate subsidies according to graduates' income over the life-cycle. Such a positive discrimination in the recovery of tuition fees helps to compensate for means differentials between parents.

Equal access to higher education implies a non-discriminatory admission process based only on the criterion of academic merit and also the offering of equal conditions to all students entering higher education. In addition, as an exception from the non-discrimination principle, it implies

⁴² Ibid. paragraph 72.

the duty of the States to compensate for parental means differentials by providing income-contingent loans to students without sufficient resources to pay tuition fees upfront. The non-discrimination principle usually also has to be applied to migrant students from other German States and European Union Member States. The second part of the thesis, which includes the third and fourth chapter, discusses another potential deviation from the non-discrimination principle, the possible introduction of differentiated tuition fees according to place of prior long-term residence.

From a legal perspective, as students are mobile within Germany but also within the EU, German constitutional law and the EC Treaty become applicable.⁴³ The most important provisions from the German Constitution to legally evaluate differentiated tuition fees are Article 3 (1) GG, Article 12 (1) GG and Article 20 (1) GG, guaranteeing equal access to higher education institutions in Germany. ECJ case law has also determined that within the EU, non-discrimination on the basis of nationality must be extended to all European migrant students.⁴⁴ The European principle of non-discrimination, Article 7 EC, in combination with free movement for Union citizens, Article 18 EC, is applicable to differentiated tuition fees. To normatively evaluate differentiated tuition fees according to place of prior residence, their negative impact on the non-discrimination provisions, on both the German and the European level, has to be balanced against their positive impact on politicians' investment incentives. These questions of social desirability of tuition fees backed by income-contingent loans and of the social desirability of differentiated tuition fees have to some extent been discussed in the literature. The following section gives a short overview.

1.3 Literature overview

This thesis is an interdisciplinary thesis, which aims at economically analysing parts of the German tuition fee legislation and possible variations. With regard to the German tuition fee legislation, very little interdisciplinary work has been done yet. The economic and legal discussion on the question of social desirability of tuition fees backed by income-contingent loans and the introduction of differentiated tuition fees according to place of prior residence have been almost entirely separate. Thus, first the different strands of the two literatures will be presented. Then the possible ways of, and the benefits from bringing them together will be shortly outlined.

The question of social desirability of the German tuition fee legislation has been discussed in the economic policy debate surrounding the introduction of tuition fees. When applying only Pareto-

⁴³ The ECHR is not within the scope of this thesis.

⁴⁴ Case 293/83 *Gravier v City of Liège* [1985] ECR 593.

efficiency as the normative criterion, economists in general support the introduction of tuition fees. Tuition fees are usually argued to be efficient, because expected individual returns to higher education are positive. Thus, pricing higher education at its marginal cost will induce efficient demand for higher education.⁴⁵ However, the analysis becomes more complicated, if equity is introduced as a second normative criterion into the debate. As a cost of higher education, tuition fees have to be paid before its returns can be realised. They are therefore usually paid by parents or other members of the family. If information were complete, capital markets should provide financing to students, whose parents lack sufficient means to pay the tuition fees. Unfortunately, information is asymmetric and incomplete. Banks have less knowledge of an individual student's talent and motivation than she herself, and students also cannot predict their own returns to higher education accurately. This tendency to market failure on capital markets with regard to student loans may lead to quite expensive, and possibly restricted, student loans, which not all students may be willing to take out.⁴⁶

The market failure creates barriers to access to higher education and makes tuition fees without additional financial support by the government for students from weak financial backgrounds inequitable. The discussion about tuition fees has therefore focussed on the question of how to design student loans and other means of financial support which solve the problem of market failure.⁴⁷ The most important contributions to the literature on the optimal design of income-contingent loans are *Barr 2004c* and *Chapman 2005*.⁴⁸ Their framework for the design of income-contingent loans outlines how the loan system should be structured in order to guarantee that it achieves its goals, but is also as cost effective as possible for the taxpayer.⁴⁹ This framework provides a benchmark with which to analyse whether the existing systems of income-contingent loans are optimally designed. The German income-contingent loan systems have not yet been analysed in the light of these results from the theoretical literature.

⁴⁵ *Barr 2004a*.

⁴⁶ For a general overview of the debate see *Janeba, Kemnitz and Ehrhart 2007* and *Hansjürgens 1999*. Commenting especially on the problem of spending levels see *Blankart, Koester and Wolf 2005*, *Blankart and Krause 1999*, *Hansjürgens 2000*, and *Straubhaar 2005*. For the problem of participation see *Wissenschaftliche Dienste des Deutschen Bundestages 2004*, *Becker and Fenge 2005*, *Ertl 2005* and *Ebcinogle 2006*.

⁴⁷ For an overview of the discussion see *Teixeira, Johnston, Rosa and Vossensteyn 2006b* and *Johnes and Johnes 2004* chapter 8 on the funding of higher education.

⁴⁸ *Woodhall 2006* p. 17 ff.

⁴⁹ *Chapman 2005* p. 16 ff.

The legal literature about the constitutionality of different tuition fee designs is quite restricted.⁵⁰ Scholars are just starting to discuss the details of the tuition fee legislation in regard to the German constitution.⁵¹ To my knowledge, in the small existing literature on the constitutionality of tuition fees, no contribution exists which integrates the results from the debate in the social sciences on the optimal design of income-contingent loans into the legal debate on the constitutionality of tuition fees backed by income-contingent loans. By evaluating the German tuition fee legislation within the framework of *Barr/Chapman* and introducing the results to the legal literature, an attempt is made to close a gap in the both the economic literature and in the constitutional law literature.

In addition to ascertaining that spending on higher education in Germany is too low, the political economy literature has also been analysing the reasons for low higher education spending levels. A number of factors, including institutional, societal and political factors explain why German levels of investment are so low, particularly when compared to other countries.⁵² Salient among them are the following factors. First, low political support of higher education decreases government spending on higher education as demographic developments, and relatively low participation levels in higher education, have decreased the proportion of students amongst the population.⁵³

Second, ideological party politics are an important factor determining the spending level on education in general, and on higher education especially. Left-wing parties, usually tend to spend more public resources on higher education than moderate or right wing parties. In Germany, since WW II, left wing parties have only been in office a quarter of the time on the Federal level, and only half of the time on the State level. Therefore no spending boost on higher education has occurred in contrast to that seen in some Nordic countries.⁵⁴ Third, competition for scarce public resources between investment in higher education and other social policies has also decreased the

⁵⁰ *Kronthaler 2006, Bosse 2007, Pieroth and Hartmann 2008, Tegebauer 2007*; a similar discussion exists with regard to the constitutionality of the tuition fees legislation of the State of Hesse under the constitution of the State of Hesse, which was decided positively by the Constitutional Court of Hesse in a judgement from 11 June 2008 (*Hessischer Staatsgerichtshof NVwZ 2008, 883*); see *Pestalozza 2007, Walther 2007* for arguments in favour of constitutionality, *Schmehl 2006* takes a more restricted view.

⁵¹ *Pieroth and Hartmann 2008* discuss the constitutionality of the interest rate charged on publicly provided student loans. *Tegebauer 2007* discusses the legislation's constitutionality in regard to the Constitution's provision on the use of revenues from extra fees (*Sonderabgabe*).

⁵² *Schmidt 2004* p. 28-29, *Schmidt 2002* p. 17-18. For an empirical analysis of the determinants of education spending in 26 OECD democracies see *Busemeyer 2006*. The influence of demographic change on public education spending is discussed in detail in *Grob and Wolter 2007*.

⁵³ *Schmidt 2002* p. 10-11.

⁵⁴ *Ibid.* p. 11 ff.

spending on higher education.⁵⁵ Finally, also the constitutional framework governing the financing of higher education influences the overall investment in higher education.⁵⁶ This last factor influencing public investment in higher education will be in the focus of the discussion in the third and fourth chapters of this thesis.

As has already been mentioned above, student mobility under the constitutional framework creates a free-riding problem. This, in addition to all those other factors just discussed, further decreases the higher education investment incentives of politicians. As the free-riding problem is central to the analysis of chapter three and four, it will be shortly recalled. Under the current constitutional set-up, higher education policy including spending on higher education is a responsibility of the States. Students from all German States have access to universities in other States under the same financial conditions as students, who have lived on a long-term basis in that State. As migrant students can be assumed to return to their home State after graduation with a high probability because people in general have a strong attachment to their home region, the host States have to bear the cost of educating migrant students. After the return of the migrant student, the home State enjoys most of the external benefits of higher education after graduation. Therefore, expecting graduates to return home, States have an incentive to free-ride on their neighbours' higher education spending by investing less than they would have done otherwise.

This problem is discussed in a small, but growing, theoretical and empirical economic literature. *Schwager 2007* and *Gérard 2007* show formally that in such a setting of decentralised higher education competencies, non-discrimination with regard to tuition fees and mobile students, a free-riding problem arises. As a consequence, politicians' incentives to invest in higher education decrease. *Büttner and Schwager 2006* provide some preliminary statistical evidence, which backs this claim. *Schwager 2007*, *Stettes 2007*, *Berthold, Gabriel et al. 2007* and *Gérard 2007* all analyse the same problem, but suggest very different measures as solutions. To name only the most important contributions: *Stettes 2007* suggests that higher education policy should be centralised to remove the free-riding incentive; *Berthold, Gabriel et al. 2007* suggest a system of transfer payments between States to compensate for the cost of the migrant students' higher education; *Schwager 2007* and *Gérard 2007* derive differentiated tuition fees as solutions to the free-riding problem. From an institutional point of view, all these solutions are very different and depend to a large extent on the way the problem is framed. To the author's knowledge, no interdisciplinary account

⁵⁵ *Ibid.* p. 15 ff.

⁵⁶ *Ibid.* p. 16 ff.

of the free-riding problem from a law and economics perspective exists, which integrates all parts of the legal framework into the analysis of the reasons for the free-riding problem and takes into account the political framework for enacting the solutions. In the first part of chapter three an attempt will be made to fill this gap in the literature. In this chapter, the free-riding problem and its solutions will be discussed from a law and economics perspective to lay the foundation for the integration of the economic analysis into the legal discussion.

The higher education investment incentives faced by politicians on the one hand, and the free-riding problem on the other hand, are completely neglected by the legal literature on the constitutional framework of higher education finance in both Germany and Europe. However, the legal literature does discuss differentiated tuition fees, which would solve the free-riding problem.⁵⁷ In contrast to the economics literature, the legal literature focuses almost exclusively on the interference of differentiated tuition fees with fundamental rights, especially non-discrimination.⁵⁸ In this literature, the impact of differentiated tuition fees on fundamental rights such as non-discrimination, free choice of occupation and freedom of movement is analysed in detail.⁵⁹ Unfortunately, it seems that to date, scholars have paid hardly any attention to the positive impacts that differentiated tuition fees, according to prior residence/nationality, would have on the incentives of politicians to invest in higher education. Therefore they miss an important rationale for, and consequence of, allowing tuition fee differentiation.

In the context of the discussion surrounding the European right to equal treatment, *Scholsem* 1989, *von Wilmsky* 1990 and *van der Mei* 2005 have analysed, to a certain extent from a law and economics perspective, the tension between granting mobile students a right to equal treatment in the host State, and the financing of education within this State. These three authors apply fiscal federalism theories to assess the ECJ case law on higher education finance. However, a systematic account integrating the newest developments in law and economics into the legal literature is still lacking. Thus, after having analysed the free-riding problem from a law and economics perspective, this thesis aims at integrating the economic account on differentiated tuition fees into the legal literature. When doing this, the thesis aims at answering the question whether differentiated tuition fees are socially desirable.

⁵⁷ See *Pieroth* 2007, *Gärditz* 2005, *Haug* 2000 and *Waldhoff* 2005. A good overview of the European discussion is given by *Wollenschläger* 2007 and *Bode* 2005.

⁵⁸ *Pieroth* 2007 p. 234 ff., *Gärditz* 2005 p. 163.

⁵⁹ *Pieroth* 2007, *Gärditz* 2005, *Haug* 2000.

The main differences between the economic accounts of tuition fee legislation and the legal discussion are the number of normative criteria included in the discussion and the way human behaviour is modelled. Economists usually only apply the normative criterion of Pareto- or Kaldor-Hicks-efficiency. Often, they will also include a definition of equity or social justice within their criteria, which is the case for example in the literature on student loans.⁶⁰ Constitutional lawyers, on the other hand, are provided with so many different normative criteria by the constitution, especially fundamental rights. Therefore, they cannot decide normative questions only on the basis of efficiency and sometimes equity. On the other hand, economists apply usually rational choice theory of human behaviour, which specifies the assumptions underlying predictions of future consequences of any piece of legislation. Lawyers, on the other hand, do not usually engage in such rigorous theorising when evaluating legislation. Thus, a methodological approach is needed, which brings together both worlds and makes economic analysis of constitutional law possible. This approach has been developed by *Anne van Aaken* and will be discussed in the next section.

1.4 Integrating economic analysis into constitutional law applications

Before the normative questions can be fruitfully analysed from an economic analysis of law perspective, two methodological choices have to be made. First of all, to fill the term *socially desirable* with meaning, a normative frame of reference has to be chosen. Secondly, to compare the consequences of different alternatives, a method to analyse the impact of the legislation on human behaviour needs to be chosen. The second step is important because it ensures that the normative conclusions are drawn on the basis of a thorough assessment of the empirical consequences of the legislative measures.

As regards the first methodological choice, the obvious normative frames of references would be the traditional approaches of normative economics: welfare and constitutional economics. They include the use of the well accepted rational choice theory to predict human behaviour, but suffer from the shortcomings of their one-dimensional, purely consequentialist normative criteria of efficiency and consensus. Traditional legal analysis, to the contrary, relies on constitutional principles, mainly fundamental rights, as a normative frame of reference, but does not incorporate any systematic analysis of human behaviour when balancing competing constitutional principles in the proportionality test.

⁶⁰ E.g. *Hansjürgens* 1999 discusses both efficiency and equity aspects of the introduction of tuition fees.

To overcome the shortcomings of the traditional approaches, this thesis applies the *Van-Aaken*-approach, which has been especially developed for this purpose. *Van Aaken* relies on constitutional principles as normative benchmarks, in the same manner as legal scholars do. However, she then applies rational choice theory to predict human behaviour by incorporating results from economic theories. In this section, I will first discuss in greater detail, why welfare economics and constitutional economics are not well suited as normative benchmarks in this thesis. Then, I will line out why the classic legal proportionality test alone is also not sufficiently refined enough from a methodological point of view. Finally, I will introduce the proportionality test based on the *Van-Aaken*-approach.

1.4.1. Shortcomings of traditional normative analysis of law

1.4.1.1 Normative economic analysis of law

Welfare economics and constitutional economics are the two most important approaches used in the normative economic analysis of law.⁶¹ In carrying out an analysis, a welfare economist would, for example, ask whether it was either Pareto or Kaldor-Hicks efficient if the GFCC or the ECJ allowed tuition fee discrimination according to place of prior residence or nationality. Efficiency, either as Pareto or Kaldor-Hicks efficiency, remains the predominant normative criterion used in the economic analysis of law, even though it has been heavily criticised.⁶²

The main arguments of its critics are the following: First, it is impossible to compare interpersonal utility without making value judgements. Therefore distributional justice is excluded from the analysis. Secondly, it is a problem to delimit geographically and intertemporally the individuals whose welfare is to be included in the welfare function and it is problematic to decide which preferences to include in the welfare function. Thirdly, a guarantee of fundamental rights for every individual is absent. Fourthly, the assumption of stable preferences in a social welfare function is problematic.⁶³ Finally, a further even more fundamental criticism of efficiency as a normative criterion, going back to *Hayek*, is that the subjective individual assessments of cost and benefits of a situation cannot be known by external third parties. As a consequence of this missing information, supporters of this view argue that normative conclusions based on welfare comparisons will never be possible.⁶⁴ These problems, in principle, call into question all normative legal recommendations based exclusively on welfare economics. However, the actual research question will dictate whether the problems are severe enough to make the choice of a different approach necessary.

⁶¹ For a comprehensive overview of normative economic analysis of law compare *Aaken* 2003 chapter 3.

⁶² For an overview of the debate, see *Schäfer and Ott* 2005 chapter 2.

⁶³ *Aaken* 2003 p. 232.

⁶⁴ See *Schäfer and Ott* 2005 p. 52-53 for a short overview of this line of argument. See also *Hayek* 1945.

With regard to the questions examined in this thesis, the third criticism is the most important. In the legal discussion, fundamental rights and other constitutional principles are the benchmark against which laws are evaluated.⁶⁵ For example, tuition fee differentiation could infringe the fundamental right of EU citizens to free movement within the European Union, and other fundamental rights protected in the Constitution.⁶⁶ Therefore, fundamental rights must be incorporated in the analysis as normative values in themselves. In welfare economics, which has its philosophical roots in utilitarianism, the aggregate utility of the society serves as the normative criterion.⁶⁷ The existence of individual fundamental rights within such a framework has to be justified by utility, which individual citizens derive from enjoying the protection of their fundamental rights.

As a consequence, within a welfare economic framework, even the complete abolition of any individual fundamental right may be justified by individuals' preferences, if the collective preferences for the abolition of the right outweigh the collective preferences in favour of the fundamental right. This is also known as Sen's "Liberal's paradox".⁶⁸ To avoid any inconsistency, the existence of the fundamental rights would have to be assured by assumption before welfare economics could be applied to analyse conflicts between fundamental rights from an economic point of view. To avoid any inconsistency, first an assumption assuring the existence of fundamental rights would need to be made, before welfare economics could be applied to analyse a normative question, in which fundamental rights are relevant normative criteria.

As with regard to the research questions of this thesis, in which fundamental rights are normatively important, welfare economics does not seem to be a suitable normative approach for addressing the questions of this thesis. However, normative constitutional economics could be an alternative approach. Normative constitutional economics has emerged as an alternative

⁶⁵ Alexy 2003a p. 131.

⁶⁶ See below section 4.1.2.1 for a discussion about the question whether free movement of persons within the EU constitutes a fundamental right.

⁶⁷ Barr 2004a p. 45-46.

⁶⁸ Sen 1997. Sen derives this famous paradox when he tries to find a social welfare function that fulfils three conditions: the condition of liberal rights, the Pareto principle and the assumption of an unrestricted domain of preferences. The existence of liberal rights imply that every member of society may at least decide about one matter completely on his own. The underlying idea is that personal liberty means that individuals have individual decision rights for their individual problems. The Pareto principle implies that the utility maximising outcome should be chosen. An unrestricted domain of preferences also allows "meddlesome" preferences to be included in the utility aggregation. Meddlesome preferences are preferences for actions that interfere with liberal rights of other citizens. Sen shows that it is impossible to find a social choice function satisfying these three assumptions not leading to cyclical decisions. The crucial question of the paradox is whether liberal rights should be allowed to be restricted as long as utility is maximised. For further references compare Sen 1970 and Mueller 2003 chapter 27.

normative approach in economics.⁶⁹ Its proponents claim they have scientifically solved the problems of welfare economics. Consensus, either real or hypothetical, is their predominant criterion against which to evaluate any piece of legislation. Like welfare economics, constitutional economics is a normative individualistic and therefore subjective philosophical approach. In constitutional economics, fundamental rights would enter the constitution if citizens could unanimously agree on them when adopting the constitution. Thereby, the protection of fundamental rights in the constitution becomes dependent on the preferences of the citizens reaching the consensus about the constitution.⁷⁰ Unfortunately, the same problems as in welfare economics arise. It does not follow from the theoretical premises of constitutional economics that fundamental rights will be necessarily included in the constitution. A consensus of all citizens on fundamental rights does not necessarily exist. Members of a majority may not favour fundamental rights which protect members of a minority. Therefore, the framework of constitutional economics does not allow us to avoid Sen's "Liberal Paradox" either.⁷¹ Fundamental rights would also need to be included in a constitutional economics analysis by introducing an assumption about the preferences of the citizens adopting the constitution.

In addition to the missing guarantee of fundamental rights on the constitutional level, it is also problematic that consensus, as a normative criterion, is only applicable on the constitutional level. Constitutional economists start from the idea that the legislative process is a two-level game comprising the constitutional level and the sub-constitutional level. Hypothetical consensus is best applied on the constitutional level as a normative criterion, if a new constitution or change of constitution is under discussion. On the subconstitutional level, consensus is only meaningful as normative criterion if a norm does not cause any external costs or benefits. This, for example, is often the case for contracts, if the contract only affects the contracting parties.⁷² However, in the area of administrative law, to which the tuition fee legislation belongs, duties and requirements are usually imposed on the citizens irrespective of their consent. As administrative law often imposes cost on citizens, as in the case of tuition fees, citizens' consent cannot be presupposed. In this case and in the majority of norms of subconstitutional legislation, hypothetical consent is thus no meaningful normative criterion.⁷³

⁶⁹ Among its main representatives are *Buchanan 1962, Buchanan 1985, Homann and Suchanek 2005, Kirchner 1997 and Vanberg 1999.*

⁷⁰ *Aaken 2003 p. 103 ff.*

⁷¹ *Ibid. p. 104.*

⁷² *Ibid. p. 256.*

⁷³ *Ibid. p. 256.*

Instead of directly evaluating subconstitutional legislation by (hypothetical) consensus, constitutional economists derive the normative status of subconstitutional laws indirectly from the normative evaluation of the constitutional decision rules by (hypothetical) consensus. They hold that if consensus was achieved when the constitution was adopted, then neither hypothetical nor real consensus will be necessary to legitimise sub-constitutional laws formed later.⁷⁴ To legitimise sub-constitutional laws, decision making rules regarding norms on the sub-constitutional level must have been agreed upon by consensus in the constitution first. However, the missing guarantee of fundamental rights in constitutional economics persists on the subconstitutional level. If a given constitution does not necessarily include fundamental rights, fundamental rights are also not necessarily protected in its rules of decision making for the sub-constitutional level. Therefore constitutional economics is also problematic as a normative framework with which to address the question of this thesis.

1.4.1.2 The legal proportionality test

Looking for a normative frame of reference to address the research questions of this thesis, we will now turn to the main frame of reference developed in constitutional law, the traditional legal proportionality test. The proportionality test is a formal procedure used to balance and weigh conflicting normative values against each other, which are incorporated in the constitution.⁷⁵ It was developed outside economics and even outside welfare theory. It might therefore serve as an alternative normative evaluation standard to overcome the shortcomings of welfare and constitutional economic analysis of law.

Constitutional jurists, in contrast to welfare and constitutional economists, incorporate the constitutionally guaranteed fundamental rights in the normative benchmark against which to judge measures, when carrying out the judicial review of governmental actions under the proportionality test. Thereby, the main shortcoming of welfare and constitutional economics, the missing guarantee of fundamental rights, would be circumvented. However, it is important to note, that the proportionality principle has its own shortcomings. For example, no unambiguous methodology exists as to how to analyse a case. This lack of unambiguous methodology opens up a margin of judicial discretion. In this section, after describing the traditional structure, legal definition and main functions of the proportionality principle, its shortcomings will be discussed.

The proportionality test establishes whether or not a rule is constitutional. Within the legal system, the values embodied in constitutions guide legislation and legal interpretation of

⁷⁴ *Buchanan 1962 and Aaken 2003 p. 257.*

⁷⁵ *Alexy 2002a.*

subconstitutional laws. Constitutions are the most important codification of binding normative requirements for all members of society.⁷⁶ In Western democratic States like Germany, the values in the constitution are often interpreted as the normative consensus of all German citizens.⁷⁷ Consequently, if the proportionality principle tests whether measures are constitutional, it implicitly also tests whether they are *socially desirable*.

The proportionality principle is not explicitly codified in the Constitution. However, from the very first years of its existence, drawing on a well-established doctrinal tradition in Prussian Administrative law, the GFCC has established the proportionality principle as a constitutional principle.⁷⁸ The GFCC based its doctrinal derivation of the proportionality principle on the principle of the rule of law and the nature of fundamental rights.⁷⁹ In Germany, the proportionality principle has since become an accepted constitutional principle. It is the main procedure used to cope with conflicting constitutional rights claims.⁸⁰ In cases of conflicting constitutional rights, the application of the proportionality principle is aimed at discovering whether in drafting the legislation, the legislator has realised a given legitimate aim with the least negative impact on the other normative goals of society, and whether the positive impact towards achieving the aim justifies any losses suffered with regard to the other goals.⁸¹

The proportionality principle has spread from Germany to many other legal orders within Europe and around the globe, e.g. Canada, Israel and South Africa.⁸² Nowadays considered to be a “best practice standard” for undergoing the constitutional review of legislation, it has become an overarching principle of constitutional adjudication.⁸³ As such, the principle is also applied in the adjudication of legal disputes under international treaty regimes, most importantly for this thesis, to conflicts arising under the European Community Treaty.

In the context of European law, the concept was first applied by the European Court of Justice in the 1970ies under the intellectual influence of *Hans Kutscher*, a former judge at the GFCC, later appointed to the ECJ.⁸⁴ Over time, the ECJ has firmly incorporated the proportionality principle as the main procedure for dealing with conflicting normative values under the European

⁷⁶ *Peters* 2006 p. 584.

⁷⁷ *Aaken* 2003 p. 321.

⁷⁸ See BVerfGE 3, 383, 399 and established case law since BVerfGE 7, 377, 405, 407 ff.

⁷⁹ *Hirsch* 1997 p. 2.

⁸⁰ *Stone Sweet and Mathews* 2008, see II B.

⁸¹ *Bizer* 1999 p. 6 ff.

⁸² See introduction in *Stone Sweet and Mathews* 2008.

⁸³ See *Ibid.* for a global analysis of the judicial application of proportionality principle.

⁸⁴ *Ibid.* III B.1.

Community Treaty. The proportionality principle is applicable to challenge both the legislative measures of the Community, and those of the Member States, if they fall within the scope of Community law.⁸⁵ Following the Court's lead, politicians codified the principle in the Maastricht Reform Treaty.⁸⁶ The third paragraph of Article 5 EC now reads: "Any action of the Community shall not go beyond what is necessary to achieve the objectives of this treaty".⁸⁷ This paragraph in the Treaty anchors the principle firmly in Community Law.⁸⁸ However, even though this codification in the EC-treaty can be considered a step forward from German constitutional law, in which no codification of the principle exists, Art 5 EC still leaves a lot of room for interpretation.⁸⁹ For instance, the wording of Art. 5 EC leaves open, whether the fourth of the following four steps has to be discussed when applying the proportionality principle on the European level.⁹⁰

In its most developed form, the proportionality test in German and European law comprises the following four steps:⁹¹

- 1.) Does the legislative measure further a *legitimate aim or public interest*?
- 2.) Is the measure *suitable* to achieve the desired outcome (*suitability*)?
- 3.) Is it the measure *necessary* to achieve the desired end (*necessity*)?
- 4.) Does the measure impose a burden that is excessive in relation to the objective sought to be achieved (*proportionality in a narrow sense*)?

In the first step of the proportionality principle, the legislation's legitimate aim has to be derived taking the current state of constitutional law into account.⁹² The operation of the second test aims at eliminating all legislative alternatives that do not have any impact on the legitimate aim. This test protects citizens from arbitrary legislation because the legislator has to demonstrate that his measures are likely to have at least some effect on the goal. Necessity, the third step in the procedure, rules out all measures that are unnecessary to reach their goal. A measure is

⁸⁵ *Craig and de Búrca* 2007 p. 546 ff.

⁸⁶ *Craig and de Búrca* 2003 p. 372; *Hartley* 2007 p. 151-152.

⁸⁷ The numbers of the Articles of the EC Treaty, which I use, correspond to the post-Amsterdam numbering.

⁸⁸ *Hartley* 2007 p. 152. In German law the principle is not codified in the constitution but has been developed by the German Constitutional Court. See also *Hirsch* 1997 p. 1 ff.

⁸⁹ For the doctrine in German law compare *Engel* 2003. The proportionality principle in European law is discussed extensively by *Craig and de Búrca* 2007 p. 544. *Emiliou* 1996 compares the application of the principle in German, French, English and European law.

⁹⁰ *Craig and de Búrca* 2007 p. 545.

⁹¹ For a discussion of the doctrinal structure of the proportionality principle see *Lerche* 1961 and *Engel* 2003. For the application on the European level see *Chalmers, Hadjiemmanuil, Monti and Tomkins* 2006 p. 448 ff. and *Hirsch* 1997 p. 8 ff.

⁹² The first test of the principle is only discussed in the context of judicial review of a law. It is not applicable if the proportionality of an administrative action is under review because compared to the legislator, the administration usually does not have discretion when choosing aims. *Pieroth and Schlink* 2002 paragraph 280 ff.

unnecessary if another legislative measure achieves the same goal at a lower cost, or lower infringement of citizens' fundamental rights. Only the least intrusive means is considered necessary.⁹³ Expressed in economic terms, the necessity test ensures that the adapted measure lies on the production possibility frontier and is not produced with inferior technology. Proportionality in a narrow sense finally tests, whether the positive effects of a measure on the legitimate aim justifies the sacrifices society has to make in reaching its other goals, even when the mildest legislative alternative is chosen. Here competing normative objectives such as fundamental freedoms and rights, distributive justice and efficiency have to be balanced against each other.⁹⁴

In the hands of the GFCC and the European Court of Justice, the proportionality test is a very powerful tool of judicial oversight. The GFCC applies the test to determine whether legislative measures of the Federal legislator or the State legislators violate the Constitution.⁹⁵ The proportionality principle thus protects the German citizens against the legislator. As the legislators have not only to comply with German but also with European law, their legislative measures may also be reviewed against the European Treaties under the proportionality principle. Under European law, the proportionality principle is also applied to protect the national legislators against any infringement of their autonomy by the European legislator.⁹⁶

A constitution provides constitutional lawyers, judges and scholars with codified normative criteria, against which to evaluate legislative measures. In the course of a constitutional evaluation, often intra-constitutional conflicts of norms arise. The need to balance such conflicting norms when establishing the constitutionality of a piece of legislation gives judges law-making power. This fact poses a genuine challenge to the legitimacy of judicial decision-making especially in a civil law system like Germany, which has assigned the main law-making power to its parliament. To cope with that challenge, constitutional judges in Germany and the EU strive to make the decision process as rational as possible, by using the proportionality test.⁹⁷

⁹³ If objectives cannot be measured on the same scale and legislative alternatives impact differently on the legitimate aim and on the other objectives, the analysis gets even more subjective. In this case it is not possible to discriminate between different alternatives without value judgments. See *Aaken* 2003 p. 333. In this case, competing objectives already have to be balanced at the level of the necessity test. This might also be one of the reasons for the disagreement about the number of steps in the proportionality principle.

⁹⁴ For the concept of rational balancing of fundamental rights, which will be adopted later in the thesis, see *Alexy* 2002a. *Schlink* 1984 and *Habermas* 1992 reject the concept of rational balancing.

⁹⁵ *Grabitz* 1998.

⁹⁶ *Emiliou* 1996 p. 139 ff.; *Calliess* in *Calliess and Ruffert* 2007, Article 5 EC, paragraphs 50-58.

⁹⁷ *Stone Sweet and Mathews* 2008, section I.

However, in practice, the Courts enjoy a wide discretion when applying the principle. Judges are free to choose the level of detail they are going to go into when investigating the different steps, and how they balance the competing objectives against each other in the last step.⁹⁸ As a result, depending on the measure under review, the Courts engage in different intensities of judicial review and scrutiny of the details of a case. For example, on the European level, ECJ review of legislative measures is especially intense if Member States' infringements of fundamental rights and fundamental freedoms are involved. Whereas the Court is more deferential in questions regarding economic and social policy issues, which are often designed by the European Commission and simply enacted by the European legislator.⁹⁹

As the Treaty text does not contain any rules on the doctrinal application of the proportionality principle, the principle is usually applied without basing predictions on any explicit theory of human behaviour.¹⁰⁰ These differences in the application of the proportionality principle may, on the one hand, reflect differences in the relative expertise of the ECJ in assessing the impacts of certain legislative policy measures.¹⁰¹ On the other hand, they may also reflect the ideological preferences of the judges. In any case, the freedom enjoyed by the ECJ in applying the proportionality principle introduces a certain amount of arbitrariness into its judgments.¹⁰²

This arbitrariness of the principle's application is considered problematic here as under the rule of law judicial oversight should be equally strict in all respects. Deferential review in some areas of policy creates the wrong incentives for legislators. If officials know that the judicial oversight of certain types of policy measures is very weak, then in these areas they may set policy which predominantly reflects their own ideology or interests instead of following the public interest, or at least their voters' interest. Predictions based on sound economic theory and results from

⁹⁸ *Hartley* 2007 p. 152.

⁹⁹ *Craig and de Búrca* mention three groups of cases which illustrate the varying degrees of intensity used in the application of the proportionality principle. The most intense scrutiny is applied by the ECJ to cases involving the infringement of fundamental rights, followed by cases involving the proportionality of penalties imposed by the Community. The most restrained review is applied to cases involving questions of discretionary policy choices. Strict review is also applied to cases where Member States try to justify exemptions from the four freedoms of the EC Treaty. Here the Court tries to avoid that protectionist policies are disguised behind general aims such as public health or social stability. *Craig and de Búrca* 2007 p. 545 ff.

¹⁰⁰ None of the references cited above mentions any methodological foundation for the predictions of human behaviour. Article 4 of Protocol 30 on the application of the principles of subsidiarity and proportionality added to the EC Treaty at the Amsterdam Summit 1997 mentions that the conclusion that an aim can be better achieved by the Community than by the Member States should be substantiated by qualitative and if possible quantitative indicators. However there is no further reference to general methodological requirements on these indicators in the protocol. Therefore the protocol still leaves the ECJ a lot of freedom when applying the proportionality principle.

¹⁰¹ *Craig and de Búrca* 2007 p. 545.

¹⁰² For instance, the Court has increased the intensity of its review over time. *Ibid.* p. 550. Critical towards the differing levels of review also *Hirsch* 1997 p. 28.

empirical studies also make judicial review in areas of economic and social policy possible.¹⁰³ As it currently stands, the proportionality principle does not restrain government action to the minimum in all areas of legislation, which arguably should be its function.

To sum up, the traditional legal proportionality principle has two main characteristics which make it very attractive as a normative framework to discuss the research questions posed in this thesis. The proportionality principle is more attractive as a normative framework than welfare and constitutional economics because judicial review of legislative measures under the proportionality test incorporates many different normative criteria, most importantly fundamental rights. Also, a clearly defined structure of the proportionality principle exists, which clearly distinguishes empirical statements in steps 2 and 3 from a normative valuation of competing norms in step 4. This clear separation of empirical and normative claims opens the proportionality test on principle for theoretical and potentially empirically informed rational choice analysis of the effects of the legislative measure on its normative objectives.

However, as discussed above, first of all, the doctrinal structure of the principle is disputed and not all jurists agree on the sequence of steps lined out above. Secondly, no doctrinal and also no practical consensus exists on the question how exactly the analysis leading to the answers of steps 2 and 3 should be performed. The intensity of empirical scrutiny varies considerably between Courts and types of cases. When applying the proportionality principle, different Courts may thus come to different results.¹⁰⁴

Thirdly, informational problems, which make clear predictions about the effects of legislative measures under review difficult if not impossible, force judges to use discretion. Given that no practical consensus exists on the methods and theories to be applied in the review process, also potentially strategic behaviour or ideological prejudices of judges can influence judicial decision making. It is very hard to distinguish those different scenarios at present.

Finally, two different courts may still decide the same case differently under the proportionality principle even if they apply the same methodology in predicting the effects of the legislation. This may be caused by different value judgements when balancing competing normative principles against each other in step four of the proportionality test. It is impossible to reduce the ambiguity

¹⁰³ *Engel* 2003 p. 297 ff.

¹⁰⁴ *Stone Sweet and Mathews* 2008 IV.

of the test in this respect. The only option is to make the decision rule applied when balancing the competing norms against each other as transparent as possible.

To mitigate the problems arising from the judicial discretion with regard to the empirical claims in steps 2 and 3 three of the test, *van Aaken* suggests integrating rational choice predictions of human behaviour into the proportionality test with regard to the effects of the legislative measure on all affected constitutional principles. The paradigm of rational choice applied in welfare and constitutional economics to predict human behaviour is, for all its problems, still considered the most successful and powerful social sciences paradigm.¹⁰⁵ Rational choice theory allows us to systematically predict changes in human behaviour as a reaction to changes in law. Including such systematic predictions in the constitutional review of legislation, would force constitutional scholars to make a clearer distinction between the predicted change of human behaviour, taking into account informational problems, and the evaluation of this behaviour. The *Van-Aaken*-approach will be adopted as the normative approach in this thesis. Its properties, advantages and problems will be discussed in greater detail in the following section.

1.4.2. The *Van-Aaken*-approach

The *Van-Aaken*-approach combines the multidimensional normative framework of constitutional law with the methodological rigour in predicting human behaviour of rational choice theory. The approach offers a framework within which to pursue the normative analysis of the application of constitutional law, based on a thorough prediction of the consequences of the analysed legislative measure.¹⁰⁶ The approach has its normative foundation in constitutional law. The normative criteria are constitutional principles derived from the constitution. Constitutional principles offer all-encompassing normative criteria against which to evaluate legislation.¹⁰⁷ Additionally, the *Van-Aaken*-approach builds on the predictive strength of positive economic theory, by analysing human behaviour with rational choice theory.

In the *Van-Aaken*-approach, rational choice theory is applied to predict the impact of a piece of legislation on the relevant constitutional principles. The use of rational choice theory to predict behaviour leads to a clear distinction between empirical and normative statements. A formal evaluation framework, which is based on normative decision theory, is then applied to normatively compare different legislative measures. In this approach, economics is employed as a middle-level theory predicting changes in behaviour, but not as a full social philosophy

¹⁰⁵ *Schäfer and Ott* 2005 chapter 3 give a short and comprehensive overview over the methodological foundations, status and criticisms of the rational choice paradigm as model of human behaviour.

¹⁰⁶ The approach presupposes the existence of a constitution.

¹⁰⁷ *Aaken* 2003 p. 288 ff.

normatively evaluating alternative states of the world.¹⁰⁸ Pareto- or Kaldor-Hicks-efficiency are not employed as the only normative criteria. Instead, the normative criteria are constitutional principles derived from the Constitution. The constitutional principles may, but need not, include Pareto- or Kaldor-Hicks-efficiency. Due to the multidimensional nature of the normative benchmark, the approach can be widely applied to different problems of legislation and adjudication, which affect multiple values.

The *Van-Aaken*-approach consists of three essential components: the interpretation of modern constitutions as normative benchmarks for society, which contain constitutional principles as optimisation requirements for the legislators; rational choice theory, which predicts the impact of legislative or judicial alternatives on the realisation of the constitutional principles; and finally a general normative decision making framework, which can be adapted to discuss different normative problems. To discuss any specific normative question, a decision rule as how to balance competing normative principles needs to be added to the open normative decision theory framework. With regard to normative questions of constitutional law, where fundamental rights are relevant as normative principles, this decision rule is usually the decision rule, which is applied in the „proportionality in a narrow sense“-test, the fourth test in the classic proportionality principle. As will be discussed in more detail below, the whole proportionality principle can be interpreted as one special version of the more general normative decision framework. Therefore, the normative assessment of a legislative measure under the *Van-Aaken*-approach can be easily converted into a legal constitutionality test.¹⁰⁹

¹⁰⁸ The idea of a middle-level theory is further explained in *Coleman* 1992 p. 1 ff.

¹⁰⁹ *Van Aaken* is not the only scholar trying to bridge the gap between consequentialist economics and deontological legal thinking. *Zamir and Medina* 2008 develop a similar approach to bridge the gap between consequentialism and deontology in the normative economic analysis of law (p. 327). They interpret the deontological classification of certain actions as bad or good, which is independent from the actions' consequences, as an additional constraint on the welfare economic cost-benefit analysis. Fundamental rights can thus be incorporated into a classic welfare economic cost-benefit analysis as deontological constraints. These deontological constraints differ according to the question under discussion. This approach is very general. It could also be applied to any question of normative constitutional law. Constitutional norms are interpreted by *Zamir and Medina* from a moderate deontological perspective. Their moderate deontological perspective allows them to balance conflicting constitutional norms against each other (p. 326). The normative consensus of a society is, in this approach as in the *Van-Aaken*-approach, combined with the methodological rigour of welfare economics. In distinction to *van Aaken*, *Zamir and Medina* interpret e.g. fundamental rights not as constitutional principles which are optimisation requirements for the legislator and which enter the normative benchmark in the normative analysis. Instead of such an interpretation of the value system in the constitution, they interpret constitutional principles mainly as restrictions on the cost-benefit analysis. Basing a cost-benefit analysis on any other value than aggregate utility is mentioned as a possibility by *Zamir and Medina* but it is not further elaborated upon (p. 369). Thus, the approach by *Zamir and Medina* also allows for the integrating of fundamental rights and economic analysis, but in contrast to the approach by *Anne van Aaken*, it does not take the interpretation of the constitution as an objective order of values into account.

1.4.2.1 Constitutional principles as normative objectives

The general normative commitments of a legal order, which guide the interpretation of the remainder of the constitution and further law-making, are codified in a constitution in almost all legal orders.¹¹⁰ These general normative commitments are hereinafter referred to as "constitutional principles". Following *Alexy*, *Van Aaken* interprets constitutional principles as optimisation requirements for the legislator.¹¹¹ Therefore, constitutional principles are normative objectives for the society and are suitable for use when normatively evaluating legislative measures. Under the *Van-Aaken*-approach, a specific legislative measure is evaluated against the constitutional principles which are affected by the specific legislative measure under judicial review.

The choice of constitutional principles as normative criteria is justified by *Van Aaken's* interpretation of modern constitutional law, as a compromise between the consequentialist and deontological schools of legal philosophy. The debate between the advocates of a consequentialist ethic, predominant in economics, and the proponents of deontological thinking, dominant in the constitutional law discussion, has a long philosophical tradition, and is still ongoing.¹¹² On the one hand, it is generally accepted that not just one answer to the question of justice exists, but that interpretations of the concept of justice change over time and space. Therefore, constitutions have to be open to change, too.¹¹³ On the other hand, a core of fundamental values is accepted by almost all Western democratic States. This core of values is, for example, codified in the Universal Declaration of Human Rights which was adopted in 1948 by the General Assembly of the United Nations.¹¹⁴

Almost all modern Western democratic constitutions incorporate these values as fundamental principles.¹¹⁵ Since the adoption of modern Western style constitutions, they have hardly changed over time. The near universal acceptance of these basic values in modern Western constitutions justifies interpreting modern Western constitutions as codifications of the current consensus on the idea of a just social order. The fact that there is such a widespread consensus among the constitutions of Western democratic States in regard to the main normative principles, justifies their use as a normative benchmark against which to evaluate legislation and judicial decisions of

¹¹⁰ *von Bogdandy* 2003 p. 156. One prominent exception is a UK which has up to today no written constitution.

¹¹¹ *Alexy* 1995 p. 237.

¹¹² *Aaken* 2003 p. 265 ff.

¹¹³ *Ibid.* p. 322 ff.

¹¹⁴ For the text of the Universal Declaration of Human Rights see www.un.org/overview/rights.html.

¹¹⁵ *Stone Sweet and Mathews* 2008 FN 26.

all courts.¹¹⁶ However, in different legal orders, the practical interpretation and application of the same fundamental values by the judiciary can lead to different decisions with respect to similar cases. These different decisions only arise from disagreement on the interpretation of values and not because they are based on completely different value systems.

As it does not refer back to individuals' preferences to derive the normative criteria, the *Van-Aaken*-approach is no longer purely individualistic. Instead, it incorporates *a priori* fundamental rights codified in the constitution as normative criteria, which are interpreted as the current consensus of this specific society on a just social order. From this point of view, citizens' preferences are already incorporated in the constitution.¹¹⁷ Under the *Van-Aaken*-approach, the principles inherent in any modern constitution are therefore taken as normative goals, without the need to further refer to any specific legal philosophy. As the normative benchmark used to evaluate the same question may vary between jurisdictions according to the constitution in force, the *Van-Aaken*-approach always has to be applied to a question within one specific legal order.

Starting from the idea of the constitution as the codification of the consensus on what the populace considers a just social order, *van Aaken* refers to *Robert Alexy's* very influential theory of constitutional rights, when she interprets the values codified in the constitution as constitutional principles.¹¹⁸ *Alexy* argues that jurisprudence is a practical discipline with the ultimate aim of solving cases.¹¹⁹ His concept of "jurisprudence as a rational enterprise"¹²⁰ requires that in all cases "the route from the statement of a constitutional rights norm to the concrete ought-judgement is as accessible to inter-subjective control as possible".¹²¹ *Alexy's* structural theory of constitutional rights was developed with the aim of achieving such rationality.

Alexy has developed a concept of constitutional rights that allows for the interpretation of all constitutional rights in a consistent and systematic fashion. This laid the foundation for the practical application of the theory to German constitutional law.¹²² His theory is considered to be among the most important contributions to constitutional theory in the last fifty years, as his

¹¹⁶ *Aaken* 2003 p. 322 ff.

¹¹⁷ "Eine solche Vorgehensweise ist in diesem Sinne nicht mehr subjektivistisch -und umgeht daher die Meß- und Aggregationsprobleme bezüglich der individuellen Präferenzen-, weil davon ausgegangen wird, daß der individuelle Nutzen sich bereits aggregiert in Verfassungsprinzipien wiederfindet." *Ibid.* p. 106.

¹¹⁸ *Ibid.* p. 318 ff.

¹¹⁹ *Alexy* 2002b p. 9.

¹²⁰ *Ibid.* p. 18.

¹²¹ *Ibid.* p. 14.

¹²² *Ibid.* p. 5.

conceptualization of constitutional rights norms, even though written in the light of German constitutional case law, is generally applicable.¹²³

One of the cornerstones of *Alexy's* theory is the division of legal norms into rules and principles.¹²⁴ He defines the difference between the two kinds of norms according to their structure. When applied to a specific case, rules allow only a binary choice: either the case falls under the rule or it doesn't. When a norm with the structure of a principle is applied to a specific case, on the other hand, the principle may prevail to (in theory infinitely) many different degrees.¹²⁵ For example, a law stating that only citizens aged 18 and older may vote in national elections is a rule. Either a person fulfils the requirements of being a citizen and having reached the age of 18 and is therefore allowed to vote, or she does not. On the other hand, the right to free speech is an example of a principle. A full range of intermediate situations from completely unrestricted speech, up to total State control of the media, may exist in practice. Therefore, free speech is a principle because it can be realised in degrees. In conjunction with rules regulating the organisation of the State, most modern constitutions include principles, most importantly fundamental rights.

According to *Alexy*, constitutional principles can be categorised into individual rights and collective goods.¹²⁶ Individual rights are rights that can be attributed to individuals. The most important examples of individual rights are fundamental rights. From his point of view, fundamental rights do not only bind the legislator and protect the liberty of individual citizens. In addition to these two functions, fundamental rights also serve as goals that the legislator and the courts must respect when they draft a new law, or interpret the existing statutes. Fundamental rights, interpreted as principles, therefore form optimisation requirements for the legislator.

Similar to public goods in economics, collective goods are defined by *Alexy* as goods that cannot be divided up into several pieces, by terminology, in reality or by the legal system.¹²⁷ The category of collective goods according to *Alexy* comprises classic public goods, such as national security or environmental protection, but also, as will be argued below, distribution and constitutional provisions dealing with the structure of the State, such as the democracy principle. If two

¹²³ *Stone Sweet and Mathews* 2008 I.F.

¹²⁴ *Alexy* 1985 chapter 3.

¹²⁵ *Ibid.* p. 71 ff.

¹²⁶ *Ibid.* p. 98.

¹²⁷ *Alexy* 1995 p. 239, *Alexy* 2002b p. 59. See *Blankart* 2001 p. 56-66 for the economic definition of public and private goods.

principles conflict, the legislator has to balance them.¹²⁸ *Alexy* argues that the degree to which principles are realised can be compared according to their intensity classified on an ordinal scale of three different intensities. On the basis of this ordinal ranking, principles can be rationally balanced against each other.¹²⁹ The constitution contains, in the enumerated constitutional principles, the normative goals that the legislator is supposed to strive for.¹³⁰

The method used to derive the principles from the Constitution determines the content of the normative benchmark, and thus the outcome of normative analysis. Due to the crucial influence the derivation method has on the normative analysis, it deserves some further explanation. Both groups of principles, individual rights and constitutional principles, have to be derived from constitutional norms.¹³¹ If a constitutional norm can be “correctly cited for or against a decision”, then this constitutional norm protects a principle relevant to the case.¹³² Whether a specific constitutional norm can be cited for or against a decision, is determined by the method of legal interpretation. It is usually no problem to identify the individual rights protected by constitution norms, regardless of the method of legal interpretation. However when it comes to deriving the principles protecting the provision of collective goods, these are much harder to derive.

Alexy subdivides the derivation of principles into substantive and procedural derivation. Substantive derivation of principles starts from a constitutional norm and then derives the principle explicitly protected by this norm. Such explicit protection by constitutional norms usually exists for individual rights. In contrast to individual rights, principles protecting the provision of collective goods can only sometimes be identified by substantive derivation. Substantive derivation of principle protecting collective goods is for example possible from the limitation clauses of fundamental rights, from the institutional interpretation of a constitutional right as part of their scope of protection, or from the principle of social democracy, Article 20 (1) GG.¹³³ In addition, principles protecting collective goods can also be derived by procedural derivation. Procedural derivation of principles is based on norms granting the legislator the procedural competence to legislate in certain areas. If legislation in these areas is aimed at providing collective goods, e.g. defence, then these collective goods are also protected by

¹²⁸ *Alexy* 1985 p. 75 ff., Also *Alexy* 2003a.

¹²⁹ *Alexy* 2003b p. 440.

¹³⁰ *Aaken* 2003 p. 315 ff. A similar view is also taken by the German Constitutional Court when it interprets the German Grundgesetz in the famous Lüth-decision as “a system of objective moral commitments” (“eine objektive Werteordnung” – translation by the author). See BVerfGE 7, 198, 205.

¹³¹ *Alexy* 2002b p. 80.

¹³² *Ibid.* p. 80.

¹³³ *Ibid.* p. 80.

constitutional principles. The constitutionally protected collective good may, in some cases, be a justification for the legislator to restrict a competing principle that protects a fundamental right.¹³⁴

Constitutional principles are interpreted as optimisation requirements that the legislator must fulfil. From the normative perspective of the German Constitution increasing the factual realisation of any of these principles is considered desirable. Therefore, increasing the realisation of any of the constitutional principles is defined as increasing “constitutional welfare”.¹³⁵ Decreasing the realisation of any of these principles therefore decreases “constitutional welfare”. “Constitutional welfare” should not be mistaken for social welfare. In the usual interpretation of social welfare, social welfare is defined as a real number attached to a particular collection of all individual states of the members of a society. “Constitutional welfare” in contrast to social welfare is comprised of many different criteria which may, but need not, be comparable on the same scale, e.g. as real numbers. To evaluate the impact of a legislative measure on the realisation of a constitutional principle, the measure’s effects on individual behaviour are analysed theoretically and, if data exist, the theoretical hypothesis are tested empirically. This analysis will be based on rational choice theory, which is discussed in the following section.

1.4.2.2 Rational Choice theory to predict behaviour

Rational choice theory is the second essential component of the *Van-Aaken*-approach. Under the *Van-Aaken*-approach, rational choice theory is applied to predict human behaviour when carrying out the proportionality test.¹³⁶ When undergoing an analysis, to start with, the behavioural effects of the legislative measures are analysed theoretically, and if possible, empirically. Then, the abstract constitutional principles relevant for assessing the effects are derived from the constitution. Next, the results from the theoretical rational choice analysis are employed to predict the impact of the different legislative alternatives on the realisation of the abstract constitutional principles. To make these predictions, the scales on which realisations of constitutional principles are measured have to be defined.

For most constitutional principles, especially fundamental rights, realisations can only be measured on ordinal scales, which rank the intensity of the realisation of a constitutional principle. In case traditional economic cost or benefits enter the normative constitutional welfare function, these will be measured in real numbers. The impacts of the legislative alternatives on the realisation of the constitutional principles concerned are then divided into ‘constitutional

¹³⁴ Ibid. p. 82.

¹³⁵ *Aaken* 2003 p. 323.

¹³⁶ If appropriate, finding from behavioural economics may also be included in the analysis.

benefits' and 'constitutional cost'. 'Constitutional benefits' include the positive impacts of the law on the realisation of all constitutional principles, and 'constitutional costs' the negative impacts. However, given the different scales on which e.g. fundamental rights and economic benefits or costs are measured, it will be impossible to aggregate the impact on these different kinds of constitutional principles, as the scales are not compatible with each other.

1.4.2.3 Normative decision theory to compare alternatives

Normative decision theory is the third component of the *Van-Aaken*-approach. Normative decision theory is the theory of taking optimal decisions.¹³⁷ The optimality of a decision depends on the objectives, constraints and the evaluation of the situation, with respect to the objectives. A framework based on normative decision theory is employed in the *Van-Aaken*-approach to choose the best legislative alternative with regard to the legislator's objectives, given the constraints and decision rule being used. After the alternatives to be compared have been defined, the relevant constitutional principles are derived from the constitution and inserted into the framework as normative objectives. To analyse the impact of the legislative measures under comparison on the objectives, rational choice theory is employed and the scales are defined to measure the impacts for each constitutional principle. Finally, a decision rule is chosen and the rule is then applied to evaluate the different alternatives according to their impact on the achievement of the normative goals. The best alternative is named the "formally efficient" alternative.¹³⁸ In contrast to Pareto- or Kaldor-Hicks-efficiency, the concept of "formal efficiency" does not refer to the normative content of the decision, but only to the formal decision procedure.

The normative decision theory framework makes a clear distinction between analysis of the possible empirical consequences and the value judgements driving the evaluation of the empirical consequences. By the disclosure of the decision rule, the value judgements influencing the decision become transparent. Normative decision theory per se does not provide a decision rule. The decision rule has to be added by the author of the analysis. In the *Van-Aaken*-approach, the decision rule, is the „proportionality in a narrow sense“-test of the proportionality principle, in its interpretation by *Alexy*. *Alexy* developed a concept of rational balancing, which will be applied to balance conflicting normative principles.¹³⁹

¹³⁷ See *Gäfigen* 1974 and *Laux* 1998 for a general overview over normative decision theory.

¹³⁸ *Aaken* 2003 p. 296 ff.

¹³⁹ For *Alexy*'s concept of balancing compare *Alexy* 2003a.

Not only is the fourth step of the proportionality principle applied as the decision rule, the whole proportionality principle has an identical underlying structure as the normative decision theory framework. Normative decision theory solves an optimisation problem. The proportionality principle can also be interpreted as the solution of an optimisation problem.¹⁴⁰ Given the aim of the legislation, the proportionality principle tests whether the legislator has chosen the legislative alternative that minimises the cost of that legislation, and in addition is not overly onerous with respect to the other constitutional principles. The cost of the legislation is widely defined as the negative impact on all the other constitutional principles affected by the legislation. If the impact of the alternatives on the constitutional principles is predicted using rational choice theory, then the results from the proportionality principle, and the formally efficient solution in the *Van-Aaken*-approach, are identical. Any proportionate legislative measure can therefore also be interpreted as the solution to an optimisation problem. In order to more easily relate the results of the analysis to the constitutional law discussion, in this thesis parts of the discussion will be structured according to the steps of the proportionality principle.

Using the proportionality principle as the decision rule, it is only possible to rule out disproportionate legislative alternatives but not to choose between different constitutional legislative alternatives. However, it is possible to normatively choose between different constitutional legislative alternatives within the framework of the *Van-Aaken*-approach by introducing different decision-rules than the proportionality principle. However, introducing a different decision-making rule will not be relevant in the course of this thesis.

1.4.2.4 Structure of analysing a normative question

To assess a case normatively under the *Van-Aaken*-approach, the following steps of the analysis will be undertaken in this thesis.

1.) First, using rational choice theory, and if appropriate including insights from behavioural economics, the economic and other real effects of the legislative measure on behaviour will be predicted. The theoretical analysis will be supported by empirical findings from other jurisdictions or from the past. In German legal scholarship, this inclusion of empirical analysis into legal analysis is referred to as “*Folgenanalyse*”.¹⁴¹

¹⁴⁰ See *Bizer* 1999 p. 6 ff.

¹⁴¹ *Deckert* 1995 and *Lübbe-Wolf* 1981.

2.) Secondly, based on the thorough analysis of the effects of the legislative measure, the normative principles, the realisation of which could be affected by the legislative measure under review, are identified and defined. Then, the impacts of the legislation's effects on the realisations of these normative constitutional principles are ranked on their appropriate scale.

3.) Thirdly, this analysis of the legislative measure's impact is related to the legal system. Usually, from a legal perspective, negative impacts on the constitutional principles translate into interferences with fundamental rights. However, a negative impact on a constitutional principle cannot always be subsumed under the constitution by legal interpretation. Thus, the factual analysis has to be related to the legal analysis in an extra step of the analysis and the infringements of individual rights have to be discussed.¹⁴²

4.) In the next step, the justification of the infringements of the fundamental rights is discussed. To discuss the justifiability, the proportionality principle according to the *Van-Aaken*-approach is applied. If fundamental rights are found to have been infringed, the standard of justification required follows from the GFCC adjudication. In addition to all formal legal requirements for infringing a fundamental right, according to the GFCC, the appropriate legal standard with which to justify the infringements of fundamental rights is the proportionality principle.¹⁴³ As argued above, the proportionality principle is also a prominent standard of justification under EU law.

As already discussed above, the proportionality principle demands that the legislator restricts fundamental rights only as far as necessary to achieve the legislation's goal. The proportionality principle can be conceptualised as requiring the use of the cost-minimising legislative policy measure, given a certain legitimate aim.¹⁴⁴ Thus, if fundamental rights are infringed, then the proportionality principle allows us to directly integrate the results from the analysis of the abstract constitutional principles into the legal constitutionality discussion. Therefore, the proportionality test provides the link between the legal analysis of a constitutional rights infringement and the normative assessment based on abstract constitutional principles. The intensity of the impact on constitutionality principles will be used in the balancing step of the proportionality principle.

¹⁴² *Aaken* 2003 p. 331.

¹⁴³ See above section 1.4.1.2.

¹⁴⁴ This idea was first introduced by *Bizer* 1999.

5.) Finally, if there is more than one constitutional alternative with which to solve a problem, both alternatives can be normatively evaluated by comparing the intensity of their impact on the abstract constitutional principles.

1.4.2.5 Discussion of the *Van-Aaken*-approach

Summing up, it has to be concluded that the *Van-Aaken* approach is advantageous compared to welfare economics as a normative framework because it allows to incorporate into the normative analysis a multidimensional framework of normative objectives, which most importantly also include constitutionally guaranteed fundamental rights. Secondly, compared to the traditional legal proportionality test, the proportionality under the *Van-Aaken*-approach bases all predictions on rational choice theory, which is up-to-date the most powerful paradigm developed in the social sciences to predict human behaviour. The doctrinal structure of the traditional legal proportionality test already points scholars in the direction of theoretically informed and empirically tested analysis of the effects of legislative measures under judicial review, however it is not required. Therefore, the *Van-Aaken*-approach adds stringency to the traditional legal proportionality test.

However, even though the *Van-Aaken*-approach has many advantages over the traditional normative economic analysis of law and the traditional legal proportionality test, it has its own sets of shortcomings. These problems will be shortly lined out in this sub-section. First, it has to be mentioned that the final decision about the social desirability under the *Van-Aaken*-approach relies on value judgements. This necessity arises from the incommensurability of fundamental normative criteria, which have to be balanced against each other. The only mitigation to the problem of incommensurable normative criteria is to make the assumptions underlying the analysis transparent and allow them to be discussed. Their scope is decreased as far as possible. However, the necessity remains to make these value judgements to decide whether a piece of legislation is socially desirable. The *Van-Aaken*-approach shares this problem with the traditional legal proportionality test. The value judgements enter the analysis when two competing principles are balanced under the weight formula, which has been developed by *Alexy*.¹⁴⁵ Therefore, a certain ambiguity of the final outcome of the decision remains.

Secondly, the *Van-Aaken*-approach assigns numbers to compare different social states, e.g. the introduction of certain legislation vs. the status-quo. Thus it is a procedure to rank social states against each other. Criteria to evaluate different methods to develop rankings of social states have

¹⁴⁵ See below section 3.6.4.1.

been developed in the theory of measurement.¹⁴⁶ These criteria are usually not very demanding from a normative perspective. However, most procedures to rank social states at least fall short of one if not more of these criteria. A full discussion of the *Van-Aaken*-approach with regard to the theory of measurement would go beyond the scope of this thesis. The *Van-Aaken*-approach in general is open to be combined with different decision rules. Thus, the final answer to the question whether the *Van-Aaken*-approach fulfils the criteria of the theory of measurement depends on the decision rule chosen. In the case of this thesis, the decision rule is the proportionality principle developed by *Alexy*. A few comments on this question have to suffice. E.g. one first criterion, which is not fulfilled by the *Van-Aaken*-approach, is the Pareto-criterion. It has already been discussed in detail above that the *Van-Aaken*-approach does not assign normative value based on individual preferences but based on normative values embodied in the constitution.¹⁴⁷ A more in-depths analysis would probably identify even more problems.

Also, all critical accounts of *Alexy*'s concept of fundamental rights as optimisation requirements equally apply to the *Van-Aaken*-approach.¹⁴⁸ However, this literature is also not discussed in detail here. Even given its shortcomings, the approach is better suited than any other normative approach and will thus be applied to answer the research questions in this thesis.

1.5 Research questions and thesis structure

Under the just outlined *Van-Aaken*-approach, three main research questions are discussed in this thesis, which also provide the main structure of the thesis, as they are the respective focus of chapters two, three and four:

1. Given the normative requirements of the German Constitution, are the German systems of tuition fees, backed by income-contingent loans, designed in a socially desirable way?
2. Given the normative requirements of the German Constitution, is a right to equal access for migrant students from other German States to higher education institutions and the income-contingent loan systems socially desirable?

¹⁴⁶ For an overview of the theory of measurement see *Krantz, Luce, Suppes and A.* 1990. The most important criteria are completeness, non-triviality, monotonicity, independence, the pareto criterion, transitivity and consistency. The criteria are very similar to the criteria applied in Arrow's impossibility theorem. For a discussion of the criteria in the context of the impossibility theorem compare *Mueller* 2003 chapter 24.

¹⁴⁷ See above section 1.4.2.1.

¹⁴⁸ For a critique of the proportionality principle see e.g. *Webber* 2009 and *Möller* 2007.

3. Given the normative requirements of the EC Treaty, is the right to equal access for migrant students from other EU Member States to higher education institutions and income-contingent loans socially desirable?

The *Van-Aaken*-approach allows reframing the three research questions asking whether specific tuition fee designs are socially desirable as questions asking whether a specific (hypothetical) tuition fee design is constitutional. This follows from the interpretation of the constitution as providing the normative consensus of society. In this normative approach, the set of all constitutional laws comprises all social desirable laws. The results from the economic analysis will then be integrated into the constitutionality review.

Transformed into a legal question, the first question inquires whether the current German State systems of tuition fees backed by income-contingent loans are constitutional. The income-contingent loan systems aim at achieving equal access to higher education as required by the German Constitution in Articles 3 (1) GG, Article 12 (1) GG and 20 (1) GG. In addition, Article 114 (2) GG is also applicable. This provision obliges each State to reach its goals without wasting public resources. To assess whether the loan systems achieve its goals without wasting resources, the best way to finance higher education cost, developed by *Barr 2004c* and *Chapman 2005* will be compared to its realisation in form of the German income-contingent loan system.

The second and third questions both aim to fill the gap in the literature on the social desirability of differentiated tuition fees according to students' prior place of residence within Germany and within the European Union. Differentiated tuition fees are a solution to the free-riding problem, which was discussed above. In the beginning of chapter three, the thesis will first frame the free-riding problem from a law and economics point of view. This will be done by integrating both parts of the legal framework, the right to equal access to higher education and the allocation of higher education competency to the State level, into one integrated analysis of the problem. Then, all possible solutions to the problem will be categorised according to the fact whether they affect the right to equal access or the competence allocation. Secondly, the solutions will be categorised according to the political actors involved in enacting them. Differentiated tuition fees are chosen as the solution to the free-riding problem discussed in detail in this thesis, because they could be introduced by State legislators without the consent of many other political actors. Thus, their realisation could be quite realistic.

Research questions two and three are then reframed as hypothetical *Higher-fees-for-migrant-students*-statutes, whose constitutionality under the German Constitution will be discussed in chapter three and whose accordancy with the EC Treaty will be discussed in chapter four. The internal structure of the chapters follows mainly the structure of analysing a normative question under the *Van-Aaken*-approach, which has been developed in section 1.4.3.4. Finally, chapter five concludes, discusses implications of the research and gives an outlook to further research.

2. Normative analysis of the German tuition fee and student loan legislation

Over the last decades, public funding for higher education has stagnated at a sub-optimal level. To solve this problem, given the scarcity of public resources and competing demands from other policy fields for public funding, it seems inevitable to most observers that additional private investment is required in order to maintain the funding of German higher education at an internationally competitive level. Arguing along these lines, legislators in six German States have since 2005 introduced tuition fees. However, increasing investment in German higher education via tuition fees may have at least two detrimental effects. These detrimental effects would arise if talented, but poor students, did not enrol in a higher education degree because they could not afford it. The first effect of the deterrence of poor students would be wastage of scarce intellectual potential through a further decrease of private investment in higher education. Thereby, the introduction of tuition fees would counteract the very aim it was supposed to serve. The second detrimental effect would be a negative effect on the goal of securing equal access to higher education for students from all kinds of background, which is a value in itself. To avoid these detrimental effects of tuition fees, the German State legislators have backed up tuition fees with income-contingent loans in the recent tuition fee legislation. At first glance, it is hard to tell whether the advantages of tuition fees outweigh their disadvantages.

This chapter of the thesis analyses in detail whether the German tuition fee legislation, which backs up general tuition fees of up to € 500 per semester by income-contingent loans, is socially desirable. Under the *Van-Aaken*-approach, the Constitution applicable to the case in question is used as the normative standard against which to assess the social desirability of a specific legislative measure. The normative assessment of the legislation will be based on a benchmark of constitutional principles derived from the Constitution.¹⁴⁹ First, a short overview of the main characteristics of the legislation provides the necessary background for the ensuing analysis (2.1). Then the economic impact of the legislation is assessed (2.2). As a third step, the normative benchmark of constitutional principles is derived from the Constitution, on the basis of which the changes in students' and politicians' behaviour are normatively assessed (2.3). This normative assessment of the implications of the legislative measures on the constitutional principles is then translated into a legal assessment of the constitutionality of the measure (2.4). The constitutionality discussion will then be the basis for the ensuing discussion of the social desirability of the measures, which concludes the second chapter (2.5).

¹⁴⁹ See above section 1.4.2.1.

2.1 Main characteristics of the legislation

Recently, the States of Baden-Württemberg, Bavaria, Hamburg, Lower-Saxony, North Rhine-Westphalia and Saarland have all introduced general tuition fees of up to € 500 per semester.¹⁵⁰ The State of Hesse had also introduced a similar system of tuition fees, but after a change in majority in the State parliament, this system has already been abolished again, which may soon change back again as the original government is back in power.¹⁵¹ Under the various State legislations, fees have to be paid by all students enrolled at public universities and at universities of applied sciences.¹⁵² Students suffering social hardship are exempted, e.g. students who have to take care of dependent and chronically ill relatives, who raise a child, who have disabilities, or other reasons justifying exemption.¹⁵³ Baden-Wuerttemberg, Bavaria and the Saarland have also included the right for universities to exempt students of high academic merit from paying tuition fees.¹⁵⁴ In passing the judgement allowing such fees, the GFCC further obliged the States to ensure that these tuition fees do not have detrimental effects on equal access to higher education.¹⁵⁵ To fulfil this obligation, the States have all introduced a form of income-contingent student loan which offers students the opportunity to finance their tuition fees. Hamburg has recently changed its tuition fees regime and has now given students the choice to defer payment of fees until they start earning a gross income over € 30.000. If they do not reach this income threshold for ten years, the fees are waived.

In all States students have the choice between paying the tuition fees up-front, and borrowing and repaying the loan after graduation, when their income exceeds a certain income threshold.¹⁵⁶ The loan systems differ only slightly between States. Table 1 in the appendix of this chapter summarises the characteristics of the different systems of income-contingent loans. Baden-Württemberg, Lower-Saxony, Hesse and Hamburg in the new regime provide the loans via their State-owned banks. The other States including Hamburg in its old regime have given the mandate for providing the loans to the KfW-Förderbank, owned by the Federal Government. The income-contingent loans are available without collateral and cover tuition fees for the standard

¹⁵⁰ Compare below in section 2.6 the table listing the legal foundations and details of the tuition fee and student loan legislation for every State.

¹⁵¹ *Gesetz zur Sicherstellung von Chancengleichheit an hessischen Hochschulen* of 18 June 2008, [2008] OJ 764.

¹⁵² Lower Saxony charges students, who study longer than the standard period of study, higher fees according to § 13 of *Haushaltsbegleitgesetz* of 15 December 2005[2005] OJ 426.

¹⁵³ See below section 2.6.

¹⁵⁴ See below section 2.6.

¹⁵⁵ BVerfGE 112, 226, 245.

¹⁵⁶ The deferred fees in Hamburg technically are not a loan. However, the effect of the scheme is quite similar to the loans in that students only have to pay their fees after graduation when they are earning a good salary.

period of study plus four semesters.¹⁵⁷ Loans are only offered to students under a certain age—usually 35, presumably to guarantee that graduates have enough time to repay the loans after graduation.¹⁵⁸ Thus, the age caps ensure that the States do not finance the consumption benefits of retirees, but subsidise future-oriented investments in higher education. EU-citizens, recognised refugees, applicants for asylum, and other foreigners, who have obtained their right to study at a German university by acquiring the Abitur, may also apply for the loan.¹⁵⁹

The terms of the income-contingent loans are very similar across the different States. The interest rate is set according to the government's cost of borrowing, usually the European Interbank Offered Rate (EURIBOR)¹⁶⁰ plus a premium covering administrative cost.¹⁶¹ Graduates only have to repay the loan if their post-tax income exceeds a minimum threshold of around € 1,060 per month. If they earn less, payment is deferred and usually no compound interest is charged. The minimum threshold is increased for a partner and every child by ca. € 400 each. Repayments commence after a waiting period of up to two years after graduation and must be completed 20 or 25 years after graduation. Monthly instalments are fixed, and students can choose to make instalments starting from € 20-50, and up to € 150, per month. Early repayment is possible at all times without paying a loan discharge fee. There is a repayment cap of € 10,000 (up to € 17,000 of total debt for students, who have also borrowed from the BAföG scheme of the Federal Government to cover their living cost).¹⁶² Repayment is collected by the state-owned banks. In all States, any defaults are covered by the tuition fee revenue.¹⁶³ Anticipating the defaults, part of all this tuition fee revenue is attributed to a fund. These funds are separately managed and cover defaults as no private collateral is provided.

Students, who have to take out publicly provided income-contingent loans to finance their tuition fees, often also have to finance their living costs via a loan. In this respect, students have the option to apply to three Federal Government schemes, the BAföG, the *Bildungskredit* and the *KfW-Studienkredit* in addition to obtaining their income-contingent loans financing tuition fees. These other loan schemes will now be discussed in turn.

¹⁵⁷ The standard period of study is usually calculated to include enough time to complete a Bachelor and a consecutive Masters degree.

¹⁵⁸ In some States the maximum age is 40 and in North Rhine-Westphalia it is even 60.

¹⁵⁹ See below section 2.6.

¹⁶⁰ The EURIBOR is a daily reference rate based on the average interest rates at which banks offer to lend unsecured funds to other banks in the euro wholesale interbank market.

¹⁶¹ Per June 2008, the effective interest rate of the public income-contingent student loans varied between 5-6%. Müller and Langer 2008 p. 24 ff.

¹⁶² See below section 2.6.

¹⁶³ See below section 2.6.

BAföG (Bundes-Ausbildungsförderungsgesetz) is a general scheme of education support provided by the Federal Government, and is available to students in all kinds of higher education, undergoing vocational training and apprenticeships, and to pupils in the non-compulsory years of secondary schooling.¹⁶⁴ Germans, EU-nationals and their families residing in Germany, and other foreigners, who have resided in the country for five years, may apply for this living cost support. In order to apply successfully, the potential beneficiaries have to prove their lack of means, and their talent for, and likely success in, the chosen field of study. *BAföG* is only available to students, who have not turned 30 at the commencement of their studies.¹⁶⁵ An evaluation is made based on parental means, the student's own income and factual living costs, depending on whether the student lives with her parents or away from home. The living cost support may reach up to a maximum of € 643 per month. 50 % of this support is made in the form of a maintenance grant and the other 50% is provided as an interest-free loan, without the requirement of providing collateral. The loan also has a repayment cap of € 10.000. A part of the loan is converted into a grant if the student graduates amongst the top 30% of her cohort of graduates in a calendar year.¹⁶⁶

The second scheme, called *Bildungskredit*, is not means-tested. It is financed directly from the Federal budget and is administrated by a publicly owned bank, the *Deutsche Ausgleichsbank*.¹⁶⁷ The aim of the *Bildungskredit*- programme is to accelerate the graduation of students well into the second half of their studies, to enable students to finance a consecutive Master degree, a year abroad or a practical semester as part of their degree.¹⁶⁸ Therefore the circle of applicants is restricted to those students in the second half of their studies, or studying for consecutive degrees.

The third scheme, the *KfW-Studienkredit*, is offered by the *KfW-Förderbank*, which is also owned by the Federal Government. The *KfW-Studienkredit* is available to all students enrolled in their first degree and is intended to finance the living cost of the student, up to € 650 a month, for a maximum of seven years.¹⁶⁹ Both loans, *Bildungskredit* and *KfW-Studienkredit*, have variable interest rates that are equal to the government's cost of borrowing plus administrative costs. No collateral

¹⁶⁴ For an overview see *Bundesministerium für Bildung und Forschung* 2005.

¹⁶⁵ § 10 (3) *Bundesausbildungsförderungsgesetz*.

¹⁶⁶ § 18, 18a, 18b *Bundesausbildungsförderungsgesetz*.

¹⁶⁷ *Bundesministerium für Bildung und Forschung*, Richtlinien für die Vergabe des Bildungskredites. See www.bildungskredit.de.

¹⁶⁸ *Bundesministerium für Bildung und Forschung* 2005 p. 124.

¹⁶⁹ See the *Merkblatt-KfW-Studienkredit (174)*, available at www.kfw-foerderbank.de/DE_Home/Service/KfW-Formul26/Merkblaetter/Bildung/KfW-Studienkredit/index.jsp, which summarises the relevant details of the *KfW-Studienkredit*.

is required. The terms are a bit stricter than for loans financing tuition fees as repayment is not income-contingent, there is no minimum repayment threshold and instalments are fixed. There is, however, a waiting period after graduation before repayments start. Also, the interest-rate charged is quite low as it is close to the Government's cost of borrowing.¹⁷⁰

Therefore, under the current legislation, students in German universities, who cannot afford to pay the cost of higher education up-front, already have access to publicly provided systems of loans financing all parts of their higher education cost. They can finance tuition fees via the loan system provided by the State, which funds their university. This loan only has to be repaid if the graduate's income exceeds a certain threshold. Thus, students are insured against the risk of having to repay this loan without a sufficient income. Additionally students can finance their living cost through either the *BAföG* scheme, if they fulfil the eligibility criteria, which targets the living cost support at students from low income backgrounds. Or, if they do not have access to *BAföG*, students can still finance their living costs via the loan schemes *Studienkredit* and *Bildungskredit* provided by the Federal Government. *BAföG* is partly a maintenance grant and partly a loan, which also has a minimum repayment threshold. The other two loan schemes do not have a repayment threshold but they do only charge moderate interest rates. Overall, borrowing to finance tuition fees is not very risky for any students. All students who are eligible for *BAföG* do not incur a high risk in borrowing to finance living costs. Those students, who are not eligible for *BAföG* but still have to borrow money, do incur the risk of having to repay, even when out of the labour force, however they usually minimise this risk by working part-time reducing the amount they need to borrow. Based on this short overview, the economic impacts of the German tuition fees and income-contingent loan legislation will be analysed in the subsequent section.

2.2 Economic impact assessment

Before predicting the effects of introducing tuition fees backed by income-contingent loans, first some background on the nature of the 'good higher education' needs to be given. The higher education process results in multidimensional outcomes. The 'good higher education' is comprised from an aggregation of these outcomes. Quantification of the outcomes is hard. In addition, the causal link between higher education and its outcomes has been disputed, and thus needs to be discussed.

¹⁷⁰ See below section 2.6.

To begin with, the terminology will be clarified. This thesis discusses investment in higher education. First, the scope of the term higher education is sometimes unclear. Higher education, as used here, refers to all degrees in tertiary education awarded by universities and the other institutions of tertiary education in Germany, which include the *Fachakademien*, *Schulen des Gesundheitswesens*, *Fachschulen*, *Berufsakademien* and *Verwaltungsakademien*.¹⁷¹ Secondly, in daily usage, the term higher education refers to both the process of higher education, as well as its outcomes. This thesis focuses on the impact of the institutional framework on public and private higher education investment decisions. As these investment decisions are mainly driven by the outcomes of higher education, the process of higher education is in this thesis treated as a black box. Therefore, from here on, the term higher education is used only in reference to the outcomes of higher education.

At the individual level, the process of higher education results in four main outcomes. First, human capital is formed by higher education, as graduates acquire knowledge and skills that directly increase their productivity. Second, higher education degrees also function as a screening mechanism which allows employers to differentiate between job-applicants with non-verifiable characteristics, e.g. intrinsic motivation to work hard, according to higher education degrees. Third, students enjoy consumption utility from taking part in the process of higher education. Last but not least, common values and norms are transmitted to students during the process of higher education.¹⁷² The importance of the first two outcomes has been fiercely debated in the economics of education literature.

Proponents of the human capital theory have long debated with proponents of the screening hypothesis as to how best explain the positive impact education has on wages.¹⁷³ For a long time, both hypotheses were considered to be mutually exclusive and scholars tried to falsify either of them. Today, they are more often seen as two sides of the same story.¹⁷⁴ Accordingly, empirical studies are no longer trying to falsify one theory, but attempt to measure the relative importance of the two hypotheses in explaining wages. These studies indicate that screening can only explain a small fraction of the wage increase correlated with higher education, and that the rest has to be attributed to the increased value of human capital.¹⁷⁵

¹⁷¹ This is equivalent to the OECD categories higher education institutions of type A and type B.

¹⁷² These categories were delimited by *Gradstein and Justman 1995*.

¹⁷³ See *Becker 1993* for background to Human Capital Theory, *Spence 1973* and *Spence 2002* for an outline of the screening hypothesis.

¹⁷⁴ *Weiss 1995*. Spence also writes in his retrospect that he never understood the signalling/screening hypothesis to be an all-encompassing theory of education. *Spence 2002* p. 434.

¹⁷⁵ Approximately 10% of estimated education returns can be attributed to ability and related factors made visible by screening according to *Psacharopoulos 2004* and *Card 2001*. *Lange and Topel 2006* p. 488 ff. also

How these individual outcomes are viewed, largely determines how the aggregate outcomes of higher education are also viewed. From the aggregate perspective, the most important of the four individual outcomes is the formation of human capital. In addition to the well-documented wage increases enjoyed by those with education, the formation of human capital also creates positive externalities.¹⁷⁶ These positive externalities make higher education partly a public good. The other outcomes of the process of higher education are from here on neglected in the discussion. This neglect should not be interpreted to imply that the other outcomes are unimportant or even non-existent. On the contrary, they all fulfil important functions in society. However, here we focus on the creation of human capital because this is the outcome which is most important with respect to the long-term economic well-being of society, and most relevant with respect to the research questions addressed in this thesis. Therefore the terms higher education and human capital are used interchangeably in the following parts of the thesis. On the societal level, the individual outcomes of higher education increase the overall welfare of society, above their direct influence on individuals, by exhibiting positive externalities, e.g. a positive impact on growth. These externalities are partly a national public good; partly a local public good and partly a public good consumed by a small group e.g. the family of the graduate or her work colleagues.

The discussion of tuition fees in this part of the thesis will thus start by analysing the impact of their introduction on the State supply of higher education. The impact that introducing fees has on the supply of higher education will determine to what extent the legislation reaches its aim of increasing spending per student. Two separate factors are important in this respect. First, the actual costs of implementing the tuition fees and systems of income-contingent loans. Second, the possibility that increased private investment in higher education will crowd out public investment. In the second subsection, the indirect effects of increasing investment in higher education by introducing tuition fees will be discussed on the basis of a summary of the externalities of higher education. Third, the discussion of the impact of tuition fees backed by income-contingent loans on student demand for higher education follows. Finally, changes in the demand of students from lower socio-economic backgrounds will be analysed. Demand of students from lower socio-economic backgrounds is especially important because it determines whether the tuition fee legislation will have an impact on equality of opportunity.

review the evidence for signalling as an explanation of wage critically. They conclude that signalling can only explain small parts of the returns to schooling.

¹⁷⁶ See *McMahon* 2004 and *McMahon* 2002 for a thorough discussion of education externalities.

2.2.1. Spending on higher education increased

The additional funds supplied by tuition fees could be used to either create more university places or to spend more money on each student, thus increasing the quality of higher education, or be split between the two aims. In Germany, the rationale for the introduction of tuition fees is aimed at increasing the quality of higher education by increasing spending per student. According to the legal provisions implementing them, the tuition fees have to be spent on providing better quality teaching, libraries and pastoral care, and must not be used to create additional places at university.¹⁷⁷

The impact of the introduction of tuition fees on overall higher education spending depends on their impact on three variables: tuition fee revenue; cost of introducing income-contingent loans; and public investment in higher education. The first data on the tuition fee revenue for the last semesters have only recently been released. These initial figures are insufficient though to make any meaningful predictions as to what the long-term effects might be. Therefore the overall impact on investment in higher education must still be predicted; particularly as the full cost of the income-contingent loan systems, on the one hand, and the extent of the crowding out effect, on the other, will only become known in the future. Thus, the full impact has to be predicted based on rational choice assumptions.

2.2.1.1 Tuition fee revenue

To date, tuition fees appear to have had an impact on raising the quality of higher education. E.g. in the summer term 2007, the institutions of higher education in Baden-Württemberg have been reported as being able to spend an additional € 90 million from tuition fee revenue on increasing the quality of teaching.¹⁷⁸ 18% of all students were exempted from the duty to pay fees due to taking a break in studying, social hardship and also academic merit.¹⁷⁹ In North Rhine-Westphalia, detailed data have also been published.¹⁸⁰ From all students enrolled at public higher education institutions in North Rhine-Westphalia, approximately 80% have been required to pay tuition fees, while approximately 20 % have been exempted because they are taking a break from studying or for reasons of social hardship.¹⁸¹ The overall tuition fee revenue amounted to € 251.94 million. About 73 % of this revenue has been spent immediately to improve the quality of teaching. The remaining 27% has been used to cover the cost of the system.

¹⁷⁷ Müller, Ziegele and Langer 2006 p. 24 ff.

¹⁷⁸ *Monitoring-Beirat Studiengebühren Baden-Wuerttemberg* 2008 p. 10.

¹⁷⁹ *Ibid.* p. 10 and p. 14.

¹⁸⁰ *Deutsches Studentenwerk and Stifterverband für die Deutsche Wissenschaft* 2008.

¹⁸¹ *Ibid.* p. 8.

Tuition fees have predominantly been used to increase the number of available teaching staff, to expand the number of tutorials offered, to invest in technical equipment as well as library equipment, and to extend library opening hours.¹⁸² In addition to increasing investment in higher education, tuition fees may also positively influence the quality of higher education by increasing motivation of students to finish their studies within the given standard period of study and to get good grades.¹⁸³

2.2.1.2 Cost of the system

According to the legislation, the costs of administering the tuition fees and, even more importantly, of the income-contingent loans system have to be covered from the tuition fee revenue.¹⁸⁴ E.g., in North Rhine-Westphalia, 27% of the revenue received from tuition fees has been set aside to cover the costs of introducing the system of tuition fees and income-contingent loans. This figure is very much an estimate of the true cost of the income-contingent loans programme. The final costs of the various State systems of income-contingent loans will only be definitely known in the future. This is because they depend on the rate of default on the income-contingent loans and on the long-term administration cost of the system of income-contingent loans. Although no definite figures can be known for this, the default rate and the administration cost of the system can be roughly approximated based on past experiences in other countries. The costs of the system are comprised of two main components: the interest rate and the administration costs.

To minimise costs, the interest rate charged on an income-contingent loan should cover the government's cost of borrowing, plus a premium for administrative costs. If in this scenario all loans were repaid in full, the system would be self-financing. If instead, the interest rate were subsidised, the cost of the loan system would increase strongly. In the long run, interest rate subsidies may even turn loan systems into grant systems. *Ismail* 2006 theoretically analyses the effect of subsidised interest rates on the cost of loan schemes. He concludes that untargeted interest rate subsidies are very expensive. In an empirical analysis, *Johnstone* 1986 concluded in the case of subsidised interest rates on student loans that students received amounted to an effective grant of 15-33% in the USA, and even up to 70-80% of the loan in Germany.¹⁸⁵ *Albrecht and Ziderman* 1993 also point out the high cost of subsidised student loan schemes for the

¹⁸² Ibid. p. 10. The allocation of tuition fee revenue in Hesse over the last two semesters has also been analysed in detail. *Hessisches Ministerium für Wissenschaft und Kultur* 2008.

¹⁸³ *Garibaldi, Giavazzi, Ichino and Rettore* 2007.

¹⁸⁴ *Müller, Ziegele and Langer* 2006 p. 29 ff.

¹⁸⁵ In these calculations, the exact position of the effective grant in the range of percentages is determined by assumptions about the discount rate used to calculate the present value of graduates' loan repayments.

governments. Most recently, *Barr* 2001 reports that in the nineties, thirty percent of all British student loans were not repaid because of an interest subsidy.¹⁸⁶

In the German income-contingent loans schemes, a repayment cap for the overall level of debt, which can be assumed, is included. This repayment cap effectively means that an interest rate subsidy is included in the system. The exact cost of this subsidy is hard to predict. Depending on the development of labour market conditions, places for Master degrees and duration of study, it will vary. Assuming a constant duration of study in his estimation and making conservative assumptions with regard to the other factors, *Dohmen* 2005 estimates that a repayment cap of € 15.000 will cost the government around an estimated 13-16% of tuition fee revenue.¹⁸⁷ Therefore, based on these figures it is likely that the inclusion of the repayment cap in the German system of income-contingent loans will considerably increase the cost of the system in the future. Additionally, the administrative cost of the system will be non-negligible. The whole loan system has to be administered, contracts have to be handled, money has to be transferred, repayments have to be monitored, and graduates' earnings have to be checked if a delay is granted due to purported earnings below the repayment threshold.

The cost of the repayment caps and the larger part of the administrative cost of the income-contingent loan systems will only occur in the future. Already State governments have decided that part of the current tuition fee revenue has to be allocated to a default fund, which will be used to cover the future costs of default, including the costs generated from the inclusion of the repayment caps. In North Rhine-Westphalia, in 2007, 17.8 % of the tuition fee revenue was assigned to the default fund.¹⁸⁸ In Baden-Wuerttemberg, where students' borrowing under the income-contingent loans scheme has been much lower than in North Rhine-Westphalia, 5% of all tuition fee revenues have been assigned to their default fund. It must be noted however, that these numbers are all preliminary estimates and that the true costs of the system will only become known over the coming decades. In North Rhine Westphalia, a further 1.4% of the tuition fee revenue was spent on administration of the tuition fees system.¹⁸⁹ Given the experiences with interest subsidies and administrative cost of income-contingent loans in other systems in the past, it can be expected that the cost of tuition fee administration and income-contingent loans will decrease the investment in higher education. The conclusion must be drawn that the cost of the

¹⁸⁶ *Barr* 2001 p. 204.

¹⁸⁷ *Dohmen* 2005 p. 27.

¹⁸⁸ *Deutsches Studentenwerk and Stifterverband für die Deutsche Wissenschaft* 2008 p. 8.

¹⁸⁹ *Ibid.* p. 8.

system will not be negligible and will decrease the positive impact of tuition fees on investment in higher education.

2.2.1.3 Crowding out

Tuition fees backed by income-contingent loans will only have a positive impact on overall investment in higher education, if the States do not concurrently reduce their public investment in higher education. This is one of the main worries of opponents of the tuition fee legislation. In the nineties, such crowding out of public resources by tuition fees occurred in both, Australia and the UK, following the introduction of tuition fees.¹⁹⁰ However, over the last decade, these two countries seem to be rather an exception. In many cases, e.g. the US and Spain, between 1995 and 2003, increases in private expenditures on higher education have been complemented by increases in public expenditure.¹⁹¹ *Janeba, Kemnitz et al.* 2007 show this effect correlates with the organisation of States as federal States.¹⁹² The allocation of competency over higher education to the State level in the German Constitution may, to a certain extent, act to counterbalance crowding out incentives amongst State politicians.

One explanation for this pattern in the data is that in federal States, students have more options to leave the State to attain their higher education elsewhere and may remain out-of-State after graduation. According to *Janeba et. al.*, students' option to leave reduces market power of federal entities providing higher education. *Kemnitz* 2005 models this effect. However, as argued in the second part of this thesis, students are quite likely to return to their home region in the long run because they have strong preferences to live there.¹⁹³ Another explanation could be that in federal States, State politicians are monitored more closely by their voters with respect to higher education than governments in centralised States and that therefore higher education policy features more prominently in their political objective function. If this hypothesis was correct, then the federal structure of Germany would counterbalance the crowding out effect to a certain extent and we could hope to experience a similar pattern as in the US and in Spain.

At the time of introducing the fees system, there is no way to prevent future reductions in public spending on higher education in response to political pressures. The legislator is sovereign to change its spending on higher education and may thus change the allocation of public resources. In order to overcome the public scepticism towards tuition fees, some State legislators have made contracts with the Universities committing to maintain a certain amount of spending on higher

¹⁹⁰ *Barr* 2004a p. 342.

¹⁹¹ *OECD* 2006 Table B 2.2.

¹⁹² *Janeba, Kemnitz and Ehrhart* 2007 p. 200.

¹⁹³ See below section 3.1.1.

education in the medium-term.¹⁹⁴ Unfortunately, these contracts are not actually enforceable because the legislator retains the budgetary power to change their mind. Overall, some crowding out of the tuition fee revenue will probably take place in the future, however it is regarded very likely in the light of the international experiences that increase in public investment in higher education will mainly be used to increase quality of higher education.

Since their introduction, tuition fees have had a positive effect on the quality of teaching and research in German higher education institutions.¹⁹⁵ However, the net-positive effects, which tuition fees have had over the last years on the quality of teaching in German public higher education institutions, may be decreased in the future by the cost of the system of income-contingent loans and potentially by lower public investment. No definite predictions on the net-effects in the long run can be made and in the worst case but unlikely scenario the overall effect may even be negative.¹⁹⁶ Acknowledging many uncertainties, a moderate lasting increase in investment in higher education is predicted to be caused by the introduction of tuition fees.

2.2.2. Positive externalities of higher education increased

The analysis of the effects of introducing tuition fees has up to now dealt with the direct impact it will have on the supply of higher education. In addition, an increase in higher education investment also has indirect effects, most importantly on development and growth. The extent of the empirical evidence with regard to private and public returns to higher education differs. On the one hand, there is an extensive literature which gives a fairly accurate picture of the amount and distribution of the private returns from higher education.¹⁹⁷ On the other hand, the literature on external returns to higher education is still developing and the results are less clear due to considerable methodological problems.¹⁹⁸ However, two results are clear from the literature. First, different higher education externalities occur via different channels. Only the overall sum of all these different, and often indirect effects, will show the importance of investment in higher education for economic competitiveness and societal development of a nation. Secondly, higher education has a very long-term impact. As a consequence, investing too little in higher education also has negative impacts over the long-term.¹⁹⁹

¹⁹⁴ Compare www.hof.uni-halle.de/steuerung/vertrag2007.htm for an overview of all contracts between States and their universities, which also include budgets for universities for the medium term.

¹⁹⁵ See *Deutsches Studentenwerk and Stifterverband für die Deutsche Wissenschaft* 2008.

¹⁹⁶ *Janeba, Kemnitz and Ehrhart* 2007 p. 203.

¹⁹⁷ For an excellent overview of the literature on private returns to education see *Card* 1999.

¹⁹⁸ For an overview of the literature in external returns see *McMahon* 2004.

¹⁹⁹ *Ibid.* p. 215 and 219 and *McMahon* 2007 p. 7.

Increasing investment in higher education also increases the magnitude of the positive externalities and thus indirectly impacts positively on development and growth. The impact of higher education on economic development and growth is attributed as stemming mainly from two effects: first from innovation of new technologies and imitation of these technologies over the world; and, secondly from the impact of higher education on the public goods that provide the institutional framework for the development and growth process. The following section gives a brief overview of the theoretical and empirical literature on these two processes.

2.2.2.1 Externalities on growth via innovation and imitation of technology

It has been a widely and long-held believe that higher education fosters growth. Surprisingly it has been harder than expected to confirm this view empirically. For a long time, scholars could not find significant and clear evidence for this hypothesis.²⁰⁰ More recently these inconclusive empirical results have been attributed to an earlier lack of theoretical understanding of the way in which higher education, technological processes and growth interact.²⁰¹ A more nuanced theory of the growth process has been developed to be able to reliably predict the impact of higher education investment on growth. According to new theoretical accounts of growth, the impact of higher education on growth in a specific country is determined by both the technological development of the country, and the composition of its human capital.²⁰²

According to Schumpeterian growth theory, world wide growth is driven by two main factors: on the one hand, by technological innovation in countries pursuing fundamental research; and on the other hand, by imitation and adaptation of these innovations in countries without the capacity to innovate.²⁰³ The respective importance of innovation and imitation for growth in any particular country depends on the current stage of its technological development. In countries which are highly technologically developed, innovation is more important for growth, whereas in countries without a high level of technological development, imitation is crucial. In addition, with respect to maximising growth rates, the state of a country's technological development not only determines the key driver to growth in a country, but also the optimal composition of its human capital.²⁰⁴

Increasing investment in higher education has the highest impact on the growth rate in countries, which are already very highly technologically developed. In these countries, innovation drives

²⁰⁰ See e.g. *Benhabib and Spiegel* 1994, *Krueger and Lindahl* 2001.

²⁰¹ *Aghion and Howitt* 2006 p.291 ff.

²⁰² *Acemoglu, Aghion and Zilibotti* 2002.

²⁰³ *Nelson and Phelps* 1966 was one the first growth models to adopt this idea. *Cooter and Schäfer* 2006, chapter 1 differentiate between „technological innovation“ and „adaptive innovation“.

²⁰⁴ *Aghion and Howitt* 2006.

growth, and as innovation depends on higher education, higher education impacts on growth. On the other hand, higher education has a much lower impact on growth in countries, which are less technologically developed and depend on the adaptation of new technologies to grow. In these countries, investing in secondary education and higher education with an applied focus is the key to increasing growth rates.²⁰⁵ This new theoretical account of the impact of higher education on growth has been empirically tested.²⁰⁶ The results of the empirical studies support the hypothesis that the impact of higher education investment on growth depends on the state of technological development in the country.²⁰⁷ In addition, the ineffectiveness of higher education investment in States, in which fundamental research is not located, is reinforced by the out-migration of higher education graduates to other States which lie closer to the technology frontier and offer greater labour market perspectives for highly skilled individuals.²⁰⁸

Furthermore, in technologically developed countries, higher education is not only a prerequisite for growth because it drives innovation, but also because higher education helps to turn these innovations into products. High-tech production processes are very complex and are most effectively co-ordinated by university level educated individuals. As high-tech production processes are initiated by investment in physical capital, investment in higher education may trigger additional investment in physical capital. Thus, physical capital and human capital “formed” at universities are complements in the modern production of technological goods. Therefore to a certain extent investment in higher education also drives investment in physical capital.²⁰⁹

2.2.2.2 Externalities on growth via public goods and institutions

In addition to its impact on innovation, higher education influences economic growth and development positively via a second channel. This second channel is the impact of higher education on the institutions, which are a prerequisite for the process of economic growth and development, and on other national public goods such as the general state of health of the population or the income distribution. The influence of higher education on these institutions and public goods is very slow and gradual, and only comes into effect long after the student has graduated from an institution of higher education. This effect is very long lasting, especially as the behaviour modifications brought about through higher education are life long, and even passed on to the next generation via parenting. These long-term behavioural changes drive the

²⁰⁵ *Acemoglu, Aghion and Zilibotti* 2002.

²⁰⁶ *Vandenbusche, Aghion and Costas* 2004 and *Aghion, Boustan, Hoxby and Vandenbusche* 2005.

²⁰⁷ *Aghion, Boustan, Hoxby and Vandenbusche* 2005.

²⁰⁸ *Aghion and Howitt* 2006 p. 296 ff.

²⁰⁹ See the seminal contribution of *Acemoglu* 1996 and *Acemoglu* 1998.

development of the political and civil society processes within a nation that are often a necessary prerequisite for sustainable economic growth

There are many micro-econometric studies measuring the impact of higher education on specific aspects of the institutional framework, such as its impact on civil society etc. These effects are relevant, not only as may be expected in developing countries, but also in OECD countries.²¹⁰ The results of these micro-econometric studies have been used to simulate the overall effect of higher education on growth. The effect has been found to be very important, especially in the long-term.²¹¹ To illustrate the foundation for this overall effect, the different positive effects of higher education on institutions and public goods are briefly summarised here.

Higher education causes changes in behaviour with regard to health. This change in behaviour extends beyond the improved state of health of the individual graduate alone. Higher education graduates also influence the state of health of their partner and children.²¹² Better individual health enjoyed by higher education graduates influences the overall productivity of a society. Through its positive impact on health, higher education increases overall life expectancy, which in many countries also increases productivity. In OECD countries, however, increases in life expectancy due to better health are over-compensated by the lower fertility rates of graduates. Therefore, higher education's impact on individual health may have an ambiguous impact on societal welfare. On the one hand, lower fertility rates increase GDP per capital in the short term because women have more time to spend in the workforce. However, on the other hand, they may reduce productivity in the long-term, as the share of the population of working age is decreasing.²¹³

In addition, the quality of the civil society apparatus crucially depends on higher education. Higher education influences the democratic political system, the rule of law and political stability. These are all public goods as they are enjoyed by the whole population. In addition, they foster general economic activity and increase the economic growth rates experienced by all citizens, companies and industries. Higher education graduates vote with a higher frequency, and they place a much higher value on freedom of speech and political information than citizens without a

²¹⁰ See e.g. an overview of the microeconometric studies in *Bynner and Egerton* 2001 or *McMahon* 2007.

²¹¹ *McMahon* 2007 p. 277 finds an average total return of 30% to a bachelor's degree in the United States.

²¹² *Grossmann and Kaestner* 1997 and *Grossmann* 2005.

²¹³ *McMahon* 2006 p. 16.

degree in higher education.²¹⁴ In addition, graduates also donate more money to charitable and political institutions.²¹⁵

Worldwide, inequality in income distribution tends to be correlated with less economic development.²¹⁶ However, this is also the case in highly developed countries such as Germany, where the income differential between higher education graduates and employees with secondary schooling is high. Increased levels of higher education amongst the population may help to reduce this inequality, by equipping larger cohorts of young graduates with the necessary skills to participate in the labour market. Thus, increasing investment in higher education theoretically prevents the income differential from rising, and also fosters the economic growth process via all the other external benefits it generates. Notably, this positive effect depends crucially on equal access to higher education for all secondary school graduates.²¹⁷ As has been argued above, the design of higher education financing plays an important role in guaranteeing equal access to higher education.

2.2.2.3 Spatial distribution of higher education externalities

The external returns to higher education do not only have a time-dimension but also a geographical dimension. If graduates move away, their positive externalities follow. For many governments financing higher education, the various positive externalities of higher education may be overshadowed by one negative externality: local geographical distribution of the benefits. The external returns to investment in higher education mostly arise from the interaction of higher education graduates with other colleagues in the work place, with family and friends during leisure time, and with other members of civil society while participating in the activities of civil society. Spatially, the positive externalities generated by higher education mostly arise in the locations where the graduate interacts with these various groups. With a high probability, this location is centred around the main residence of the graduate. Even positive externalities caused by innovations, which are of the type most likely to spread nationally and even internationally, also have a more concentrated positive regional effect. For example, even though the innovations of the computer industry increase productivity, and thus growth, all over the world, areas where

²¹⁴ *Dee* 2003, *Bynner and Egerton* 2001 and *Keller* 2006 all show empirically that higher education impacts positively on democratic participation and civil society. *Keller* 2006 shows that investment in higher education with a ten year lag is highly significant to explain democratisation. *Acemoglu, Johnson, Robinson and Yared* 2005 on the other hand do not find a significant impact of higher education on democracy.

²¹⁵ *McMahon* 2006 p. 19-20.

²¹⁶ *McMahon* 2007 p. 5.

²¹⁷ *Psacharopoulos* 1977.

clusters of innovative companies are located, like “Silicon Valley” in California, especially benefit in terms of jobs creation, tax revenues etc.²¹⁸

The empirical evidence on the spatial distribution of the returns to higher education appears scarce. *Konegen-Grenier, Plünnecke et al.* 2006 analyse the spatial distribution of externalities in Germany, on the basis of data on the distribution of tax revenues paid by German graduates. Tax revenues in Germany are shared between the Government in the State of Residence, the Federal Government and the other States, via a fiscal equalisation scheme. Despite these sharing mechanisms, more than 50% of the external benefits generated by higher education still remain in the graduate’s State of long-term residence.

Given the fact that the positive externalities of higher education are much more varied than just increased tax returns, this measure of the social benefits retained in the State of long-term residence is probably biased downwards. In addition, higher education increases the labour market mobility of its graduates. Therefore it may cause graduates to migrate to other countries which offer higher wages and better labour market conditions for their skills.²¹⁹ Outbound migration creates a negative externality for the country of origin because the positive externalities of higher education occur in other constituencies, while all the costs of its provision have been borne nationally. Thus, the main risk for countries investing in higher education is that their graduates will move abroad.

This short overview of the private and social returns to investment in higher education has shown that higher education generates important social benefits. Scholars are still engaged in the project of accurately modelling and measuring the exact nature and extent of these social benefits. Nevertheless, there is sufficient theoretical understanding and empirical evidence of the social returns to higher education, to state that investment in higher education is crucial for economic growth and development in countries with a high level of technological development such as Germany and the other European Union Member States. Increasing investment in higher education, whether by introducing tuition fees, or by increasing public investment in higher education, will with a high probability have a positive impact on growth, via all the different channels analysed above. However, if graduates move, higher education externalities move with them.

²¹⁸ For the „cluster“- theory, see *Porter* 2000.

²¹⁹ *Aghion and Howitt* 2006 p. 296 ff.

2.2.3. Overall demand for higher education not affected

Finally, the impact of the tuition fee legislation on demand for higher education will be analysed. Their impact on demand for higher education is important in two respects. First, the overall demand of higher education co-determines the overall output of higher education graduates, which are becoming scarce in the German economy. Secondly, the social composition of the student body is important in its own right as equality is included in the constitution as a fundamental right. Therefore, in the following section the discussion of the impact of the German tuition fee legislation on the individual demand of students from lower socio-economic backgrounds will be the focus of the final part of the economic impact assessment.

In order to conduct a normative assessment, the impact of tuition on the demand for higher education is as important as the impact on the supply of higher education. Tuition fees increase the price of higher education for the individual student. However, it seems very unlikely that the moderate price increase of € 500 a semester will have a strong effect on demand for higher education. This is because an investment in higher education yields high private returns to the individual. These returns take the form of both: private market returns to higher education; and private non-market returns to higher education.²²⁰ Both these aspects are discussed below in turn.

Private market based returns for investment in higher education stem from the increased incomes that graduates of higher education institutions earn in the labour market.²²¹ In addition to higher labour market income, graduates of higher education often also enjoy greater job satisfaction.²²² *Psacharopoulos and Patrinos* 2004 compare the private returns from higher education according to regions of the world and GDP level. This comparison shows that the return from higher education is positive for all groups. The minimum rate of return in the OECD is 8.5%.²²³ The difference in returns decreases with increasing levels of development and increasing levels of education.²²⁴ In addition to higher wages and higher job satisfaction, graduates enjoy many non-

²²⁰ Compared to workers who have only completed upper-secondary and post-secondary non-tertiary education, tertiary education has led to a wage premium of on average 49% over all types of tertiary education in the whole population between 24-65. *OECD* 2006 Table A9.1a.

²²¹ *Card* 1999.

²²² *Becker and Lewis* 1992, chapter 7, show that the private financial return to many postgraduate programmes in higher education is quite low. But these low private returns do not seem to decrease the demand for such postgraduate programmes. This apparent paradox is explained by high non-financial returns to postgraduate training in form of higher job satisfaction.

²²³ *Psacharopoulos and Patrinos* 2004.

²²⁴ Higher education does not only increase the productivity of higher education graduates, thus leading to higher wages, but also creates positive spill-over effects in the work place. These spill-over effects arise from informal and formal interactions between graduates and less qualified employees in the work place. Interaction in the work place also increases the productivity of less qualified employees and thus subsequently their wages. The existence of these spill-over effects has been empirically confirmed, but their extent still remains uncertain. Compare *Sianesi and Reenen* 2003 p. 160. *Moretti* 2003 estimates productivity spill-overs in a general

market benefits from their higher education e.g. better state of health and more self-determination in family planning. These are the individual benefits, which in the aggregate form the above described positive externalities of higher education.

Assuming that the crowding out effect is low and students are rational, students will be willing to invest private resources of up to € 500 per semester into their higher education on grounds of private financial and non-market returns. In addition, students also enjoy the consumption benefits of going through the process of higher education. It is well known that at least in some respects, the German system of higher education is supply constrained. There are more applicants than places, and a high percentage of places is allocated by a central agency on the basis of merit. Even though it is still too early to identify the effects from the data empirically, the existence of excess-demand, in combination with a price below the returns to higher education, supports the conclusion that the introduction of tuition fees should not significantly influence demand for higher education. Empirical evidence from other countries which have introduced tuition fees does not appear to show a clear impact on the demand for higher education following the introduction of changes in the system.²²⁵

However, even if overall demand remains relatively constant, the demand of students from lower socio-economic backgrounds to the price increase is especially critical. If tuition fees have a stronger impact on their demand than on the demand of students from average or higher socio-economic backgrounds, then tuition fees will likely harm equal access to higher education. Therefore, the reaction of students from lower socio-economic backgrounds to the introduction of tuition fees is analysed carefully in the following section.

2.2.4. Socio-economic composition of the student body

As already mentioned in the introduction to the thesis, ensuring equality of opportunity in attending higher education is one of the main goals of higher education policy in Germany. The demand shown by children from lower socio-economic backgrounds for higher education is much lower than the demand of children from average and higher socio-economic backgrounds. There is a strong correlation between parental income and attendance of higher education, which shows in the following statistics. The first hurdle faced by children from lower socio-economic backgrounds to entering higher education is to complete the voluntary part of secondary education. In Germany, mandatory schooling ends with the age of 14. Having reached this age, pupils may stay on in school to obtain further degrees of secondary education. Usually, the

equilibrium model based on US census data. He finds significant evidence for the existence of the productivity spill-overs but cannot determine their exact amount due to methodological problems p. 46-47.

²²⁵ *Teixeira, Johnston, Rosa and Vossensteyn* 2006a p. 348.

highest degree of secondary education, the *Abitur*, is required in Germany to enter higher education. Some universities also admit students with other, lower qualifications, such as degrees from vocational training, but this way into higher education is still the great exception.²²⁶

Only 46% of children, whose father does not have a higher education degree, stay on in school after the age of 16. In contrast, 88% of all children, whose father has obtained a higher education degree, finish the optional part of secondary education.²²⁷ Even among the children, who attain the *Abitur*, the educational level of the father greatly influences further educational choice. Only 50% of high school graduates, whose father has no higher education degree, attend university. Meanwhile, 83% of all children with *Abitur*, whose father has a higher education degree, enrol at a university.²²⁸ Many critics of tuition fees believe that this inequality is predominantly due to parental means differences, with less educated parents lacking the necessary resources to cover the costs of higher education.²²⁹ Such critics fear that these tendencies will be aggravated by the introduction of tuition fees. Furthermore, they doubt that income-contingent loans are an effective way to prevent this.

The impact of parental income on student demand for higher education has already been the subject of some empirical research. According to *Carneiro and Heckman* 2002, the observed positive correlation between parental income and attendance at higher education may occur for two reasons. Either, it is dependant on short term credit constraints, or it is caused by long-term effects of the family background on children's preparation for higher education and preference formation with regard to higher education. In regards to the former, credit constraints arise at the time of the decision to enrol for a higher education degree if low parental labour market income and insufficient social transfers cannot be compensated for by providing access to loans. In regards to the latter, if family background is important for preparation for and preference with regard to higher education, then parental income is not the true reason for unequal opportunities, but is only correlated with the true causes of low demand for higher education of children from lower socio-economic backgrounds.²³⁰

²²⁶ See *Kultusministerkonferenz* 2006 for the prerequisites that applicants without *Abitur* have to fulfil.

²²⁷ The educational attainment of the father is used as the closet proxy to socio-economic status. See *Bundesministerium für Bildung und Forschung* 2006 p. 8.

²²⁸ *Ibid.* p. 8.

²²⁹ E.g. Prof. Rolf Dobischat, president of the association of the German Student Unions. See *Pressemitteilung des Deutschen Studentenwerks*, 9 September 2008, www.studentenwerke.de/presse/2008/090908a.pdf.

²³⁰ *Carneiro and Heckman* 2002 p. 705 ff.

Both factors probably explain part of the low demand and thus have to be taken into account when designing higher education finance. The two different root causes for the inequality of opportunity, which we see in Germany, both interact differently with higher education finance. To the extent that credit constraints cause the low demand exhibited by students from lower socio-economic backgrounds, tuition fees will aggravate the problems of access and income-contingent loans are a way to offset this effect. If on the other hand, parental background is the main reason for the low demand shown by children from lower socio-economic backgrounds, then tuition fees will have no influence on the problem, and income-contingent loans will also have no influence. Their causes and possible policy solutions are outlined in the following subsections.

2.2.4.1 Student loans cannot compensate for the effect of socio-economic background on access

To discuss the impact that family background has on a student's attainment of higher education, the assumption of consumer sovereignty made in the human capital model has to be dropped. The human capital model assumes that potential students undertake a rational cost-benefit analysis when deciding whether or not to attend higher education. This model seems to be quite realistic with regard to students from middle class or upper class socio-economic backgrounds. These students may be risk-averse, and thus refrain from borrowing on the traditional capital market. However, if they have access to an income-contingent loan, they should take out the loan to enrol in higher education.²³¹

With regard to students from lower socio-economic backgrounds, the assumptions of consumer sovereignty made in the human capital model do not hold as well. This remains the case, even when the model is extended to include uncertainty. As the social environment provides role models and sets reference levels, the aspirations of children are strongly determined by their social environment.²³² Additionally, the social environment also determines how well informed children become about the benefits of higher education. Having contact with individuals who have finished higher education and can provide first hand experience and information about it, is crucial to raising children's aspirations and transmitting information. Children from lower socio-economic backgrounds are much less likely to have these contacts than children with parents who have obtained a higher education degree themselves. It is this combination of poor information and low aspirations, also on parts of their parents, which causes children from lower socio-economic background not to attain the same level of secondary schooling as their peers

²³¹ See Barr 2004a p. 327 for the reasons why the human capital model fails.

²³² Callender 2006 p. 112-113.

from other backgrounds.²³³ Additionally, as already mentioned with regard to Germany, even if they have completed secondary schooling, they have a lower propensity to go on to higher education degrees.²³⁴

The enrolment decision is in reality influenced by variety of cultural, social and economic factors.²³⁵ These myriad factors prevent students from lower socio-economic backgrounds from making an informed and rational decision, in the sense required in the human capital model. The main determinants are lower secondary school attainment, lack of aspiration, lack of information and debt aversion.²³⁶ In addition to influencing access to higher education directly, these factors are also interconnected. Low educational attainment by children from lower socio-economic backgrounds influences their access to higher education. In addition, low educational attainment is caused by lacking aspiration and information, both of which also influence access in themselves.

In addition, the social background influences the perception of children from lower socio-economic backgrounds with regard to borrowing to finance their higher education. These potential students are even more reluctant to borrow, even though it would be rational, than their peers coming from a more highly educated family background. This phenomenon is known as debt-aversion. The debt-aversion displayed by students from lower socio-economic backgrounds is caused by a different perception of the cost and benefits of higher education.²³⁷ From a behavioural economics perspective, the perception of the cost and benefits of higher education may differ between students according to their parental incomes. This is because parental income serves as reference level against which students compare the cost of higher education.²³⁸ Thus, relative to their family income, higher education is perceived as more expensive by poor students than by richer students. Some surveys have shown that students from lower socio-economic backgrounds have different perceptions of the risk of debt and the cost of higher education, compared to students from more affluent backgrounds.²³⁹ Despite this, it is still unclear from an empirical point of view to what an extent this different perception of debt and cost has an effect

²³³ *Vereinigung der Bayerischen Wirtschaft e.V.* 2007 p. 31 and 51-52.

²³⁴ *Callender* 2006 p. 115.

²³⁵ *McDonough* 1997 shows in a study of US college-bound high school graduates that family background, peer groups and schools influences colleges choice of graduates and contribute to the persistence of social inequalities.

²³⁶ *Barr* 2004a p. 327, *Callender* 2006 p. 111 ff.

²³⁷ *Vossensteyn and De Jong* 2006 p. 224 ff.

²³⁸ *Ibid.* p. 227-228.

²³⁹ *Callender* 2006 p. 112 ff.

on students' actual enrolment choices.²⁴⁰ It is possible that debt-aversion is only correlated with family background, but that family background per se via its influence of preferences in the first place prevents children from entering higher education.

A second problem which has been empirically observed is that people are especially sensitive to potential losses and place a higher value on things they already possess than those that they might acquire in the future. This phenomenon has been called loss aversion.²⁴¹ As higher education is risky, loss aversion might lead students to overestimate the risk of higher education and to underestimate its benefits.²⁴² Due to the reference level effect described above, loss aversion could further aggravate the problem of debt aversion, leading to a greater unwillingness amongst students with a lower socio-economic status to take out a student loan. Such students may have a higher preference for immediate returns and thus prefer immediate labour market returns to future uncertain returns to higher education.²⁴³ The empirical impact of loss aversion is also still unclear.

To the extent that the inequality of opportunity we see in Germany is caused by parental background and not credit constraints, changes in the financing of higher education will not influence the demand for higher education shown by children from lower socio-economic backgrounds. The complex interaction between cultural, social and economic factors has yet to be perfectly understood by the various social science disciplines. Nevertheless, it seems safe to infer from the existing evidence that it is very hard, very expensive, and maybe even impossible to completely compensate for a disadvantaged upbringing via public policy. As the disparity shown amongst children due to parental background can already be measured in the early years of childhood, instruments to tackle the problem would also have to target the early years of childhood development.²⁴⁴ One option is to increase the funding available to schools which educate a high proportion of children coming from lower socio-economic backgrounds.

Betts and Roemer 2001 and *Waltenberg and Vandenberghe* 2005 respectively show in simulations the enormous amounts of reallocation of resources which would be necessary to create equality of

²⁴⁰ *Vossensteyn and De Jong* 2006 p. 236.

²⁴¹ *Kahneman and Tversky* 1970.

²⁴² *Vossensteyn and De Jong* 2006 p. 228-229.

²⁴³ *Ibid.* p. 229-230.

²⁴⁴ *Barr* 2004a p. 327. But also quality of academic preparation is important for the success of students from low socio-economic backgrounds *Carnevale and Rose* 2003. To tackle this problem, the German federal government has started on 9th of January 2008 a programme to increase the overall level of skill in the German economy, the so-called „Qualifizierungsinitiative“ (see www.bmbf.de/de/12042.php). The planned measures include smoothing the transfer from school to higher education for children from lower socio-economic backgrounds and scholarships for graduates from vocational training who intend to take a higher education degree.

opportunity between white and black children in the United States; and between children from different socio-economic backgrounds in Brazil. In addition to increasing the quality of school education to compensate for the lack of parental education, children's aspirations must be altered and increased by providing information and access to higher education graduates. Another way of reducing the costs of higher education for disadvantaged children would be by providing scholarships based on need and parental means. However such scholarships are only likely to have a significant effect if they are implemented together with the other policy changes.

In contrast to the prevailing public opinion but in line with the argument just discussed, the empirical literature on the German situation draws the conclusion that unequal access opportunities to German higher education is caused by family effects and not by credit constraints. In a discrete choice model, *Lauer 2002* empirically analyses the factors which influence an individual's decision to participate in higher education. She finds that by far the most important variable driving higher education participation is social background. In addition, she finds that the probability of enrolling in higher education depends positively on labour market expectations and the expected chance of receiving BAföG.²⁴⁵

By directly estimating the impact of financial aid in Germany on enrolment rates, *Baumgartner and Steiner 2005* and *Baumgartner and Steiner 2006* test whether credit constraints prevent students from lower socio-economic backgrounds from attending university. *Baumgartner and Steiner 2005* evaluate the effectiveness of the first reform of BAföG in 1990. In this first reform, BAföG was changed from a 100% loan, to a 50% loan and 50% grant. For students receiving BAföG, this policy change decreased the cost of higher education significantly. In contrast to what perhaps may have been expected, *Baumgartner and Steiner 2005* cannot find a significant increase in enrolment rates following from this reduction in the cost of higher education. *Baumgartner and Steiner 2006* then evaluate the follow-up reform of 2001 which increased the number of households eligible for BAföG and the amount of subsidy received by those eligible. They find that the BAföG-reform of 2001 also did not have a significant impact on enrolment rates.

In line with the previous results, *Vandenberghe 2007* finds in his most recent study that there is no evidence for credit constraints barring access to German higher education. Controlling for the observable characteristics of social and family background and for family fixed effects, he found the impact of parental income on higher education attendance is insignificant.²⁴⁶ These papers all

²⁴⁵ *Lauer 2002* p. 447.

²⁴⁶ *Vandenberghe 2007* p. 18.

support the conclusion that in Germany credit constraints are not the main obstacle impeding students from lower socio-economic backgrounds from accessing higher education. Within their given preferences at the time of graduation from high school, the majority of high school graduates can implement their first best choice with regard to their further education. This result is also consistent with the general observation that compared to other countries which charge tuition fees, the German no tuition policy has not lead to a higher participation rate amongst students from lower socio-economic backgrounds.²⁴⁷ These empirical results for Germany are also generally consistent with the empirical results for other countries. In many other countries, inequality of opportunity with regard to higher education attainment is also not caused by the existence of credit constraints.²⁴⁸

According to the empirical evidence, unequal opportunities in Germany seem to be determined primarily by family background and not by short term credit constraints. Thus, the introduction of tuition fees will not have a significant impact on the majority of high school graduates' demand for higher education. Instead, programmes to enhance the quality of school education in disadvantaged areas, to raise student aspirations, and the introduction of need-based scholarships for schools and higher education institutions would be more appropriate policy levers. To the extent that unequal access is a product of family background, the introduction of tuition fees backed by income-contingent loans in Germany will not aggravate the problem of unequal opportunities and thus income-contingent loans will also not solve it.

Given that family background seems to explain most of the unequal access seen in Germany, the question arises, whether income-contingent loans are necessary to back up tuition fees at all. However, the empirical evidence does not allow a conclusion that income-contingent loans are superfluous.²⁴⁹ Instead, the empirical evidence may very well imply that the German programmes to alleviate credit constraints with regard to living cost, which were until 2005 in Germany the main cost of higher education, have already removed all the existing credit constraints. By introducing tuition fees, the German State legislators could have created new financial barriers to access. By backing up the charging of tuition fees with the provision of income-contingent loans, the German State legislators thus aim to prevent tuition fees from creating such new financial barriers to access. The next section analyses the causes for credit constraints, discusses potential solutions and derives a reference solution developed from the literature on credit constraints. The

²⁴⁷ Ziegele 2006 p. 271.

²⁴⁸ Empirical studies for the Netherlands have shown that students' demand of higher education is quite price inelastic with regard to tuition fees *Vossensteyn and De Jong* 2006 p. 221.

²⁴⁹ *Chapman* 2005 p. 69 in regard to the same observation in Australia.

effectiveness of the actual legislation in Germany to remove new credit constraints is finally analysed by comparing the German system of income-contingent loans against the reference solution for removing credit constraints.

2.2.4.2 Student loans prevent new credit constraints through tuition fees

The second explanation given for the unequal demand for higher education exhibited by both groups of students starts from the observation that students from lower socio-economic backgrounds often lack sufficient resources to pay tuition fees and living cost. Therefore, in the absence of State funding or scholarships etc, to attend a higher education institution, they would have to take out a loan. Unfortunately depending on the design of the loan contract, taking out a loan can be quite risky and prospective students may not be willing to take on that risk. In addition, they would first have to find a bank willing to offer them credit even though their true talent and motivation is not observable and given that they probably cannot provide collateral. The risk of higher education for the individual in combination with informational capital market imperfections is the classic explanation given for the low participation rates seen by children from lower socio-economic backgrounds. Though private returns to higher education are positive on average, students face considerable risks and uncertainty regarding their individual returns to higher education.²⁵⁰ This fact was first pointed out by *Friedman* 1955.

This uncertainty arises due to many different factors. As higher education has in many respects the character of an experience good, students are not perfectly able to predict their own talent and true interest in a chosen field of study before they have actually undertaken their studies. In addition, students are uncertain with regard to the future state of the labour market and their chances of getting a well-paid job after finishing their studies.²⁵¹ This overall level of uncertainty may lead risk-averse students to make a rational decision to not take out debt, rather than to acquire higher education.²⁵² Thus, students' risk-aversion leads them to invest sup-optimally in higher education. The risk of the investment in human capital is aggravated by the nature of human capital. As human capital is intangible and inalienable, the investment once made is irreversible and cannot be sold after graduation in the case that students no longer wish to use the human capital they have acquired.²⁵³

For the individual, higher education is an investment in human capital that will only pay off later in life. As long as higher education is a profitable investment, students should in theory be able to

²⁵⁰ *Psacharopoulos* 2004.

²⁵¹ *Chapman* 2005 p. 5.

²⁵² *Barr* 2004c p. 270.

²⁵³ *Ibid.* p. 270.

finance their higher education costs in the capital market. However, the fact that human capital cannot be collateralised, because it cannot be separated from its owner, is a problem for both the student and the banks when they consider whether they should provide finance for the cost of higher education. Financial intermediation by capital markets is impeded by the imperfect information of both borrowers and lenders. As the majority of students cannot provide collateral, these informational asymmetries may cause adverse selection in the capital market, leading in extreme cases to market failure.²⁵⁴

Market failure arises because lenders in free capital markets cannot reliably predict the future wage of an individual student. This future wage depends, in addition to labour market circumstances, on the student's natural ability for a chosen field of study, and on her efforts to study and to work hard. These crucial parameters can only be insufficiently approximated by the banks according to parameters such as school results, the reputation of the university a student has been admitted to, and family background.²⁵⁵ Consequently, the average interest rate charged on student loans will be too high for the good risks and lead them to drop out of the market. As banks anticipate good risks dropping out, they therefore have to increase the interest rate to cover the higher expected cost of default. This starts the process of adverse selection as more potential customers drop out given the new conditions. As a result, the market might collapse. At the very least the amount and price of the student loans provided would be suboptimal. Student loans would be restricted to low risk customers, e.g. students who can provide collateral, and students admitted to a prestigious university. Under such conditions, students from lower socio-economic backgrounds, even if they would be willing to take out a loan, would likely not always get one.²⁵⁶

To solve the problems arising from inefficient capital markets, state intervention needs to take into account the above causes of the problem of credit constraints. Credit constraints arise from

²⁵⁴ Barr 2001 p. 176 -178. For the role of asymmetric information causing market failure see Akerlof 1970.

²⁵⁵ Barr 2004c p. 270.

²⁵⁶ Chapman 2005 p. 11. In Germany, private banks have recently started to offer student loans without requiring collateral. This development seems to falsify the theoretical prediction of market failure and contradict the theoretical analysis of the market for student loans. It is important to note first, that these student loan schemes are newly established. No evidence of their long-term profitability for the banks is yet available. The profitability will determine the conditions according to which these loans will be available in the long-term. In addition, many banks offering student loans are publicly owned savings banks (*Sparkassen*). Savings banks in Germany have a mandate to further the common good. Therefore there may already be a subsidy included in the loans provided by the savings banks. In addition, as long as they have to be repaid in fixed instalments like mortgages, these private loans cannot solve the problem of risk-averse students. Only if private student loans are available in the long run without discrimination between high risk and low risk students at favourable conditions, would the existence of a private market for student loans call into question the need for public provision of income-contingent loans.

asymmetric information with regard to a students' ability and effort, human capital's intangible nature and the insurance problem which arises due to students' uncertainty about their individual returns from higher education. The academic debate surrounding the alternative solutions to this problem has identified income-contingent student loans as the best solution.²⁵⁷ The idea of income-contingent student loans was first introduced into the discussion by *Milton Friedman* in the fifties and has since been advocated by various other economists.²⁵⁸ The earliest contributions were made by *Friedman* 1955, *Peacock and Wiseman* 1962 and *Prest* 1962. Today, the idea has won many more supporters and it has been implemented in Australia, New Zealand, the UK and most recently also in Germany. The most well know proponents of the idea of income-contingent loans are *Nicholas Barr* (*Barr* 2004c) and *Bruce Chapman* (*Chapman* 2005). Public provision of loans regardless of individual risk solves the problems of adverse selection due to asymmetric information and makes collateral superfluous. Income-contingent repayments solve the problem of students' reluctance to borrow by insuring students against low earnings and taking away the risk of default.

There are three other alternatives to income-contingent student loans which may be used to finance higher education: mortgage-type loans backed by a government guarantee; a graduate tax; and human capital contracts. A complete discussion of advantages and disadvantages of these alternatives is provided by *Oosterbeek* 1998 and *Barr* 2004c. They identify publicly provided income-contingent loans as the best solution to the problem of credit constraints because the alternatives all have definite disadvantages.²⁵⁹ Mortgage-type loans are loans provided by private banks backed by a government guarantee. They have to be repaid in fixed instalments within a given time span. Their disadvantage is that they do not offer students insurance against low returns to higher education because they have to be repaid irrespective of the debtor's income. In addition, they are very expensive for the government. This is because private banks have no incentive to chase repayments by students but prefer instead to take recourse to the guarantee in case of default.²⁶⁰ A graduate tax would oblige graduates to pay a special tax, calculated as a certain percentage of their income for the rest of their life. Since the amount paid in such a scheme does not bear any relation to the actual cost caused by the graduate, it may be considered unfair.²⁶¹

²⁵⁷ See also *Barr* 2004a p. 324.

²⁵⁸ *Woodhall* 2006 gives an overview of the development of the concept of income-contingent loans.

²⁵⁹ *Barr* 2001 chapter 12, *Chapman* 2005 and *Oosterbeek* 1998 are the most important overview of income-contingent student loans.

²⁶⁰ *Chapman* 2005 p. 16 ff.

²⁶¹ *Ibid.* p. 27 ff.

The last option would be human capital contracts. Human capital contracts are defined as private financing contracts granting credit to students to finance their studies. In return, issuers receive a predefined part of the student's future income for a certain amount of time.²⁶² Although theoretically attractive, it remains uncertain whether these human capital contracts would be viable in practice. They also raise a potential adverse selection problem, as students with high earnings potential would have an incentive to get financing via the credit market if they anticipated to be pooled with low-earning graduates, which would increase the percentage of income to be paid by each member of the scheme.

In addition, if a system of progressive taxation continued to exist while human capital contracts were introduced, high income earners who elected to use such a system would be "taxed" twice. The double burden on high income earners may also be regarded as unfair. Income-contingent loans are theoretically the best solution to the problem of credit constraints and the only one which has already been practically implemented on a large scale. This thesis thus adopts income-contingent student loans as suggested by *Barr* and *Chapman* as the reference solution against which to evaluate the German system of financing tuition fees.

On the supply side of the financial market, ensuring the availability of loans to students regardless of individual risk or financial background is the main problem.²⁶³ To remove any financial barriers to accessing higher education, all students admitted to a degree should have access to loans. The accessibility of loans is determined by the amount a student can borrow and the definition of eligibility to the income-contingent loans system. The loans should cover tuition fees and realistic living costs. Loans covering the full expenses of higher education are preferable to loans only covering part of the expenses because they reduce the need to work part-time. Even though beneficial effects of part-time work cannot be denied, as students assume responsibility and acquire additional skills, many students spend the majority of their working time in jobs requiring low skills with the sole aim of earning money to cover their living cost. If full costs are covered, students can study full-time, which is usually more effective than studying part-time and working part-time. Secondly, every student, who has been admitted to a publicly financed university, should be entitled to a full student loan without having to provide collateral.²⁶⁴ Thus the first two characteristics which will be incorporated into our reference solution for student loans are:

²⁶² This concept was developed by *Palacios* 2002.

²⁶³ *Barr* 2004a p. 326.

²⁶⁴ *Ibid.* and *Chapman* 2005.

- Loans provided by the state available to all students admitted to an approved institution of higher education; and,
- Coverage of full tuition fees.

On the demand side, the main factor giving rise to underinvestment is the great variance seen in the individual returns from higher education. The variance of returns results in student uncertainty with regard to their returns from higher education. If students are risk-averse, then given the uncertainty, they will rationally refrain from borrowing to attend university. Risk-averse students will only borrow if they can insure themselves against the risks of investing in their higher education. Such insurance is provided by making repayments on student loans contingent on the graduate's net-income. Making repayments contingent on graduate's income level removes the risk of default for the borrower.²⁶⁵ This reduces risk for borrowers and in the end effectively exempts students, who do not benefit from their higher education, from the requirement to pay tuition fees. The insurance might also cause problems of moral hazard but it is unlikely that they are going to be very severe.²⁶⁶

By transferring resources from the time of active labour market participation to the time of studying, income-contingent loans allow students to smooth out consumption, and in this case also investment spending, over their life-cycle. Assuming decreasing marginal utility of income, consumption smoothing maximises utility. The same principle is realised by the pension system, which transfers resources to the later years in life.²⁶⁷ Publicly provided income-contingent loans can thus be interpreted as giving public support to consumption smoothing over the life-cycle. From this perspective, publicly provided student loans are simply the application of an old principle of the welfare state to another area of life.²⁶⁸

There are several ways in which repayments can be made contingent on graduates' net income, and thus provide insurance against low earnings. The best form of income contingency will require that repayments only start if the graduate's net-income exceeds a certain minimum threshold. This is often defined as the mean net-income of individuals who did not attend higher education.²⁶⁹ In this case the costs of higher education are then financed out of the extra returns

²⁶⁵ Full insurance would include insurance against the loss of earnings itself leading to replacement of lost income.

²⁶⁶ *Oosterbeek* 1998 p. 237-238 concludes that income-contingent loans are the best way to finance tuition fees even though they cause moral hazard among low income earners.

²⁶⁷ *Barr* 2001 p. 186.

²⁶⁸ *Barr* 2004a p. 327.

²⁶⁹ *Vandenbergh and Debande* 2006 p. 435.

to higher education.²⁷⁰ Provided that the income exceeds this threshold, instalments should then be calculated as a percentage of the income. Thus, instalments should vary with the net-income above a certain minimum threshold. As a consequence an individual's repayment period will vary depending on the net-income. Repayments should only stop if the complete loan including interest has been repaid, or the graduate retires or dies. This interpretation of income-contingent repayments automatically takes into account the varying capacity of graduates to repay depending on their net-income.²⁷¹ Thus, the further characteristics which will be incorporated into our reference solution are

- Income-contingent repayments calculated as percentage of income;
- No maximum repayment time span; and,
- A minimum income threshold for repayment.

To evaluate the effectiveness of the German loan systems with regard to preventing new credit constraints from arising, the German loan systems will now be compared to the just discussed reference solution. The comparison starts out with the discussion of the availability and provision of loans and then moves on to discuss income contingency of repayments.

First the requirement that the loan system should be open to all students regardless of their background needs to be discussed in the German context. In Germany, such a requirement may be considered superfluous. Until now, under German law, parents have been solely responsible for financing the private part of the costs of their children's higher education. The privately borne part of higher education finance used to be only the student's living costs during their first professional higher education degree. All the other costs of higher education were born by the taxpayer. The question whether, and to what an extent, parents should be responsible for financing the higher education of their children is a philosophical question. According to § 1610 German Civil Code (*Bürgerliches Gesetzbuch*), children, regardless of having reached the age of majority, have maintenance claims against their parents for the duration of their first post secondary degree.²⁷² Whether this maintenance claim also includes tuition fees has yet to be decided by a Federal Court and remains an open legal question.²⁷³ However, within the current system of German civil law, it seems very likely that should it come to court the claim will be found to also include tuition fees for the first degree. If this were the case, taken literally, the state

²⁷⁰ *Vandenbergh and Debande* 2008 p. 365.

²⁷¹ *Barr* 2004a p. 326.

²⁷² *Born in Rebmann, Säcker and Rixecker* 2002 § 1610 paragraphs 210 ff.

²⁷³ *Waldeyer and Waldeyer-Gellmann* 2007 argue that maintenance should include tuition fees.

would only have to provide income-contingent loans for covering tuition fees on a means-tested basis.

If the GFCC or the legislator did grant children a maintenance claim against their parents which included tuition fees, then the current publicly provided, non-means tested system of income-contingent loans might be unnecessary. In this case it would appear as though the state was taking over a family duty. This would mean overruling the subsidiarity principle and spending public resources without need. It seems that few students are actually prevented from studying by credit constraints in Germany. However, the 2003 survey of the economic and financial situation of German students revealed that the means-test used for the *BAföG* leaves many students without sufficient funds to cover their living costs.²⁷⁴ To earn at least part of their living costs, 63% of students work. By working, these students cover on average 26% of their expenses, but this percentage varies between individuals.²⁷⁵ If the same criteria for means-tested support were applied to the financing of tuition fees, it would be very likely that students, who have to work today to cover part of their living costs, would have to work even more in the future to cover part of both their living costs and the tuition fees. This would most likely aggravate the current German problem of excessively long study duration at University. Therefore publicly provided income-contingent loans covering tuition fees would probably assist an important number of students to devote more time to their higher education and to graduate more quickly. Thus, the existence of income-contingent loans would probably reduce the long average times spent at German universities, even if children do have a maintenance claim against their parents which includes tuition fees.

In addition, although the maintenance claim exists, children are, for very good reasons, usually very reluctant to enforce it in court. Thus, if parents are unwilling to support their child's pursuit of higher education, in many cases even a maintenance claim which included tuition fees would be insufficient to guarantee their children could attend university, because it would never be pursued. In such situations of intra-family conflict, a system of publicly provided loans would open up new options for those students who are not supported by their parents even though the parents might be financially able to do so. Instead of having to go to court and wait for the judgement, these students would have access to financial resources which would allow them to study independently from their family. Thus, even if parents could be forced by the courts to

²⁷⁴ *BMBF* 2003 p. 34.

²⁷⁵ *Ibid.* p. 34-35.

assume the higher education costs of their children, a system of income-contingent loans would have great advantages.

However the introduction of income-contingent loans may also have a negative effect on the financing of higher education. Shifting the responsibility for covering the cost of higher education to the individual, and opening up a way of meeting this responsibility, might cause a crowding out of parental support. The danger that parental support is crowded out is probably small given that many parents feel a strong obligation to support their children's education as far as possible.

Thus, introducing income-contingent loans means facing the reality that a significant proportion of parents are either unable or unwilling to offer sufficient support to finance the living expenses of their children while studying. Altogether, even if the Federal Courts do establish a maintenance claim against parents which includes tuition fees, the system of income-contingent loans should not be changed to a means-tested system. Especially for students whose family only just fails the means test, but whose parents do not support the idea of higher education, the system of income-contingent loans may be the only way available to them to finance their higher education.

Currently, Germans, EU-Citizens, recognised refugees, applicants for asylum and other foreigners, who have obtained their right to study at a German university by acquiring the *Abitur*, have the right to apply for a publicly provided income-contingent loan.²⁷⁶ The loans are provided by state owned banks, which are to some extent sheltered from the market and have the objective of furthering the common good. Thus, if graduate repayments are lower than expected, or the bank's refinancing costs become more expensive, the loan conditions will not have to be changed immediately or the provision of the loans stopped. Students can presently finance the full amount of their tuition fees for the standard period of study and additional four semesters. Living costs are not included in the system. This is a potential criticism from a policy perspective, because the need to finance living cost can constrain access as well as the need to finance tuition fees. However, as this section only discusses the introduction of tuition fees, this argument is less relevant to the discussion here, and thus will not be pursued. Thus, with regard to the first two criteria of the benchmark model, the German system of student loans can be considered well-designed. It enables all students irrespective of their financial situation to enrol in a higher education degree. Additionally, it cures the market failure in financial markets.

²⁷⁶ Student, who do not fulfil these prerequisites do not have access. See below 2.6.

On the demand side of the market for higher education finance, the market failure is mainly generated by the uncertain nature of the outcomes from higher education. This uncertainty deters risk-averse students from borrowing to finance their higher education. Income-contingent repayments remove the uncertainty surrounding individual returns from higher education. In the benchmark model, monthly repayments are calculated as a percentage of the monthly net-income starting as soon as the graduate's net-earnings exceed a minimum threshold. In the reference solution, the repayment obligation also only stops if the graduate earns less than the minimum threshold, has repaid the full amount, retires or dies. The design of the repayments in the German income-contingent student loans schemes differs somewhat from the benchmark model. Similar to the benchmark model, repayments in the German model only start from a minimum net-income. In contrast however, if a graduate earns more than this threshold, she repays the loan in fixed monthly instalments. The repayments are independent from her income and start from a minimum instalment of € 20-50 going up to € 150 per month. The whole loan must be repaid within a fixed time span of 20 or 25 years. Therefore, depending on the time which has elapsed since the loan was taken out, the minimum instalment may have to be adjusted to the remaining time span of repayment to ensure completing the repayments in the allotted time.

Regardless, even though they are not designed identically to the benchmark solution, the German income-contingent loans do also insure students against labour market risks. Thereby, they should somewhat reduce their reluctance to take out loans in order to attend university. All students, with the exception of those not eligible, have access to an income-contingent loan regardless of their individual risk or financial background. Therefore, the current German system of income-contingent loans removes the credit constraints of students entering higher education.

This conclusion has also been empirically confirmed by *Vandenberghe and Debande* 2008, who show in a simulation that income-contingent loans repaid in fixed instalments, do index the average probability of repayment quite well to the net-income of graduates.²⁷⁷ The definition of the income threshold determines the generosity of the insurance against labour market risk. Thereby, it determines an important part of the overall cost of the loan system. The higher the income threshold, the more expensive the system becomes.²⁷⁸ *Dohmen* 2005 estimates that at the given

²⁷⁷ *Vandenberghe and Debande* 2008 p. 381.

²⁷⁸ For a simulation of the impact of the income threshold on the cost of the system compare *Vandenberghe and Debande* 2006 table 6 and table 7.

income threshold of € 1060, 5% of the loans will not be repaid due to low income.²⁷⁹ The higher the income threshold is set, the lower the risk for the individual, and the more important the impact of the loan system becomes on the removal of credit constraints. To my knowledge there is no empirical research which analyses the optimal income threshold with regard to ex-ante removing credit constraints, under the assumption of given resources.

Therefore, although it does not perfectly correspond to the reference solution developed earlier, the German system of income-contingent loans nevertheless effectively removes credit constraints and thus removes the negative effects of tuition fees on the demand for higher education exhibited by students from lower socio-economic backgrounds.

2.2.5. Summary

The introduction of tuition fees backed by income-contingent loans in Germany has and will have multidimensional effects on the supply of, and demand for, higher education, as well as on the overall economic growth and development of Germany. Overall investment in higher education will, very likely, increase. However, there are some potential drawbacks from this conclusion. Admittedly, the potentially high cost of the system of income-contingent loans in the form of interest rate subsidies and administrative costs, and the possibility of crowding out of public support, endanger the positive effect on investment in higher education. The decentralised Federal structure of higher education finance may mitigate the crowding out problem to a certain extent. Thus, the overall impact cannot be predicted with great certainty, but will probably still be positive.

By increasing the rate of innovation and the provision of public goods, more investment in higher education furthers economic development and growth. This positive indirect impact will only be realised in the long-term and is comprised of many different positive effects. It is actually these indirect effects of higher education investment on development and growth which in the long run have the most important effect on higher education investment.

Given the high private market and non-market returns to investing in higher education, and the - compared to the returns to higher education - modest amount of tuition fees, general demand for higher education will probably not decrease significantly. Critical in determining the overall impact is the change in demand from students from lower socio-economic backgrounds. Here, in order to analyse the impact of the German tuition fees backed by income-contingent loans on the

²⁷⁹ *Dohmen* 2005 p. 29. Simulation of the cost of a repayment cap on the basis of the student population of Lower-Saxony.

demand exhibited by students from lower socio-economic backgrounds, its causes have first been discussed. Empirical analysis has established that the impact of family background on preference formation of children appears to be the main reason for the low demand shown by children from lower socio-economic backgrounds.

Compared to this impact, credit constraints due to a lack of financial resources, only play a minor role. Tuition fees and loan systems only have an impact on access to the extent that credit constraints actually influence access. To the extent that parental background determines access, tuition fees will not significantly influence demand for higher education. Subsequently income-contingent loans will not mitigate the problem. Even though parental background is responsible for most of the observed inequality of opportunity in Germany, an increase in the cost of higher education by tuition fees may still aggravate the problem at the margin. Therefore, the introduction of income-contingent loans should ensure that the existing inequalities in opportunity will not be aggravated.

To predict the effectiveness of the German system in preventing new credit constraints from arising, a benchmark design for the perfect income-contingent loan in order to remove constraints has been derived. The derivation of the reference solution of income-contingent loans in relation to credit constraint removal has established that the loans should be publicly provided, open to all students without collateral and cover full tuition fees. Furthermore, the repayments should be calculated as a percentage of income, no maximum repayment time span should be stipulated, and there should be a minimum net-income threshold above which repayment commences. With regard to the risk of taking out a loan, the level of the minimum threshold is decisive because it determines to what extent graduates are protected against having to repay the loan even if their income is low or zero. The height of the threshold thus determines the amount of the insurance effect, and also to a large extent the cost, of the system. For a given income threshold, the benchmark provides a model, compared to which no higher impact on reducing equality of opportunity can be reached without spending more resources.

As the current German system of income-contingent loans insures graduates against labour market risks by including a minimum income threshold, it has to be concluded that no higher impact on equality of opportunity can be reached for the given amount of resources spent. The German system of tuition fees backed by income-contingent loans therefore will not negatively impact on the goal of ensuring equal access to higher education. It compensates for credit constraints by the system of income-contingent loans. In addition, it will have no impact on

equality of opportunity, to the extent that it is caused by family background. Therefore, increasing investment in higher education via the introduction of tuition fees should not deter students from lower socio-economic backgrounds from applying to higher education. However, this result depends critically on the assumption that tuition fees remain moderately low. To assess the effects of the introduction of tuition fees and income-contingent loans in Germany, a normative benchmark of constitutional principles is now derived from the German constitution.

2.3 Normative benchmark of constitutional principles

In this section, a normative benchmark will be derived to evaluate the German tuition fee legislation. The German system of tuition fees and income-contingent loans are State measures and thus fall under German Constitutional law. Consequently, the normative benchmark will be derived from the objective values incorporated in German Constitutional law, most importantly the fundamental rights codified in the German Constitution. According to the GFCC, fundamental rights are not only subjective rights but also provide an objective order of values (*objektiv-rechtlicher Gehalt der Grundrechte*).²⁸⁰ This objective order of values does not only apply to the relation between individuals and the State but also to all areas of law beyond that. As objective values, fundamental rights have thus to be taken into account by the legislator and the courts when drafting or interpreting *any* legal norm, regardless of its area of law.²⁸¹ Through this general impact, fundamental rights guide legislation and adjudication to a much greater extent than “just” classically protecting individuals against state restrictions on their freedom. In addition to protecting individual freedom, fundamental rights thus provide normative commitments, which are interpreted as constitutional principles by *Alexy* and provide the normative foundation of the analysis in this thesis. The benchmark developed here is comprised of the principles of non-discrimination, equality of opportunity, investment in higher education and cost effectiveness. This section starts from the derivation of the normative benchmark. Then the impact of the legislation on the benchmark will be discussed.

2.3.1. Principles of non-discrimination and equal access

The first normative requirement of the German Constitution, which we will discuss here, is the general protection of equal treatment. Equal treatment becomes relevant with respect to the tuition fee legislation because of the potential impact of tuition fees on the demand for higher education shown by students from lower socio-economic backgrounds. The right to equal treatment is first of all a subjective or personal right, which allows individuals to bring legislative

²⁸⁰ BVerfGE 7, 198. For further elaboration see *Alexy* 2002b.

²⁸¹ *Pieroth and Schlink* 2002 paragraph 73 ff.

measures infringing their individual right to equal treatment to Court.²⁸² However, the fundamental right to equal treatment also belongs to the objective values which are incorporated in the German Constitution.²⁸³ Therefore, equality is part of the normative benchmark against which to assess the German tuition fee and income-contingent loans legislation.

Equal treatment is protected by several norms in the German Constitution. Article 3 (1) GG of the German Constitution enumerates equality of persons before the law as a fundamental right. In addition, Articles 3 (2-3), 6 (5), 33 (1-3) and 38 (1) 1 GG, define more specific rights to equal treatment with regard to special forbidden criteria of differentiation, and with regard to specific areas of life. The fundamental right to equal treatment is considered as one of the most difficult norms in the German Constitution to interpret.²⁸⁴ The fundamental right to equal treatment only defines an abstract formal relationship between persons. However, the norm does not define the standard or object, with regard to which relations between persons should be equalised. Also, the Constitution provides no definition of the (groups of) persons, between which equality should be achieved. Thus, even though the right to equal treatment is one of the fundamental norms of justice, no concrete concept or theory of distributional justice is codified in the German Constitution. Therefore the norm of equality must be filled with life by the legislator and judiciary every time they enact a legal regulation or apply the German Constitution.

In this section, a short overview is given of equality as an objective value in the German Constitution. As the German Constitution only contains a very wide concept of equality, the interpretation of equality has to be further specified with regard to higher education finance. This will be done with the help of political theory. With regard to higher education finance, equality is usually interpreted being comprised of two prongs: non-discrimination; and equality of opportunity, whose definitions will be discussed in detail below. These two concepts will then be defined as principles based on the protection of equality in the German constitution.

In political theory, the everyday concepts of non-discrimination and equality of opportunity were developed into theories by *J. R. Lucas* and *John Roemer*.²⁸⁵ Both of these concepts are frequently employed in interpretations of the constitutionally guaranteed right to equal treatment. However, they start from different normative assumptions and lead to different policy conclusions. Thus, the two concepts will be shortly sketched out.

²⁸² Prevailing opinion, see e.g. *Stark in v. Mangoldt, Klein and Stark* 1999, Article 3 (1), paragraph 209.

²⁸³ BVerfGE 81, 242, 254.

²⁸⁴ *Osterloh in Sachs* 2003, Article 3, paragraph 1.

²⁸⁵ *Roemer* 1998; *Lucas* 1993.

Non-discrimination as a general normative requirement follows from the broader political theory of meritocracy. It is a widely accepted normative view in the Western World, including Germany, that important areas of life should be organised according to the logic of meritocracy.²⁸⁶ In a meritocracy, by definition, resources, wealth and access to positions of influence are distributed on the basis of merit alone. To avoid other criteria having an influence, the state first has to guarantee non-discrimination with regard to any personal attributes which are irrelevant with regard to the decision to be taken. Thus, under this theory, places at higher education institutions should be allocated on the basis of academic merit alone. In addition, it implies that all students are offered the same financial conditions of studying. Thus, under non-discrimination the probability that a student will be admitted to higher education once she has submitted her application should only depend on academic merit. Academic merit is determined by her effort and talent, but not by any other personal characteristic. The idea behind this concept is that access to higher education should be a fair competition, in which only the characteristic relevant to later success in studying, academic merit, decides the winners and losers.

Although appealing at first glance, the adoption of meritocracy as a normative principle of social order, and its corollary with regard to the definition of equality, non-discrimination, are often criticised by political philosophers and politicians. These critics of pure non-discrimination usually argue in favour of the second interpretation of equal treatment: equality of opportunity. Also, the GFCC never understood non-discrimination as the only interpretation of the right to equal treatment. The main point of criticism is that not all members of society enter the competition for access to higher education with the same probability, a requirement which is implied in meritocratic societies. The critics argue that if characteristics such as socio-economic background systematically influence the probability that a child will apply to university, then not only the outcome of the competition for higher education places will be biased, but also the outcome of the competition for other positions of influence in life. Then both the results of the competition for higher education places, and places for other positions of influence in society will be biased. To make the competition fair, the playing field first has to be levelled out. Proponents of equality of opportunity use this metaphor to make a case for compensating people by public measures for disadvantages, which are caused by circumstances lying beyond their individual control.

²⁸⁶ Discrimination based on merit was already promoted by *Locke* 1980 (First published 1690) and also by Thomas Jefferson in the declaration of independence of the United States of America (www.archives.gov/exhibits/charters/declaration.html).

The concept of equality of opportunity has been formalised by *John Roemer* in his seminal book on equality of opportunity.²⁸⁷ All individuals are divided different into types. A ‘type’ is the set of individuals, who face the same ‘circumstances’. The ‘circumstances’ are the personal characteristics of an individual which lie beyond their control. ‘Effort’, on the other hand, includes all characteristics which are assumed to lie within personal control. The ‘objective’ is the criterion with respect to which opportunities are to be equalised. The ‘instrument’ is the policy intervention which aims to bring about the equalisation of opportunities. According to *Roemer*, the equal-opportunity policy is the ‘instrument’ value, or specification, which makes an individual’s expected value of the objective only a function of her ‘effort’, but not of her ‘circumstances’.²⁸⁸ This definition of equality of opportunity rests on the assumption that it is morally justified to hold people responsible for their personal choices, which are included in their effort, but not for the factors beyond their control, which are included amongst the circumstances.²⁸⁹

In *Roemer’s*, terminology, difference between the principles of non-discrimination and equality of opportunity can be stated in the following way. To successfully implement the principle of non-discrimination [hereinafter non-discrimination principle], the probability to be admitted to higher education for all ‘types’ of *applicants* should only depend on their ‘effort’, but not on their ‘circumstances’. To realise equality of opportunity, on the other hand, the probability of all ‘types’ of *children* in a cohort to be admitted to higher education should only depend on their ‘effort’, but not on their ‘circumstances’. Proponents of equality of opportunity thus define the group entering the comparison therefore much wider than proponents of non-discrimination. The main difference between the two concepts is that the non-discrimination ideal takes the decision to apply to university as exogenous and holds the individual responsible for making it. Proponents of the equality of opportunity ideal interpret the decision to apply in itself as influenced by circumstances and society. Therefore they conclude there is a moral obligation not to hold high school graduates responsible for the circumstances which may have negatively influenced this decision. By definition, measures to implement equality of opportunity always have to contradict the principle of non-discrimination. They consist of discriminations in favour of individuals who are disadvantaged compared to others in society.

²⁸⁷ *Roemer* 1998.

²⁸⁸ *Betts and Roemer* 2001 p. 6.

²⁸⁹ Which factors are counted as ‘circumstances’ and which factors are counted as ‘effort’, is decisive for the precise policy implications if the framework is applied to a concrete policy problem. Importantly under *Roemer’s* conception, effort can be broadly defined, as not only personal effort, but also to include all factors, which are not regarded as circumstances. *Ibid.* p. 5.

There are many possible objectives even with regard to higher education policy, with regard to which we may wish to equalise e.g., access to higher education in general, access to specific higher education institutions, or completion of higher education degrees. Each of these measures would lead to a slightly different normative assessment of the situation. Since, in this thesis the introduction of *general* tuition fees is discussed, *general* access to higher education will, in line with the political and legal discussion, be chosen as the relevant objective to equalise.²⁹⁰

The realisation of the non-discrimination principle can be measured in the following way. If in a real admission process academic merit is the only selection criterion, then this admission process is counted as non-discriminatory. Also, the non-discrimination principle reaches its highest realisation and “constitutional welfare” from the non-discrimination principle is maximised. However, if the university openly discriminates according to any criterion other than academic merit, this potentially decreases “constitutional welfare”. The impact of different legislative measures on the realisation of the non-discrimination principle can be compared according to their intensity. In theory, a continuum of different intensities exists, but in practice discrete categories have to be constructed. This step in the analysis will only be pursued in chapter three of the thesis, because here, in chapter two, the normative assessment can be made without having to balance competing normative principles.²⁹¹

The realisation of the principle of equality of opportunity in access to higher education [hereinafter equal access principle] can be conceptualised in the following way. If the probabilities being faced by different types of children within a cohort to enter higher education were equal, the highest realisation of the equal access principle, which maximises constitutional welfare, would be reached. Compared to the status quo, every decrease in inequality of probabilities of different types of children to enter higher education would increase the overall constitutional welfare and vice versa. ‘Types’ of children are defined by the ‘circumstances’ according to which equality of opportunities should be equalised. Most importantly, these ‘circumstances’ include parental education and income, social class, gender, religious beliefs and ethnic background.²⁹² ‘Effort’, on the other hand, includes personal preference for acquiring higher education, personal effort in studying and ability. These are the factors according to which opportunities to enter higher education may vary, even if equal opportunities in access to higher education exist. The

²⁹⁰ Compare for the arguments in the political discussion: *CDU* 1994, p. 22; *SPD* 2006 p.5; *FDP* 2005 p. 26; *Grüne* 2002 p. 103; *Linkspartei.PDS* 2003; In a recent decision, the GFCC has restated the duty of the State to protect equal access to education, which includes higher education („...die Wahrung gleicher Bildungschancen...“) BVerfGE 112, 226, 245.

²⁹¹ See below section 3.6.3.

²⁹² *Barr* 2004a p. 134 ff.

intensity of a legislative measure's impact on the level of equality of opportunity can be measured by its impact on the probability of access for different children 'types'.

2.3.2. Principle of investment in higher education

As argued in section 2.2.1 above, the additional resources raised by charging students tuition fees are to be spent on pursuing two goals. Partly on the goal of equalising access to higher education by providing the income-contingent loans but mostly on increasing the quality of higher education. The increase in spending on higher education is the main intended effect of the German tuition fee legislation. Therefore, the second important principle in the normative benchmark is the principle of investment in higher education [hereinafter higher education principle]. The discussion of this principle will be constructed as follows. First, the constitutional backing for investment in higher education is discussed. Then, the constitutional principle requiring the legislator to realise sufficient investment in higher education is derived.

Investment in higher education as a constitutional principle can be derived from the fundamental right Article 5 (3) GG, which protects freedom of teaching and research.²⁹³ In addition to its classical function as a liberal right²⁹⁴, the GFCC has interpreted Article 5 (3) GG as embodying an objective value.²⁹⁵ This objective value of free teaching and research is based on the constitutional mandate that all politicians have to protect, foster and contribute to the Federal Republic of Germany as a civilised state (*Kulturstaatsauftrag*).²⁹⁶ This mandate is comprised of the mandate to guarantee intellectual freedom in general, and to guarantee and protect education, freedom, autonomy and pluralism in art, and academic research and teaching.²⁹⁷ These fundamental values of civilisation are interpreted as preceding the German Constitution, and are based on the most fundamental value, human dignity, which is protected by Article 1 GG.²⁹⁸ Based on this objective value, the GFCC has derived a duty for the state to render free research and teaching possible, by providing the necessary personnel, financial and organisational resources.²⁹⁹

Additionally, the GFCC supplemented its reasoning with a second argument, making the observation that nowadays free research and teaching depend on organisational structures and

²⁹³ It states "Arts and sciences, research and teaching shall be free. The freedom of teaching shall not release any person from allegiance to the constitution".

²⁹⁴ *Fehling in Dolzer, Vogel and Graßhof* as per May 2007, Article 5 (3), paragraphs 18 ff.; *Scholz in Maunz and Dürig* as per May 2006, Art. 5 (3), paragraph 115.

²⁹⁵ The seminal decision establishing academic freedom as an objective value is BVerfGE 35, 79, 114.

²⁹⁶ *Ibid.*

²⁹⁷ *Oppermann in Isensee and Kirchhof* 1990b, Art. 5 (3), paragraph 23; *Scholz in Maunz and Dürig* as per May 2006 Article 5 (3) GG paragraph 8.

²⁹⁸ *Pernice in Dreier* 1996 Article 5 (3) paragraphs 18-19 and *Häberle in Isensee and Kirchhof* 1990a, § 20, paragraph 60.

²⁹⁹ BVerfGE 35, 79, 114.

expensive facilities as necessary prerequisites.³⁰⁰ Teaching and research would not be provided to the same extent on a private basis. Therefore, the GFCC conjectured that public subsidies for higher education are necessary to cure a market failure in the market for higher education. Based on these justifications of higher education as a fundamental right, the GFCC has then gone on to derive from Article 5 (3) GG, an individual right to participation (*Teilhaberecht*) in this publicly provided and organised process of research and teaching.³⁰¹

The early GFCC judicial decisions seemed to imply that individuals have the possibility to enforce specific claims against the state.³⁰² However, in the later case law, the GFCC has only partially upheld such claims, and always conditioned on the availability of public resources.³⁰³ This is now the prevailing opinion.³⁰⁴ Also, as has been argued above, no right for students to have free access to higher education exists.³⁰⁵ Therefore, the state may complement its own investment in higher education, by private investment, in the form of charging students tuition fees. By increasing investment in higher education, independent from which source, the German legislator fulfils the normative requirements of the Constitution.

GFCC decisions have derived a constitutional requirement for the State to provide the prerequisites of a well-functioning and free research and teaching sector. To reach this aim, the German Constitution requires the state to invest public resources in higher education. Thus the higher education principle will be part of the normative Constitutional benchmark used for the evaluation of cases. The more resources are invested in higher education, the more ‘Constitutional welfare’ increases with regard to this principle. By increasing investment in higher education by introducing tuition fees, the States may therefore increase constitutional welfare.

The extent to which ‘constitutional welfare’ can be created from investing public resources in higher education is, however, limited by other constitutional principles, which also require investment of public resources.³⁰⁶ Assuming that the monetary value of the additional investment in higher education can be taken as a crude approximation of increased quality or quantity of higher education investment, different legislations can be compared according to the additional

³⁰⁰ *Ibid.*, 114, *Fehling in Dolzer, Vogel and Grafshof* as per May 2007, Article 5 (3), paragraphs 23 ff.

³⁰¹ BVerfGE 35, 79, 115.

³⁰² *Ibid.*

³⁰³ BVerfGE 43, 242, 285.

³⁰⁴ *Scholz in Maunz and Dürig* as per May 2006, Article 5 (3), paragraphs 115-116; *Fehling in Dolzer, Vogel and Grafshof* as per May 2007, Article 5 (3), paragraph 40; *Hailbronner* 1979, p. 73 ff. See also *Pernice in Dreier* 1996, Article 5 (3), paragraph 47.

³⁰⁵ BVerwGE 102, 142, 146 ff.; BVerwGE 115, 32, 37.

³⁰⁶ Marginal returns to “constitutional welfare” to investing additional resources in higher education compared to the status quo are assumed to be positive but decreasing.

investment they create. If the impact of the legislative alternatives on the realisation of the principles is uncertain, the monetary value of the additional value of investment in higher education has to be multiplied by its probability of occurring.

2.3.3. Principle of cost effectiveness

It has already been argued that the cost of providing an income-contingent loan system decreases the additional investment available to universities from tuition fee revenue. To minimise this detrimental effect, the income-contingent loan system should be designed cost-effectively. Cost effectiveness, defined as reaching a given goal at minimal cost, can be derived from the German Constitution as a principle. Article 114 (2) of the German constitution restrains the legislator with regard to the use of public resources and mandates the Federal Audit Office (*Bundesrechnungshof*) to audit the management of public finances according to two criteria: *Ordnungsmäßigkeit* and *Wirtschaftlichkeit*. *Ordnungsmäßigkeit* can be translated as propriety and implies that the legislator has to comply with the prevailing law when spending public resources. *Wirtschaftlichkeit* in general implies parsimonious or economical use of public resources. However, its scope and its precise meaning are debated.³⁰⁷

The interpretation of Article 114 (2) GG with regard to its scope has changed. Traditionally, *Wirtschaftlichkeit*, as a constitutional norm, has only been applied to review administrative decisions. Recently however, this view has changed and the norm is now also interpreted as being applicable to political decisions.³⁰⁸ Therefore, it is applicable to our case. The precise meaning of Article 114 (2) GG is debated. It is undisputed that *Wirtschaftlichkeit* is a formal concept in contrast to fundamental rights, which codify material principles.³⁰⁹ The norm does not imply which aims the legislator should pursue but how the legislator should pursue his chosen aims. Therefore, Article 114 (2) GG could be conceptualised as a meta-principle guiding the realisation of all the other principles.

However, there are several possible interpretations with regard to the Article 114 (2) GG. In general, *Wirtschaftlichkeit* requires the legislator to employ public resources parsimoniously when realising its goals. There are three potential ways to implement this requirement: the first implies that the legislator should reach a given goal at minimal cost, the second one requires that the legislator should use the given resources to maximise the impact on the given goal and the third

³⁰⁷ von Arnim 1988.

³⁰⁸ Siekmann in Sachs 2003 Article 114 paragraph 14. For the broader interpretation see especially von Arnim 1988, for a more restricted application of the principle see Kisker in Isensee and Kirchhof 1990b § 89 paragraph 112 and Maunz in Maunz and Dürig as per May 2006 Article 114 paragraph 51.

³⁰⁹ Selmer 1993 p. 77.

interpretation requires the legislator to optimise the ratio between used resources and outcomes in regards to the goal. All three are possible interpretations of the norm.³¹⁰ In this thesis, the first interpretation of *Wirtschaftlichkeit* is chosen because of the structure of our analysis. This thesis analyses whether the legislator has implemented its goal of increasing investment in higher education by introducing tuition fees in a constitutional way. The goals of the legislative measure are clear. Therefore in our case, the relevant question is whether the legislator has minimised the cost effectively. The legislation will be assessed with regard to the principle of cost effectiveness [hereinafter cost effectiveness principle].

Cost effectiveness principle also ties in with the proportionality principle. As argued above, the proportionality principle is the fundamental principle of justice currently used to balance competing normative objectives. As we saw earlier, there are four main steps involved in conducting an analysis under the proportionality principle; the tests of the legitimate aim, suitability, necessity and proportionality in a narrow sense. The necessity test step requires the legislator to minimise the factual cost and all negative impacts with regard to other constitutional principles of achieving a goal. Art 114 (2) GG, requiring the German legislator to spend public resources parsimoniously, interpreted as cost-minimisation, places identical restrictions on the legislator as step three of the proportionality principle, the necessity test.

According to the cost effectiveness principle, the legislator has to reach given goals with minimal cost. This includes the minimisation of negative impacts on other constitutional principles and minimisation of opportunity costs. Thus, the cost effectiveness principle is realised to the highest extent and ‘constitutional welfare’ is maximised if all the different costs of a piece of legislation are minimised. The higher the cost of a legislative measure compared to the minimum cost possible, the greater the decrease in ‘constitutional welfare’ caused by the legislative measure. The intensity of the impact, which different legislative alternatives have on the realisation of the cost effectiveness principle, can be compared in monetary form as far as they consist of monetary cost. To the extent, that the costs involved are negative impacts on other constitutional principles, which are non-quantifiable in monetary form, their impact has to be ranked on an ordinal scale, which orders interferences with fundamental rights.

2.3.4. Impact on the normative benchmark

Now, we will discuss the impact of the tuition fee legislation on all four above defined normative principles derived from the German constitution. First, the impact on the non-discrimination

³¹⁰ von Arnim 1988 p. 19.

principle, next the impact on the equal access principle, then the impact on the higher education principle and finally the impact on the cost effectiveness principle is analysed.

2.3.4.1 Non-discrimination

The non-discrimination principle implies that university places should be allocated according to academic merit. All successful applicants should be offered identical financial conditions. The German tuition fee and income-contingent loans legislation does not impose any requirements on student selection criteria. It only influences the financial conditions of studying. However with regard to these, the various tuition fee and income-contingent loans legislations discriminate amongst applicants in several respects. First, students are exempted from the requirement to pay tuition fees on several grounds of hardship.

Secondly, over the whole lifetime, the income-contingent loan system discriminates between different groups of graduates with regard to the amount of tuition fees they pay. At first glance, there is the presumption that the system discriminates between students who pay tuition fees up-front and those taking out the loan.³¹¹ However, this presumption neglects the opportunity cost of paying tuition fees up-front. Students, who pay tuition fees up-front, incur opportunity cost because they have to forego other investment alternatives. The magnitude of the opportunity cost is usually assumed to be the market interest rate. This interest rate is also added to the tuition fees when borrowing to finance tuition fees. Thus, assuming that administration costs are equal, paying tuition fees today and incurring an opportunity cost equal to the market interest rate, or paying tuition fees in the future including interest does not make a difference in overall cost. Thus, offering a loan to finance tuition fees and charging interest on tuition fees does not involve discrimination.

In fact, it is the insurance component, offered by the income-contingent nature of the loan and the repayment cap on the debt, which has a discriminatory effect. The design of the income-contingent repayments will lead to a factual discrimination between graduates, who paid their tuition fees up-front, and those who have taken out the loan. The loan takers can further be divided into those with high earnings on the one hand, and those with low earnings on the other hand. Graduates paying up-front and graduates with high earnings will incur the full cost of tuition fees including interest, whereas graduates with low earnings may be exempted from paying the full cost of tuition fees. Thus, there is a negative effect on the realisation of the non-discrimination principle.

³¹¹ *Leffers* 2008.

2.3.4.2 Equal access

Any negative effect the systems may have on the non-discrimination principle is mirrored by a positive effect on the equal access principle. The equal access principle requires that an individual's probability of entering higher education should only depend on her 'effort', which is defined as personal effort and talent, but not on her 'circumstances'. 'Circumstances' are comprised of all other personal characteristics, which the individual child cannot influence e.g. socio-economic background, parental education, race, religion. At present, opportunities in Germany for access to higher education remain very unequal. As we discussed above, children with low parental income have a much lower chance of accessing higher education than children whose parents have a high income. If the German tuition fee and income-contingent loan legislation would worsen the different probabilities for students in accessing higher education, it would negatively impact the principle of equal opportunity.

It has been argued in the previous section that unequal access to higher education in Germany is primarily caused by parental education and background, which correlates with low income, rather than directly by low income, which cannot be compensated via capital markets due to short term credit constraints.³¹² With regard to the overwhelming majority of potential students, who currently do not apply to attend higher education, the German tuition fee and income-contingent loan legislation will have no impact on their opportunities to access higher education. With regard to those children from low income backgrounds, who aspire to enter higher education, the introduction of income-contingent loans prevents tuition fees from creating new credit constraints. Thus, it can be concluded that the recent legislation will have a positive impact on the equal access principle, because it prevents a worsening of the distribution of probabilities of access. The currently existing unequal probabilities will not be equalised, but also no further deterioration in access should be expected.

2.3.4.3 Investment in higher education

Assuming that the crowding out effect is rather small and the costs of the system are also low, it is concluded here that the introduction of tuition fees increases investment in higher education. Thus, it will also quite likely have a positive impact on the realisation of the higher education principle. We can therefore conclude that the tuition fee legislation increases "constitutional welfare".

³¹² See above section 2.2.4.1.

2.3.4.4 Cost effectiveness

Finally, the impact of tuition fees and income-contingent loans on the realisation of the cost effectiveness principle will be assessed. Similar to the discussion of the legislation's impact on equal access to higher education, here the analysis will be based on the comparison of the German legislation, to the reference solution for income-contingent loans developed by *Barr* and *Chapman*. The earlier section on the consequences of introducing tuition fees backed by income-contingent loans has already argued that income-contingent loans will create significant costs, which will decrease the revenue available from tuition fees.³¹³ Thus far, these costs have only been divided into interest subsidies and administrative cost. In the following section, the factors influencing the cost of income-contingent loans are further analysed with regard to the following characteristics: the design of the income-contingent repayments; the definition of the interest rate; the allocation of default risk; and, the organisation of the collection of repayments. For each of these characteristics a benchmark model will be derived as a basis for evaluating the design of the German system of income-contingent loans.

2.3.4.4.1 Income-contingent repayments

To optimally lift credit constraints while minimising costs, the instalments in which income-contingent loans are paid back should preferably be calculated as a percentage of net-income.³¹⁴ In Germany, under the current legislation, this is not the case. Instead, students can choose between paying different fixed monthly instalments. They always have the right to repay parts of their loans early without paying any penalty to the banks. This increases the overall cost of the loan system because banks have to refinance the loans. If loans are repaid early and interest rates in the market have changed, banks may make losses. In addition, the current repayment modalities may cause graduates to display moral hazard in repaying the loan. Graduates may strategically exploit the fact that they are not forced to automatically repay a higher percentage of their income if their earnings have increased. If they expect the payment increase to be only temporary and can foresee a period of low earnings, some graduates may only repay the minimum amount that they have to repay. Thereby, they may try to avoid repaying the rest of their debt altogether.

However, the moral hazard problem may be mitigated somewhat by the charging of market interest rates, since graduates have an incentive to repay their loans as quickly as possible to avoid interest piling up. However, deferred payments of instalments in all regular cases generate cost

³¹³ See above section 2.2.1.2.

³¹⁴ See above section 2.2.4.2.

for the taxpayer, because no interest is charged to the student during the time of deferment.³¹⁵ Thus, the tax-payer has an interest in graduates making quick repayments. In addition, the long duration to repay, the right to always repay early, and to choose an instalment size, all increase administration cost of these, in bank terms, relatively small loans. So, providing flexibility for students causes administrative costs in the system.³¹⁶

The repayment instalments of the German income-contingent loans are not calculated as a percentage of income, are negotiable to a certain extent, and are thus not fully income-contingent. This is disadvantageous to the state because it opens up opportunities for moral hazard minimising repayments by the graduates. As the compound interest on the loan is paid by the taxpayer, it also creates costs even in the case of regular deferment of repayment. Last but not least, compared to a system with repayments automatically indexed to income, the flexibility in choosing repayment instalments causes higher administrative costs, due to the time spent in negotiations and because banks have no right to compensation for early repayments.

2.3.4.4.2 Interest subsidies

As has already been discussed above, the cost of the income-contingent loan system to the taxpayer depends strongly on the interest rate charged to students. The interest rate on an income-contingent loan should cover the government's cost of borrowing plus a premium for administrative costs. Very importantly, it should not be subsidised. However, interest rate subsidies on student loans are usually justified by governments to protect students from piling up unbearable debt.³¹⁷ However, in contrast to the good intention, it has been shown that such a subsidy does not have any additional effect on the aim of ensuring equality of opportunity and is very costly for the taxpayer. In addition, the subsidy has a regressive distributive impact.³¹⁸

A subsidised interest rate on student loans does not improve the working of the financial market. Credit constraints are caused by the risk of the student loans, and not so much their price. Studies show that graduates mainly refrain from borrowing because of the risk of taking on a loan and not so much because of its cost.³¹⁹ Given the high returns to higher education on average, borrowing is rational on average. However the individual risk is still considerable. Therefore, a student's decision to borrow is positively influenced by the insurance component of income contingency against forced repayments, and not so much by the price of a loan. The interest rate

³¹⁵ See below section 2.6.

³¹⁶ Compare www.l-bank.de/lbank/inhalt/nav/privatepersonen/bildung/studienfinanzierung.xml?ceid=102182.

³¹⁷ E.g. New Zealand has adapted interest subsidies. *Chapman* 2005 p. 33.

³¹⁸ *Barr* 2001 p. 189.

³¹⁹ *Barr* 2004a p. 325 ff.

subsidy, on the other hand, decreases the amount to be repaid for all graduates irrespective of their income. Thus, it benefits mostly graduates with a high income. Even though they could afford to repay the full cost of their loans without interest rate subsidies, the interest paid by those graduates will be subsidised. Therefore, high earning graduates will stop repaying the loan early in their career. However, as they are subsidised anyway, the graduates, who cannot afford to repay their loans in full because of low income, do not profit additionally from the interest subsidy. Therefore interest rate subsidies on income-contingent loans increase the overall cost of the system, lead to redistribution towards the rich and have no additional benefit in terms of increased equality of opportunity.³²⁰

In the current design of the German loan system, the loans have to be repaid in fixed instalments. In this system, the repayment cap has a protective function. Under the current conditions, students have to repay the total amount of their loan within 20 or 25 years after graduation. If they repay nothing or little in the first years after graduation, instalments may become a real burden. The repayment cap reduces such a possible burden. Alternatively if repayments were calculated as a percentage of net-income and no maximum repayment span would exist, they would never become unbearable. Then a repayment cap would not be necessary. To save the cost of the repayment cap, the instalments would have to be calculated as a percentage of the net-income so that no risk of unbearable repayments arises.

2.3.4.4.3 Allocation of default risk

Even if interest rates were unsubsidised, defaults on repayments due to low earnings would still be very costly. Defaults may be caused by low life-time earnings of some graduates. These low life-time earnings may be caused by early death, illness, unemployment and time spent out-of the workforce for parental or other caring duties. These costs of default have to be allocated somewhere. This may be done in a number of different ways. The default risk could be pooled among each cohort of graduates by adding a risk premium to the income-contingent loan. Then, the repayments of high earning-graduates would cover the defaults of low earning graduates and the system would be self-financing. However, such risk-pooling among the members of one cohort of graduates is problematic as it causes the problem of adverse selection. The good risks anticipate that they will be pooled with bad risks and that their interest payments will have to partly cover the overall cost of default. Thus, good risks among the students will drop out of the scheme and try to get financing on the market at a lower rate of interest. This problem of adverse selection can only be solved if membership in the income-contingent loan scheme is made

³²⁰ Barr 2004c p. 271.

mandatory.³²¹ As mandatory membership would be strongly opposed among contingents of the graduates, risk-pooling is not the best way to allocate default risk.

An alternative to risk-pooling among graduates is risk-sharing between the graduates and the taxpayer. Then the costs of default could be covered to a certain extent by a risk-premium included in the interest rate. Defaults exceeding this risk premium could then be borne by the taxpayer.³²² Thus, depending on the part of the risk borne by taxpayers, risk sharing would mitigate the problem of adverse selection. As private banks have to charge a profit margin on their student loans, the risk-premium actually charged by the government could not easily be undercut on the private credit market. Therefore, also the good risks among the students would have an incentive to participate in the loan scheme, which reduces the cost of the scheme. Optimally, thus the default risk should thus be shared between the graduates and the taxpayer.

Similar to the reference solution, the costs of default in the German system are partly assigned to the cohort of graduates. However, the mechanism differs from the reference solution. Instead, each State legislator has set up a default fund administered by the State government to cover the cost of default in its State. This mechanism was invented to avoid student loans being counted on the books as public debt. Covering the default costs from tax revenues would have led to an increase in public debt. Given the tight public budgets allowed in Germany under the EU deficit criteria, an increase in public debt is politically intolerable.³²³ The default costs of the income-contingent loans system are to be covered from set aside tuition fee revenues.

In addition, these default funds solve the adverse selection problem among the members of the cohort. The funds are topped up from the general tuition fee revenues paid each semester. Every cohort pays for the use of tuition fees in this way by foregoing benefits in teaching. Sharing in the cost of default is thus mandatory and cannot be avoided by adapting individual behaviour. The system also leads to redistribution within a cohort of students. Students with a low income are subsidised by students with a high income, and by students who do not take up a loan. The cost of default may even lead to distribution between different cohorts of students if the calculated savings rate of tuition fees for the cost of default has been too low. Then the percentage of tuition fees taken away from future generations has to be increased. Therefore, even though the

³²¹ One of the earliest experiments with income-contingent repayments of tuition fees was made by the Tuition Postponement option at Yale in the 1970ies. The Yale tuition plan adopted risk pooling which caused adverse selection and was one of its major problem that lead to its closure after a short time. *Vandenbergh and Debande* 2008 p. 382.

³²² *Chapman* 2005 p. 24.

³²³ *Vandenbergh and Debande* 2008 p. 384.

default funds do not distort students' behaviour, they do cause important administrative costs. The default funds cover individual default cases claimed by banks. The validity of all these claims has to be verified, which will create administrative cost.

Overall, the restrictions on the assumption of public debt imposed by the Maastricht-Treaty were the reason for the allocation of the default risk to a fund funded from tuition fee revenues. Given this restriction by European law, no better alternative is available which would not lead to adverse selection problems. Under the given restrictions there is no cheaper way of allocating the default risk to a fund. Thus, with regard to the allocation of default risk, the current German model minimises costs.

2.3.4.4 Collection of repayments

The costs of an income-contingent loans system are crucially determined by the way in which repayments are made. As repayments are calculated according to net-income and only commence if earnings exceed a certain income threshold, the graduates' net-incomes have to be monitored. For banks, this monitoring of income is quite costly. Tax authorities, however, monitor residents' income in order to collect taxes anyway. If repayments were collected alongside the national income tax, as in Australia and the UK, the administrative costs incurred by banks in monitoring personal income a second time could be saved.³²⁴ Collection of repayments alongside national income tax seems to be the cheapest method of repayment.³²⁵ The collection of national income tax presupposes the recording of income and a bureaucratic structure which already exists. Using this structure is very cheap and the recording of the repayments would not cause a lot of additional administrative cost. Optimally, the collection of repayments should therefore be organised alongside the national income tax system.

If graduates left the system of national income tax by international migration, an alternative way of repayment would have to be arranged. Instead, migrant graduates not falling under the national tax authority could repay their student loans in fixed instalment. Within the EU, a claim to student loans repayments would still be enforceable.³²⁶ Internationally, some strategic defaults might occur and slightly increase the default costs. In any case, compared to the administrative cost of a separate student loan recollection system, these default cost due to international migration would only be marginal.

³²⁴ *Chapman* 2005 p. 41 argues that in all countries that have successfully adopted income-contingent loans (Australia, New Zealand, the republic of South Africa and the UK) one common factor was that they all could use the taxation system as a collection mechanism. Also *Barr* 2004c p. 269, for a discussion of the recollection problems of private lenders compare *Barr* 2001 p. 183 ff.

³²⁵ *Barr* 2004b p. 305.

³²⁶ *Barr* 2001 p. 233 ff.

In the current German system, the loans are collected by the publicly owned banks providing the loans. Banks have to monitor repayment and have to administer the deferred payments if students earn less than the minimum threshold. They have to be provided with proof of a low income status, and the reverse. All these administrative costs could be avoided if repayments were collected alongside the national income tax. The tax authorities could automatically set the repayments if it was calculated as a percentage of after-tax income exceeding the threshold. Thus, the current system is not the cheapest alternative to collect the repayments.

2.3.5. Summary

It is highly likely that the German system of tuition fees backed by income-contingent loans impacts positively on the realisation of the principle of state investment in higher education. It also impacts positively on the realisation of equality of opportunity due to positive discrimination. It improves the financial conditions of access to higher education in favour of students with social hardship and of graduates who have not profited from their higher education. However, this effect results in discrimination and impacts negatively on the non-discrimination principle. The analysis with regard to the cost effectiveness principle has shown that the current system of tuition fees backed by income-contingent loans introduced in Germany does not appear to be the cheapest way to design a system of income-contingent loans. The comparison with the benchmark has shown that the costs are higher than necessary because:

- instalments are not calculated as a percentage of income. This creates moral hazard, potentially increasing default costs and causing administrative costs due to negotiations between banks and debtors about early repayments or change of instalment size;
- an implicit subsidy exists in form of the repayment cap of € 10.000-15.000 of overall debt and interest, including debt from BAföG. The repayment cap is not indexed to graduate income and will increase the cost of the loan system significantly;
- repayments are collected by banks which have to verify the income of all students who apply for deferred repayments and have to organise the enforcement process of their claims.

The cost of organising the loan system could be significantly reduced by changing the details of the design of the loan system to

- calculate repayments percentage of the net-income after tax;
- decrease flexibility of repayment by abolishing choice between different instalments and early repayments;
- abolish the repayment cap; and
- collect repayments alongside the national income-tax system.

The unnecessarily high costs of the current system impact negatively on the realisation of the cost effectiveness principle. In contrast to the negative impact on non-discrimination, this negative impact is not compensated by a corresponding positive impact on another constitutional principle. Thus, the factual normative assessment leads to the hypothesis that the current design of income-contingent loans is likely not to be found constitutional. The next section will discuss whether any negative impact on the constitutional principles translates into infringements of the fundamental rights codified in the German Constitution.

2.4 Constitutionality of the tuition fee and student loan legislation

In the proceeding chapter the consequences of the introduction of tuition fees backed by income-contingent loans in Germany have been analysed and assessed against benchmark standards derived from different provisions of the German constitution. This assessment has led to the hypothesis that the system is likely not to be found constitutional because of the way in which the income-contingent loans system is designed. As the derived benchmark has been based on the German Constitution, it is very likely that a negative impact on the realisation of the benchmark principles will translate into infringements of constitutional rights. As infringements of constitutional rights are discussed using the method of heuristic legal interpretation, not all factual impacts of legislation on normative principles are always subsumed as falling within the scope of protection of a constitutional rights. Sometimes, as in the case of Article 3 GG, constitutional rights also give rise to two principles. So, the discussion of the legislation's impact on the realisation of abstract constitutional principle has to be followed by a legal assessment of the tuition fee legislation according to the Constitution.

To establish the constitutionality of the German system of tuition fees backed by income-contingent loans, the tuition fee legislation of North Rhine-Westphalia, the HFGG, will be discussed as an example. From the Summer Semester of 2007 on, North Rhine-Westphalia has

transferred the right to charge general tuition fees of up to € 500 a semester to its publicly financed institutions of higher education. Almost without exceptions, all institutions have introduced the maximum amount of € 500 per semester tuition fees.³²⁷ Exceptions for social hardship are provided. All students, who have to pay fees, have the right to finance them via loan from the State-owned NRW bank. This loan covers tuition fees for the standard period of study, plus four semesters. The interest rate is calculated as the EURIBOR plus administrative costs. Repayments on the loan only start between two and eleven years after graduation. Repayments only become due if graduates earn more than a minimum income threshold, which is at the moment is € 1,060 a month. This threshold is increased for every family member, who is dependent on the graduate. Early repayments are always possible. Graduates only have to repay a maximum amount of € 10,000. This maximum also incorporates any debt from *BAföG*. The default risk has been assigned to a fund, to which 18% of each semester's tuition fee revenue has been allocated.

North Rhine-Westphalia is the largest State in Germany and also offers the highest numbers of places at higher education institutions. In addition, North Rhine Westphalia has had the highest assumption rate of student loans in all of the German States since their introduction in the winter semester 2007.³²⁸ As the tuition fee legislation is very similar in all States, any other State law could equally have been chosen as example. To be constitutional, the legislation of North Rhine-Westphalia, the HFGG, must not interfere without justification with any fundamental rights or other constitutional norms. In this part the discussion starts with the analysis of whether the HFGG interferes with the right to equal access to higher education according to Articles 12 (1) GG, 3 (1) GG and 20 (1) GG. These provisions together embody the constitutional norm protecting equal access to higher education. Then, the possible infringement of Article 114 (2) GG, the norm demanding economical allocation of public resources, is discussed.

2.4.1. No interference with Articles 12 (1) GG, 3 (1) GG and 20 (1) GG

Article 3 GG defines equal treatment of citizens as a fundamental right. The fundamental right to equal treatment has few legal implications per se. It mostly becomes applicable if the government infringes other fundamental rights as well.³²⁹ Tuition fees belong to the area of higher education finance. When judging on matters of higher education finance, the GFCC often interprets a legislative measure as an infringement on the right to free choice of profession guaranteed in Article 12 (1) GG and at the same time as an infringement of the right to equal treatment

³²⁷ See below section 2.6.

³²⁸ *Monitoring-Beirat Studiengebühren Baden-Wuerttemberg* 2008 p. 13.

³²⁹ *Osterloh* 2003 paragraph 5, *Schnapp* 1992 paragraph 19.

guaranteed in Article 3 (1) GG. The German Federal Constitutional Court has based this conclusion on the fact that the German States have a factual monopoly position in the German higher education market. They have a monopoly because the States invest significant public resources in the higher education sector and no comparable private alternatives to public universities exist. In addition, the Court has considered that in graduates' later lives higher education degrees to a large extent determine professional opportunities.³³⁰ Therefore, access to the public higher education sector impacts on choice of occupation by graduates. As free choice of occupation is protected as a fundamental right in Article 12 (1) GG, the GFCC has conjectured that measures, which interfere with equal access to higher education, also interfere with the fundamental right of free choice of occupation.

Choice of occupation is not only a fundamental right but also has a strong distributional impact. This has led the Court to hold that the social democracy principle of Article 20 (1) GG (*Sozialstaatsprinzip*), which obliges the state to actively pursue social justice to some extent, also becomes relevant with regard to equal access to higher education. Considering that free choice of occupation and social justice depend on equal access to higher education, the GFCC has then interpreted Articles 12 (1) GG, Article 3 (1) GG and Article 20 (1) GG as granting citizens a right to equal access to publicly provided higher education (*derivatives Teilhaberecht*).³³¹ This right does not oblige the States to increase their investment in higher education in order to provide more places for applicants rejected on the grounds of constrained capacity in any particular subject.³³² It also does not imply a right to free access to higher education.³³³ It only guarantees equal chances of access for all qualified applicants to the existing places at public universities, which have been paid for from tax-revenues.

If the tuition fee legislation in Germany were found to have a negative impact on equal access to higher education, then the right to equal access as guaranteed by Articles 12 (1) GG, 3 (1) GG and 20 (1) would be infringed. Factors relevant to this interpretation include factual negative impacts on access to higher education which may be created by non-discriminatory financial conditions in case of different parental means between students. Thus, the GFCC has interpreted equality with regard to higher education as equality of opportunity and not just as non-discrimination.

³³⁰ *Kirchhof in Isensee and Kirchhof* 1990b, § 124 paragraph 114. This assertion can also be backed up by empirical evidence. Compare *Nickell* 2004, who finds that an important part of the existing cross-country differences in earnings inequality can be explained by differences in skill dispersions.

³³¹ BVerfGE 33, 303, 331 ff.

³³² *Ibid.*, 331 ff.

³³³ BVerwGE 102, 142, 146 f., BVerwGE 115, 32, 37.

Two impacts of the German tuition fee legislation on the non-discrimination principle have already been discussed. The first impact is the unequal treatment of students with regard to the duty to pay tuition fees. In all German States, students are exempted from the duty to pay tuition fees for reasons of social hardship.³³⁴ In addition, the State governments discriminate between students according to their economic success by offering student loans with income-contingent repayments. At the end of their professional life, graduates of one cohort, who have taken out the income-contingent loans to finance their tuition fees, will have paid different amounts of tuition fees. Those graduates, who have earned less than the income threshold for the whole period of repayment, will be released from their debt. Successful graduates, on the other hand, will repay the full debt and interest. Thus, the current system of income-contingent loans discriminates on the basis of economic success. High earning graduates pay tuition fees plus the interest rate whereas low earning graduates pay only part of the tuition fees and in extreme cases, may not pay any tuition fees

However, under the second interpretation of equal access to higher education as equality of opportunity, the German tuition fees and income-contingent loan legislation does not infringe the right to equal access to higher education. Even though tuition fees favour individuals for reasons of social hardship and income-contingent loans favour graduates who do not profit from their higher education, this discrimination has the effect of equalising opportunities and preventing students from being deterred from studying at university due to financial reasons. Thus, the discrimination ensures equal access to higher education and does not interfere with Articles 12 (1) GG, 3 (1) GG and 20 (1) GG.

³³⁴ See below section 2.6.

2.4.2. Interference with Article 114 (2) GG

The prevailing interpretation of Article 114 (2) GG is that this norm requires the legislator to minimise cost when achieving a goal.³³⁵ It has been shown that the current design of income-contingent loans does not minimise cost because:

- instalments are not calculated as a percentage of income. This may cause moral hazard, potentially increase default costs and cause administrative costs due to negotiations between banks and debtors;
- an implicit subsidy exists in the form of the repayment cap of € 10,000-15,000 of overall debt and interest including debt from BAföG. The repayment cap is not indexed on income of graduates and will increase the cost of loans significantly;
- repayments are collected by banks which have to verify the income of all students who apply for deferred repayments.

Thus, it has to be concluded, that Article 114 (2) GG is infringed. As costs could be minimised without any negative effect on other constitutional principles, the German tuition fee legislation will thus have to be considered unconstitutional. As the government has not infringed an individual right by designing the income-contingent loan system not cost-effectively, no discussion of a justification under the proportionality principle follows. The German constitution does not protect the cost effectiveness principle to the same extent than the fundamental right. Infringements of the principle are every year documented by the Federal Audit Office, but little consequences follow from this audit. Therefore, the government cannot be hold legally responsible for a violation of the principle and no need to justify infringements of Article 114 (2) GG arises.

2.5 Conclusion: Tuition fee and student loan legislation not socially desirable

The analysis of the effects of the German tuition fee legislation has shown that the introduction of tuition fees has increased investment in higher education, at least, in the short run, an effect which may be endangered in the long run. Future cost increases in the system of income-contingent loans, and the danger of State legislators reducing public support for higher education cannot be excluded. General demand for higher education will probably not decrease significantly as tuition fees are still very moderate compared to the private returns to investment in higher education. Demand of students from lower socio-economic backgrounds could be affected to a

³³⁵ *Siekman in Sachs* 2003, Article 114, paragraphs 11-14.

larger degree by the legislation, but it has been argued that the system of income-contingent loans is well-designed to avoid such a negative impact. No additional credit constraints will be created. Unfortunately the general inequality in access will also persist. If the investment increase brought about by the introduction of the fees persists, this will probably have a positive effect on development and growth via the externalities of higher education.

A normative benchmark has been developed on the basis of the constitution to analyse these consequences of introducing tuition fees and income-contingent loans. The realisations of the following four constitutional principles may be affected by the current legislation: the non-discrimination principle, the equal access principle, the higher education principle and the cost effectiveness principle. Non-discrimination and equality of opportunity both follow from the general principle of equality. With regard to higher education, they both aim at equalising the probability of access based on academic merit. However they differ with regard to the group of individuals between whom the probability of access is compared. For non-discrimination it is the group of actual university applicants, whereas, for equality of opportunity it is the whole cohort of children. We have seen that the legislation does impact negatively on the non-discrimination principle by favouring some individuals in order to achieve a positive impact on the equal access principle. However, these discriminatory policies impact positively on the equal access principle. By discriminating between individuals via income-contingent loans, the States remove potential credit constraints from students entering higher education.

The higher education principle is affected positively because the introduction of tuition fees has led to increased spending per student. Even though this effect may be reversed in the future, for the current evaluation of the system, a positive impact has to be stated. The cost effectiveness principle is affected negatively, as the design of income-contingent loans deviates considerably from the most cost-effective design. Given the fact that no other constitutional principle is affected positively by the increased costs arising from designing the system the way it is, the normative assessment has led to the conclusion that the legislation is most likely unconstitutional in this regard.

This conclusion has been confirmed in the legal analysis. Even though the legislation does not interfere with Article 3 (1) GG - applied in the combination with Articles 12 (1) GG, and 20 (1) GG guaranteeing equal access to higher education - it does violate Article 114 (2) GG which requires the legislator to minimise costs when achieving a goal. Thus, the North Rhine-Westphalian legislation is also most likely not constitutional in this respect. Because all the

German State systems of tuition fees and income-contingent loans are very similar, it follows from the violation of the constitution by the North Rhine-Westphalian system, that the design of the other German systems is also not socially desirable.

However, the legal implications of this result are limited. Even if the GFCC shared this analysis, the problem is that in contrast to infringements of fundamental rights, the infringement of Article 114 (2) is not enforceable. Article 114 (2) GG cannot be enforced by the GFCC via the abstract judicial review of legislation (*abstrakte Normenkontrolle*).³³⁶ It has mainly political character. Thus, there is no way currently to force the legislator to change the legislation. With regard to the constitutional principles of cost effectiveness, the balance of power between legislator and GFCC, is tilted in favour of the legislator and the legislator is only constrained by the political process but not by the constitution.

³³⁶ BVerfGE 45, 1, 34.

2.6 Appendix: Synopsis of the German tuition fee, income-contingent loan and student support systems

	Baden-Württemberg	Bavaria	Hamburg ³³⁷	Hesse	Lower Saxony	North Rhine-Westphalia	Saarland	Federal Government	Federal Government	Federal Government
Legal basis for tuition fees and loans	Landeshochschulgebührengesetz (LHGebG), Studiengebührenverordnung (StudGebVO)	Bayerisches Hochschulgesetz (Bay-HSchG) and Verordnung über Darlehen zur Studienbeitragsfinanzierung (StuBeiDaV)	Hamburgisches Hochschulgesetz	Hessisches Studienbeitragsgesetz (HStubeiG) – abolished from WS 2008/09	Niedersächsisches Hochschulgesetz	Gesetz zur Sicherung der Finanzierungsge-rechtigkeit im Hochschulwesen	Saarländisches Hochschulgebührengesetz and Studiengebührendar-lehenverordnung	Bundesausbil-dungsförderungs-gesetz (BAföG)	Bildungskredit by Deutsche Ausgleichsbank	KfW-Studienkredit
Legislation introducing fees and loans	Gesetz zur Änderung des Landeshochschulgebührengesetzes und anderer Gesetze of 19 December 2005 [2005] OJ 794	Bayerisches Hochschulgesetz of 23 May 2006 [2006] OJ 245	Studienfinanzierungsgesetz of 6 July 2006, [2006] OJ 376. The Hochschulgesetz was amended again at the end of September 2008.	Gesetz zur Einführung von Studienbeiträgen an den Hochschulen des Landes of 16 October 2006, [2006] OJ I 512. The system was changed by Gesetz zur Sicherstellung von Chancengleichheit an hessischen Hochschulen of 18 June 2008, [2008] OJ 764.	Haushaltsbegleit-gesetz of 15 December 2005 [2005] OJ 426	Gesetz zur Sicherung der Finanzierungsge-rechtigkeit im Hochschulwesen of 21 March 2006 [2006] OJ 119	Gesetz zur Änderung des Saarländischen Hochschulgebührengesetzes of 12 July 2006 [2006] OJ 1225; Verordnung über die Bereitstellung von sozialverträglichen Studiengebührendarlehen of 7 March 2007 [2007] OJ 502	Last reform 2008 of Bundesausbildungsförderungsgesetz 2009.	Richtlinie fuer die Vergabe des Bildungskredit	
Tuition fees per semester	€ 500	Universities: € 300-500 Universities of applied sciences: € 100-500	New: €375, which are only due after graduation Old: €500	€ 500	€ 500	€ 0 - € 500	1 st & 2 nd semester: € 300 afterwards € 500			
Start (and End)	SS 2007	SS 2007	New: WS 2008/09 Old: SS 2007	WS 2007/08 to SS 2008	WS 2006 for 1 st semester students, SS 2007 for all students	WS 2006 for 1 st semester students, WS 2007/2008 for all students	WS 2007/08		Since 2001	
Right of universities to decide about amount of fees	No	Universities may vary fees within limits and also between subjects.	No	No	No	Yes; Universities have the right to decide about introduction of tuition fees up to € 500.	No			

³³⁷ Hamburg has enacted a new tuition fee regime starting in October 2008. As there are still students falling under the old regime, both regimes are included in the synopsis. The 2008 regime is labelled as ‘new’ and the preceding regime which had only been implement since 2007 is referred to as ‘old’.

	Baden-Württemberg	Bavaria	Hamburg ³³⁷	Hesse	Lower Saxony	North Rhine-Westphalia	Saarland	Federal Government	Federal Government	Federal Government
Who has to pay?	All students at public universities and universities of applied sciences.	All students at public universities and universities of applied sciences in Bachelor and Master degree studies.	All students at public universities and universities of applied sciences in Bachelor and Master degree studies.	All students at public universities and universities of applied sciences in Bachelor and Master degree studies.	All students at public universities and universities of applied sciences in Bachelor and Master degree studies.	All students at public universities and universities of applied sciences in Bachelor and Master degree studies.	All students at public universities and universities of applied sciences in Bachelor and Master degree studies.			
Exceptions on grounds of social hardship³³⁸	Yes	Yes	Yes (New regime has stricter criteria than old regime).	Yes	Yes	Yes	Yes			
Exceptions on grounds of academic excellence	Possible	Universities have the right to exempt up to 10% of students for excellent results or for giving tutorials.	New: No exceptions on grounds of academic excellences. Old: Yes.	Universities have the right to exempt up to 10% of all students on grounds of academic excellence.	No		Universities have the right to exempt up to 5% of all students on grounds of academic excellence.	Parts of the loan can be changed into a grant if students belong to the best 30% best graduates of their cohort.		
Publicly provided student loans open to all students at the same conditions	Yes; provided by L-bank, a bank owned by the State of Baden-Württemberg. Germans, EU-citizens according to free movement, foreigners who have acquired the Abitur in Germany may apply according to § 7 (1), (2) LHGebG.	Yes; provided by the KfW-Förderbank, a publicly owned bank. Germans, EU-citizens according to free movement, foreigners who have acquired the Abitur in Germany may apply according to § 3 (1) StuBeiDaV.	New: No loans, referral of payment after graduation possible, then whole sum has to be paid at once. Old: Loan provided by the KfW-Förderbank a publicly owned bank.	Yes; Landestreuhandstelle Hessen; bank owned by the Land of Hesse	Yes; provided by the KfW-Förderbank, a publicly owned bank.	Yes; provided by the NRW Förderbank, a bank owned by the State of North Rhine-Westphalia.	Yes; provided by the KfW-Förderbank a publicly owned bank.	Means tested support, 50% grant and 50% loan provided by the Federal Government.	Loan open for students in the second half of their studies to finish quicker, to cover extraordinary expenses or subsequent Master studies, limited budget allocated via first come first serve.	Yes; loan open to all students during their first degree and in consecutive Master degrees.
Maximum age for the loan	39 when starting first degree.	40	New: 45, Old: 35	45	35	60	40	30	36	-
Collection of repayment	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Federal Administration	Bank	Bank

³³⁸ All States have included provisions to exempt students on grounds of social hardships from paying tuition fees. However, the scope of these exceptions varies between States. Exceptions on grounds of social hardship usually include the following cases: students who have to take care of disabled or chronically relatives students with a dependent child/children; students with disabilities; students who belong to a family who has three or more children; students who fall under a general hardship clause.

	Baden-Württemberg	Bavaria	Hamburg ³³⁷	Hesse	Lower Saxony	North Rhine-Westphalia	Saarland	Federal Government	Federal Government	Federal Government
Maximum amount	Sum of tuition fees for the normal time-span it takes to finish a degree plus four semesters.	Sum of tuition fees for the normal time-span it takes to finish a degree plus four semesters.	New and Old: Sum of tuition fees for the normal time-span it takes to finish a degree plus two semesters.	Sum of tuition fees for the normal time-span it takes to finish a degree plus four semesters.	Sum of tuition fees for the normal time-span it takes to finish a degree plus four semesters.	Sum of tuition fees for the normal time-span it takes to finish a degree plus four semesters.	Sum of tuition fees for the normal time-span it takes to finish a degree plus four semesters.	Max. € 643 per month for the normal time-span it takes to finish a degree.	€ 300 for 24 month.	€ 100-650 per month for up to seven years.
Interest rate	EURIBOR ³³⁹ + administrative cost maximum interest rate of 5.5%.	EURIBOR + administrative cost + group default risk, maximum interest rate of 8.4%.	New: No interest is charged on deferred fees. Old: EURIBOR + administrative cost + group default risk, max. interest rate of 7.5%.	EURIBOR + administrative cost; maximum interest rate of 7.5% guaranteed until 2011	EURIBOR + 2.12 % for administrative cost	EURIBOR + administrative cost; maximum interest rate of 5.9% guaranteed until 2011	Low interest rate (per January 09 nominal rate 6.92%).	No interest rate on the loan.	EURIBOR + 1%	Low interest rate close to cost of borrowing, guaranteed interest rate of 9.2% cap for 15 year.
Extension of repayment if income under threshold	€ 1060 net per month + € 480 for a partner + € 435 per child, no interest charged for deferred payment	€ 1060 net per month + € 480 for a partner + € 435 per child, no interest charged for deferred payment	New: €30.000 gross income threshold for payment of deferred fees. Old: €1060 net per month + € 480 for a partner + €435 per child	€ 1260	€ 1060 net per month + € 480 for a partner + € 435 per child	€ 960 net per month + € 480 for a partner + € 435 per child	€ 1060 net per month + € 480 for a partner + € 435 per child	€ 1040 net per month + € 520 for a partner + € 470 per child	No	No
Repayment modalities	Students can negotiate their annuities individually between € 50-150 per month; maximum time span for repayment is 20 years.	Students can negotiate their annuities individually; min. € 25 per month; maximum time span for repayment is 25 years.	New: If income threshold has not been reached 10 years after graduation, whole fees are waived. Old: Maximum time span for repayment is 25 years.	Annuities of € 50, 100 or 150 per month.	Students can negotiate their annuities individually; min. € 20 per month; maximum time span for repayment is 20 years.	Students can negotiate their annuities individually between € 50-150 per month; maximum time span for repayment is 20 years.	Students can negotiate their annuities individually; min. € 20 per month; maximum time span for repayment is 25 years.	Students can negotiate their annuities individually; min. € 105 per month; maximum time span for repayment is 20 years.	€ 120 per month, no maximum time span.	Students can negotiate their annuities individually.
Start of repayment	Up to 24 month after graduation	6-24 months after graduation	New: Deferred fees are due when reaching the income threshold. After 10 years fees are waived. Old: Up to 18 months after graduation.	Between 2 and 11 years after graduation	Up to 24 months after graduation	Between 2 and 11 years after graduation	Up to 2 years after graduation	Up to 5 years after graduation	4 years after graduation	6-23 month after graduation

³³⁹ EURIBOR stands for European Interbank Offered Rate and is the official reference interest rate for 6-month loans.

	Baden-Württemberg	Bavaria	Hamburg ³³⁷	Hesse	Lower Saxony	North Rhine-Westphalia	Saarland	Federal Government	Federal Government	Federal Government
Early repayment	Possible from € 50	Possible	Possible	Possible	Possible	Possible	Possible	Possible; better conditions	Possible	Possible
Repayment cap³⁴⁰	€ 15,000	€ 15,000	€ 17,000	€ 15,000	€ 15,000	€ 10,000	€ 15,000	€ 10,000	No	No
Assignment of default risk	No private collateral; part of tuition fee revenue is assigned to a fund to cover defaulting loans. Cost of default are shared between higher education institutions - actual saving rate 1.5% of tuition fee revenue due to low loan take out.	No private collateral; 10% of tuition fee revenue is assigned to a fund to cover defaulting loans. Universities have to cover default cost.	New: The State of Hamburg bears cost of defaults. Old: No private collateral; Part of tuition fee revenue is assigned by law to a fund to cover defaulting loans. Cost of default are shared between higher education institutions.	No private collateral; 10% of tuition fee revenue is assigned to a fund to cover defaulting loans. Assignments are adjusted to default rate. Until 2010 Taxpayer bears the ultimate risk of default.	No private collateral; Part of tuition fee revenue is assigned to a fund to cover defaulting loans. Cost of default are shared between higher education institutions. The ultimate risk bears the taxpayer via a State guarantee for the loans.	No private collateral; Part of tuition fee revenue is assigned to a fund to cover defaulting loans. Cost of default are shared between higher education institutions. The ultimate risk bears the taxpayer because universities are State institutions. actual savings rate 14% of tuition fee revenue.	No private collateral; part of tuition fee revenue is assigned to a fund to cover defaulting loans. Cost of default are shared between higher education institutions.	No private collateral; Federal Government	No private collateral; Federal Governments, the Deutsche Ausgleichsbank transfers the claim to the Federal Government if a debtor defaults.	No collateral; KfW – indirectly the taxpayer.

³⁴⁰ Applies only to students who have received a BAföG loan in addition to an income contingent loan.

3. Normative analysis of tuition fee differentiation according to prior residence in Germany

The impacts of tuition fees on the relevant normative aims provided by the German Constitution crucially depend on the design of the tuition fee system. The analysis in the second chapter of this thesis has shown that potential negative effects of tuition fees on access to higher education can be avoided by combining general tuition fees with a system of income-contingent loans. Income-contingent loans differentiate the final amount of tuition fees paid according to the economic success of graduates. Graduates, who earn a high income, pay full tuition fees plus the interest on the loan. Whereas graduates, who do not profit from their investment in higher education, pay less, and in extreme cases no tuition fees. By differentiating the amount of tuition fees paid according to economic success, we avoid not only the deterrence of students from lower socio-economic background, but also increase private investment in higher education by opening up access to higher education for talented students.

In addition to increasing private investment in higher education, the design of the tuition fee system can also have a positive impact on public investment incentives in higher education. Public investment incentives are currently distorted by the legal framework governing Germany and Europe. In both Germany and the EU, the power to decide about higher education policy has been retained by the decentralised level of political decision making. On the European level, Article 149 EC acknowledges that the main competency over higher education policy remains with the Member States. Member States have the right to decide about higher education finance and are, as in the case of Germany, free to further delegate the competency. According to Article 70 in combination with Article 72 of the German Constitution, the German States, and not the Federal Government have the competency to make decisions regarding higher education policy. This competency also includes the right to decide about the amount of public investment in higher education and the amount of tuition fees, if any.³⁴¹ Thus, if students decide to study in another German State or European Member Country and change their registered residence to this State, they change the constituency which finances their higher education. Depending on the rest of the legal framework surrounding the finance of higher education, student mobility between States or Member States may have significant financial consequences for the host State or host country of the migrating students.

³⁴¹ BVerfGE 112, 226.

At the European level, the legal framework governing higher education finance has been developed through ECJ case law. In its seminal *Gravier* decision, the ECJ granted all European students a right of equal treatment in regard to tuition fees if they decide to study in another Member State.³⁴² Within Germany, with regard to financial conditions of studying, mobile students, who have lived on a long-term basis in another German State, currently enjoy equal treatment.³⁴³ However, it has yet to be decided upon by the GFCC whether mobile students between States have a right to this equal financial treatment. The question of a right to equal financial treatment will definitely be revived when the GFCC hands down its decision in the currently pending similar case which reviews the constitutionality of a statute promulgated by the City State of Bremen.

In the statute in question, Bremen introduced differentiated tuition fees according to students' registered residence while studying.³⁴⁴ German constitutional law and earlier GFCC decisions exhibit a strong presumption towards non-discrimination in higher education law with regard to place of registered residence.³⁴⁵ The lower administrative courts followed this tendency when ruling on the Bremen statute, and on a similar statute in Hamburg which has already been abolished again.³⁴⁶ These statutes introduced differentiated fees with regard to students' residence *while* studying.³⁴⁷ As the Administrative Court of Bremen doubted the constitutionality of the statute, it transferred its case to the GFCC according to Article 100 GG to obtain an authoritative interpretation of the Constitution. Therefore it is quite likely that a right to non-discrimination in the charging of tuition fees with respect to residence *while* studying will soon be established by adjudication. This decision would not automatically apply to residence *before* studying. However it is very likely that many scholars and politicians would interpret such a decision in this way.

Places at universities are normally highly subsidised by the State. Tuition fees almost never cover the full costs of higher education and usually internationally only cover around one third of the

³⁴² Case 293/83 *Gravier v City of Liège* [1985] ECR 593.

³⁴³ See overview of the German tuition fee and income-contingent loan legislation in section 2.6.

³⁴⁴ *Verwaltungsgericht Bremen*, Decision of 17 September 2007, Az 6 K 1577/06, 6 K 1582/06 und 6 K 1587/06.

³⁴⁵ Already the convention drafting the German Constitution (*Parlamentarischer Rat*) stressed that the danger has to be avoided that States exclude students from other States from studying at their publicly financed universities. *Stenographischer Bericht über die 44. Sitzung des Hauptausschusses vom 19. Januar 1949*, *Parlamentarischer Rat* 1949 p. 575 ff. The seminal GFCC case is BVerfGE 33, 303, 331.

³⁴⁶ *Verwaltungsgericht Hamburg*, Decision of 31 January 2005, Az 6 E 4707/04, available at www.hamburg.de, *Verwaltungsgericht Bremen*, Decision of 16 August 2006, Az 6 V 1583/06, 6V 1586/06, 6 V 1588/06, *Verwaltungsgericht Bremen*, Decision of 17 September 2007, Az 6 K 1577/06, 6 K 1582/06 und 6 K 1587/06.

³⁴⁷ *Bremische Studienkontengesetz (BremStKG)* as 18.10.2005, *BremGBI.* p. 550, § 2,6,7,13; *Hamburgisches Hochschulgesetz (HmbHG)* as 18 July 2001, revised 27 May 2003, *HmbGVBl.* p. 138,170,228, § 6 (5-8).

cost.³⁴⁸ The right for mobile students to have equal access to higher education thus places a burden on the public in the student's host state. As mobile students often return to their home state after graduating,³⁴⁹ equal access by students from other states causes a free-riding problem, and thus decreases the higher education investment incentives of decentralised governments. It is one of the reasons for the low investment in higher education in Germany.

Among other solutions, which will be discussed in detail below, this problem could be solved by a change in the design of tuition fees. Then tuition fees would not only provide direct additional resources to increase investment in higher education, but also increase investment in higher education indirectly by increasing the public investment incentives. To increase public investment incentives, tuition fees would have to be differentiated according to *long-term* registered residence before studying. Admittedly, on the other hand, such differentiated tuition fees would also have important disadvantages especially as they may act to restrict students' choice between different universities. Thus, the question arises whether the current distribution of cost of providing higher education to migrant students is socially desirable, and if not, whether differentiated tuition fees are the right instrument with which to reallocate the costs. This question of the social desirability of differentiated tuition fees, according to State of long-term residence within Germany or the EU, is the main research question addressed in the third and fourth chapter of the thesis.

The main advantage of differentiated tuition fees is that they should solve the free-riding problem. The structure of the free-riding problem is identical within Germany and Europe. Thus, the third chapter of the thesis starts out with a discussion of the causes, extent of, and solutions to the free-riding problem in higher education finance in Germany and the European Union (3.1). The problem is then reframed from a law and economics perspective. A number of solutions, including differentiated tuition fees, are derived. From a political economics perspective, differentiated tuition fees according to place of prior residence present an attractive solution to the problem. German State legislators could introduce such a solution on their own without requiring the consent of other legislative bodies. In addition, it is the solution, which has been implemented in the US, another Federal State with decentralised higher education policy competencies. In the US, differentiated tuition fees are an accepted policy and may therefore

³⁴⁸ Based on 2005 data on average spending per student in Germany, tuition fees of €1,000 per year cover between 3.9% of the costs of educating one student in medical studies and 21% in social sciences. See *Statistisches Bundesamt* 2008. Within Europe, the percentage of higher education costs covered by private expenditure varies. On average, in the 19 EU countries, which are also Members of the OECD, 15,7% of all spending on higher education comes from private sources, mostly tuition fees. For an overview see *OECD* 2006 Tables B 3.2b and B 3.3.

³⁴⁹ See below section 3.1.1 for a discussion of this assumption.

serve as an example for Germany. The analysis is conducted on the assumption that the German State legislators have introduced hypothetical statutes which impose full cost tuition fees on migrant students from other German States and from outside Germany.

Then, the hypothetical case of differentiated tuition fees is defined (3.2). In the following section, the most important economic consequences of these differentiated tuition fees according to place of prior residence are derived (3.3). To evaluate the statute according to its economic impacts, a normative benchmark of constitutional values is defined and the impact of the statute on the realisation of the normative constitutional principles will be discussed (3.4). The next section will derive its legal consequences in the form of infringements of fundamental rights (3.5). After finding there has been some infringement, the chapter will turn to discussing a possible justification of the infringements under the proportionality principle (3.6). Finally, the overall conclusion is drawn (3.7).

3.1 Differentiated fees as a solution to the free-riding problem in higher education investment

If as is the case in Germany and Europe, higher education is financed by decentralised governments, students, who intend to study at a university which is not located in their home town or region, often change the constituency financing their higher education.³⁵⁰ In the EU, and also in practice in Germany, these migrant students have a right of equal access to the university system in their new host State. Since the tuition fees charged usually do not cover full cost of higher education per student, the right to equal access forces the migrant student's host State to subsidise the education of the migrant student. To start working after graduation, many migrant students often return to their home State.³⁵¹ The home State then enjoys the positive externalities generated by higher education, described in section 2.2.2. The positive externalities resulting from higher education increase the utility of the citizens in the graduate's State of residence. Thus if mobile students return to their home States after graduation, the utility derived from investment in higher education spills over from the higher education financing host state, to the home State.

As lower spending on higher education will induce more students from within their constituency to attend university in another State, all decentralised governments have an incentive to lower their spending on higher education.³⁵² Following the return of the migrant student after

³⁵⁰ As the structure of the free-riding problem is identical in Germany and Europe, in following the term "States" will refer to German States and European Union Member States.

³⁵¹ See below section 3.1.1.

³⁵² *Blankart* 2008, chapter 26 C 2.a. For anecdotal evidence of the free-riding problem see also *Renzsch*, in *Frankfurter Allgemeine Zeitung*, 15.12.2006, "Föderalismusreform II".

graduation, positive externalities are generated and the State of origin internalises the benefits. Thus it has managed to externalise the cost of higher education to the host State, while reaping the benefits. This is a classic example of free-riding. The free-riding State can then employ its resources to finance other politically rewarding projects, rather than spending on investment in higher education.

As all decentralised governments are faced with the same incentives to externalise the cost of higher education, this will likely lead to overall higher education subsidies which are too low, compared to the potential social benefits of higher education. However, this incentive to free-ride exists independently from the social returns to higher education investment. Even if higher education was a purely private good subsidised by the State out of redistributive motives, States would still try to free-ride. The spatial utility spill-over of higher education externalities is in itself an externality. For decentralised governments a situation similar to a prisoners' dilemma arises. However, in contrast to a prisoners' dilemma, within the German Federation and European Union, governments can communicate with each other and bind themselves to promises, and thus they may eventually overcome the problem by cooperation. In the following section, the extent and practical importance of this free-riding problem is discussed.

3.1.1. Student mobility determines extent of the problem

The extent of student mobility and graduates' probability of returning to their home State to commence work following graduation determines the extent of the free-riding problem. Some first inferences on the potential for free-riding can be drawn from the raw data on student mobility. In addition, also some empirical work has been done trying to test the free-riding hypothesis directly.³⁵³ In Germany, around 33 % of all students move to another State to attend university. This relatively high level of student mobility indicates that to a certain extent the German States have the possibility to free-ride on their neighbours' investments. Not-surprisingly, free-riding is often mentioned as one of the reasons for the persistently low levels of State investment in the German higher education system.³⁵⁴

In contrast, within the European Union on average only around 5.8 % of students leave their home Member State within the EU 19 to attend university in another Member State.³⁵⁵ Thus within the EU, currently the free-riding problem is less relevant than it is in Germany because student mobility is lower in relative, and in some countries even in absolute, terms. However, student mobility is induced by decreases in mobility cost. As the Bologna process aims to reduce

³⁵³ *Büttner and Schwager 2006.*

³⁵⁴ *Stettes 2007 paragraph 3.3.3, Berthold, Gabriel and Ziegele 2007 p. 15 ff.*

³⁵⁵ *OECD 2006 Table C 3.1.*

the mobility costs within Europe, there is a high probability that student mobility will increase in the near future, and thus also the free-riding potential within the EU.³⁵⁶ Mobility is already rapidly increasing within the EU. The OECD reports a 50% increase in student mobility between 2000 and 2004.³⁵⁷ In addition, as the following two tables show, student mobility both within Europe and in Germany is highly unbalanced. This implies that the interests of the different States and Member States involved in solving the problem are very different.

Table 1: Student mobility between German States

	High school Graduates	Students	Places at university in % of high school graduates	In-State students	Percentage of in-State students in all students	Out-of-State students	Student export to other States
Baden-Württemberg	143.039	131.255	92%	93.009	65%	38.246	50.030
Bavaria	146.214	151.875	104%	113.629	78%	38.246	32.585
Berlin 2)	63.367	91.261	144%	46.262	73%	44.999	17.105
Brandenburg	32.386	22.168	68%	9.501	29%	12.667	22.885
Bremen	14.739	19.353	131%	7.836	53%	11.517	6.903
Hamburg	32.381	44.199	136%	21.648	67%	22.551	10.733
Hesse	110.118	106.536	97%	67.526	61%	39.010	42.592
Mecklb.-VP	23.093	21.312	92%	12.583	54%	8.729	10.510
Lower-Saxony	119.019	91.456	77%	59.721	50%	31.735	59.298
North Rhine-Westphalia	335.401	355.349	106%	275.707	82%	79.642	59.694
Rhineland-Palatia	58.245	56.733	97%	27.220	47%	29.513	31.025
Saarland	15.320	12.752	83%	7.874	51%	4.878	7.446
Saxony	61.489	69.460	113%	43.224	70%	26.236	18.265
Sachsen-Anhalt	32.217	27.159	84%	16.218	50%	10.941	15.999
Schleswig-Holstein	35.943	23.997	67%	13.962	39%	10.035	21.981
Thüringen	36.955	33.444	90%	20.534	56%	12.910	16.421
Overall	1.259.926	1.258.309		836.454	66%	421.855	423.472

Students in German Universities 2003 according to State of University and State of High School graduation

Source: Own calculation based on data by the Kultusministerkonferenz 2005

(Leaving out foreign students including bachelor and Masters Students, as far as the new degree structure had already been introduced).

³⁵⁶ The Bologna process is a series of intergovernmental Treaties, which have been negotiated between EU Member States to improve student mobility and increase the competitiveness of the European higher education area. The most important measures to increase mobility are transparent and comparable degrees in a Bachelor/Master degree structure and increasing the quality of higher education in Europe by the establishment of a European quality assurance system in the Bologna declaration of 19 June 1999. The German Ministry for education and research provides ample information about objectives and progress of the Bologna process on its webpage: <http://www.bmbf.de/de/3336.php>.

³⁵⁷ OECD 2006 Table C 3.1.

Table 2: Student mobility between EU Member States

	Difference between incoming and outgoing students	Net-Importing/Net-Exporting Member State
United Kingdom	90.707	Importing
Germany	28.225	Importing
Belgium	19.564	Importing
Austria	10.022	Importing
Sweden	7.988	Importing
Italy	5.836	Importing
Czech Republic	4.384	Importing
Finland	-36.401	Exporting
Ireland	-26.089	Exporting
Netherlands	-14.003	Exporting
Slovak Republic	-13.913	Exporting
Hungary	-12.437	Exporting
Spain	-11.482	Exporting
Poland	-9.622	Exporting
Luxembourg	-9.429	Exporting
Portugal	-7.952	Exporting
Greece	-6.030	Exporting
Denmark	-4.713	Exporting
France	-4.462	Exporting

Source: Own compilation based on OECD Education at a glance 2006 Table C3.8. Mobile students are counted according to their nationality.

As was argued above, student mobility in order to study is only problematic if graduates do not stay in the State which has financed their higher education, but instead return to their home country, move to a third State, or even abroad. Unfortunately, there is no detailed data of graduate migration in Germany and the EU. There are no complete statistics of graduate mobility within Germany relating the State of graduation to the State of long-term residence after graduation. For Germany, *Mohr* 2002 reports that in 1997 22.8% of all graduates moved more than 200 km from their university city to take up a job.³⁵⁸ But she only looks at distance from the place of graduation, but not at graduates' changing States. Also, she did not connect the information of out-migration to mobility before studying.

Some quite restricted studies do provide limited information on the general tendency of the probability of return by German graduates within Germany. *Burckhardt, Schomburg et al.* 2000 review the data collected by universities on their graduates. They find, not surprisingly, that the

³⁵⁸ *Mohr* 2002 Figure 1.

mobility of graduates differs according to subject, university location, and labour market conditions. *Busch and Weigert* 2008 find that the probability of graduate out-migration increases with the probability of student mobility before commencing to study. Whether the graduates moving interstate returned to their home State, or elsewhere, could not be inferred by *Busch* and *Weigert* due to data limitations.³⁵⁹ However, this result shows at least that student mobility causes externalities and parts of the graduates do not primarily benefit the State which has educated them. *Parey and Waldinger* 2006 obtain similar results for international graduates, as they show that international student mobility significantly increases international graduate mobility. On the European level, very little data exists on graduate mobility. One of the few existing studies by *Jabr, Schomburg et al.* 2002 reports that 47% of the students, who have studied in another Member State, return to their home country immediately. Of the remaining graduates, 12 % move to third countries and 41% stay in the host country and work there for at least four to five years. If overall mobility of students were to increase, then the free-riding problem will definitely become more important in the future.³⁶⁰

Due to the lack of reliable data, assumptions with regard to the probability that migrant students return to their home State after graduation have to be based on qualitative arguments. In general, Europeans have a strong attachment to their home country and even region, because they have family ties and a social network there. Consequently, a strong home bias of graduates exists. This home bias makes it very likely that the majority of mobile students will try to return to their home State or country after graduation, at least in the medium to long run. It is therefore assumed that in the long run the probability of graduates returning to their home country exceeds 60% in Germany, and 70% in Europe, even if it may be lower in the first five to ten years after graduation. The probability of return is presumably higher in Europe than in Germany because people are assumed to have a stronger preference for living long-term in their native country, than for living in their region of origin within that country.

Already we can begin to observe some free-riding especially between some neighbouring European countries sharing the same language, like France and Belgium, the Netherlands and Belgium, as well as between Germany and Austria. Germany, France and the Netherlands have limited places compared to demand in very expensive and popular subjects such as medicine. Students, who are not successful in securing a place in their national university system, tend to attempt to enrol in neighbouring countries. Therefore Belgium and Austria have tried to limit the

³⁵⁹ *Busch and Weigert* 2008 section 4. However, the number of mobile students included in the *Busch* paper is unfortunately very small. Similar results were found by *Kodrzycki* 2001 for the United States.

³⁶⁰ See also *Mechtenberg and Strausz* 2008 p. 123 ff.

influx of students coming from neighbouring countries to their university system. These measures have been critically reviewed by the European Commission, and in both cases have failed the test of European law.³⁶¹

I would like to point out again that in the following analysis a student's probability of return following graduation is assumed to be exogenous. In reality, it is of course not exogenous, as States can increase graduate mobility and they can attract graduates by using measures such as tax breaks or green cards. In addition to cutting spending on higher education, attracting graduates is another possible way for decentralised governments to free-ride on other governments' investments in higher education. However these questions are beyond the scope of the following analysis and will not be elaborated upon.

In addition to the data on student mobility, some recent econometric studies support the existence of a free-riding problem. A very small, but growing empirical literature is trying to establish the empirical dimension of the problem. *Büttner and Schwager* 2006 find empirical evidence for the existence of a free-riding problem between German States. Using data on the higher education spending of German States, they detect that States reduce their higher education spending in response to an increase in higher education spending by a neighbouring State.³⁶² However due to small sample problems and measurement errors, these results can only be taken as a first indicator for the existence of the free-riding problem. The analysis of *Busch and Weigert* 2007 confirms the findings of *Büttner and Schwager*. *Busch and Weigert* find, as was already mentioned above, that the probability of graduate out-migration depends significantly and positively on the probability of mobility before starting to study. Unfortunately data limitations do not allow them to infer whether the out-migrating graduates returned to their home State.³⁶³ To my knowledge there is no direct empirical study on higher education investment which examines free-riding between European Member States. As levels of student mobility are still very low, around 5%, it would be highly unlikely to find significant evidence of free-riding in the data yet.³⁶⁴ However, as the Bologna process significantly increases mobility, this will probably change in the near future.

³⁶¹ Case 293/83 *Gravier v City of Liège* [1985] ECR 593, Case C-147/03 *Commission v Republic of Austria* [2005] ECR I-5969; for a thorough discussion see below section 4.1.

³⁶² *Bailey, Rom and Taylor* 2004 find that States in the US also have a tendency to cut public spending on higher education if they spent more than their neighbouring States.

³⁶³ *Busch and Weigert* 2008 section 4.

³⁶⁴ *Mechtenberg and Strausz* 2008 p. 124.

Overall, the raw data on student mobility to attend university within Germany clearly suggests that a possibility to free-ride exists for German State governments. In Europe, the data do not yet allow such conclusions to be drawn on a general level, as the overall level of mobility is still very low. However, between some neighbouring countries, mobility levels are already much higher and do indicate free-riding behaviour. In addition, as the Bologna process is aimed at reducing mobility costs, mobility will probably increase in the future. Thus, so will the potential for governments to try and free-ride. This problem has already been analysed in some detail in the literature, which will be discussed in the following section.

3.1.2. Economic literature on the free-riding problem

The general literature on higher education finance has already analysed several aspects of the free-riding problem. Mostly the analysis is pursued within the theoretical framework of fiscal federalism, but there are also some formal game-theoretic models. The literature on the problem is still limited, but growing, with many important contributions having been made in recent years. The literature has developed a number of solutions to the problem the most important of which are: (1) centralisation of higher education policy competences; (2) the use of transfer payments to compensate the host states for educating migrant students; and (3) giving States the right to differentiate tuition fees according to students' place of prior residence. These are discussed in turn in the following paragraphs.

The first solution, (1) centralisation, is usually suggested by those writing from the perspective of the traditional normative theory of fiscal federalism.³⁶⁵ Fiscal federalism theory focuses on identifying exogenous criteria to assign competencies between different levels of government within a federation.³⁶⁶ The results of the traditional approach in the fiscal federalism literature with regard to competence allocation over the provision of public goods is summarised by *Cooter* in the so-called internalisation prescription: "Assign power over public goods to the smallest unit of government that internalises the effects of its exercise."³⁶⁷ According to the internalisation prescription, the governmental decision making power with regard to higher education should be allocated to the central level because the centralised government will internalise all the positive external effects generated from higher education. In this case, no free-riding problem will arise. Conducting his analysis within such a framework, *Stettes* 2007 recently argued to allocate the right

³⁶⁵ For an overview see *Blankart* 2008 chapter 26, for an application to higher education finance see *Scholsem* 1989.

³⁶⁶ *Oates* 2005, *Blankart* 2008 chapter 26.

³⁶⁷ *Cooter* 2000 p. 107.

and duty to finance higher education to the federal level in Germany, in order to avoid the free-riding problem.³⁶⁸

Centralisation is also the benchmark solution derived to solve the problem of free-riding in the game-theoretical papers of *Büttner and Schwager* 2006, *Kemnitz* 2005, *Schwager* 2007 and *Mechtenberg and Strausz* 2008. In all these formal models, although they differ in details, the free-riding problem is created because a right to equal access to higher education for migrant students exists in a system of decentralised higher education policy competencies. The models show formally that the free-riding problem results in inefficient levels of spending on higher education. This is demonstrated by comparing higher education investment in the non-cooperative Nash equilibrium with the level of higher education investment in the solution of the centralised social welfare maximisation problem, which is the first best solution. *Büttner and Schwager* 2006, *Schwager* 2007 and *Mechtenberg and Strausz* 2008 derive the free-riding problem under the assumption of welfare maximising governments. *Kemnitz* 2005, on the other hand, comes to a similar conclusion assuming exploitative governments. The free-riding problem is therefore not so much a problem of self-interested governments maximising their own utility-function, but a problem of constitutional design.³⁶⁹ Even if real governments were only maximising the welfare of their citizens, the current constitutional allocation over higher education competency would still be setting the wrong incentives.

Alternatively, the free-riding problem can be solved by (2) creating a system of transfer payments. The quantum of the transfer payments would have to ensure that the home state compensates the host states for the full cost of educating migrant students. A system of such transfer payments exists in Switzerland.³⁷⁰ In this system, if a student leaves his State (*Kanton*) after graduating from high school to study in another State, the States of origin compensates the receiving State. In the literature, *Berthold, Gabriel et al.* 2007 suggest a similar system of transfer payments as a solution to the free-riding problem. This solution is also derived by *Gérard* 2007. In the most advanced theoretical model in the literature he derives a system of transfer payments as a second best solution.

³⁶⁸ *Stettes* 2007 paragraph 4.4; on the European level such a solution has been suggested by *O'Leary* 1996b p. 188-189.

³⁶⁹ *Gérard* 2007 p. 448, *Mechtenberg and Strausz* 2008 p. 118. *Kemnitz* 2005 assumes that the exploitative majority of voters support educating children at university because they anticipate that it will widen the tax base in the next period. This allows voters to take on more debt in period 1. This debt distributes income from the university graduates to themselves because the debt has to be repayed in the next period by he graduates. Given decentralised decision making competences, also in this setting a free-riding problem arises as voters anticipate that they will participate in the tax revenues of other jurisdictions via a scheme of fiscal equalisation p. 11.

³⁷⁰ *Interkantonale Universitätsvereinbarung*, as 20 February 1997.

However, the best solution identified in his paper is (3) allowing tuition fee differentiation according to nationality. *Schwager 2007* comes to a similar conclusion.³⁷¹ Assuming decentralised financing for higher education and mobile students, efficient investment in higher education is induced if governments have the right to set tuition fees at their discretion. *Schwager* thus conjectures: “The upshot of this analysis is that un-coordinated sub-national policies in higher education are not, by their nature, inefficient. Rather, any inefficiency arises from an insufficient set of instruments in the hands of the States.”³⁷² Thus tuition fee differentiation has also been formally shown to solve the free-riding problem.

As already mentioned, the most advanced among the formal accounts of the problem is *Gérard 2007*. This paper evaluates all three solutions discussed in this section in a formal framework. *Gérard 2007* models higher education as a local public good. He assumes symmetric governments, mobile students, decentralised decision making on higher education and that this aggregate welfare, defined as the contribution of their future residents to GDP, is maximised by governments. He also assumes that the human capital possessed by a graduate causes local positive externalities and thereby increases the welfare of all residents in the graduate’s jurisdiction.³⁷³ Decentralised governments decide about the level of investment which they want to make in this local public good in order to increase the welfare of the future residents of their constituency. *Gérard* then shows that tuition fees differentiation according to the probability of students returning home after graduation (3), which comes very close to the solution of differentiated tuition fees discussed in this thesis, is Pareto efficient. In his paper, solution (1), centralisation of responsibility over higher education, is also Pareto-efficient. However, given that the right to equal access within the EU prevents tuition fee differentiation, *Gérard* shows that a

³⁷¹ *Schwager 2007* models a situation of decentralised higher education finance, a right to equal access and mobile students. In this situation, decentralised provision of higher education is only efficient if governments have the right to determine tuition fees at their discretion. Given that a club good technology for providing higher education has been assumed, efficient private investment would be induced if governments were allowed to set tuition fees equal to marginal crowding cost for all students. *Schwager* cannot derive differentiated tuition fees as a solution to the free-riding problem because of the model set-up. He has assumed that higher education augments individual productivity. Individual productivity enters the welfare function of welfare maximising governments. Governments are assumed to maximise social welfare defined as the sum of individual productivities minus the cost of providing higher education. Social welfare does not contain any externalities of higher education. Externalities of higher education occur after graduation in the place where the graduate lives. Only if *Schwager* included this externality in his model, could he derive tuition fee differentiation as a way out of the dilemma. But nevertheless, the model points to the possibility of solving the free-riding problem via changing the legal structure with regard to the design of tuition fees instead of centralising the higher education policy competences.

³⁷² *Ibid.* p. 4.

³⁷³ *Gérard 2007* p. 446 equation (4).

system of transfer payments (2) exclusively assigning the cost of higher education to the home country would be still be a Pareto improvement over the current system of equal access.

By now, the free-riding problem has been recognised by the literature. However the analysis of the free-riding problem is very diverse. Furthermore, from an institutional point of view, the discussed solutions are very different. In most papers, with the exception of *Gérard*, the resulting solution to the problem depends on the way the problem itself is modelled or framed. If the problem is analysed within the framework of fiscal federalism, it is natural, as *Stettes 2007* does, to suggest centralisation as the solution. If the problem is analysed as an applied policy problem with the focus on student mobility, then a system of transfer payments is suggested as the solution, as by *Berthold, Gabriel et al. 2007*. Furthermore, if the problem is analysed as an incentive problem in a game-theoretical setting, then also differentiated tuition fees are included in the solutions, e.g. *Gérard 2007* and *Schwager 2007*. From a law and economics perspective, however, the problem is one of constitutional design. From this perspective, all the solutions suggested in the literature, can be discussed within an integrated framework. The next section will thus frame the problem from a law and economics perspective as a problem of constitutional design and discuss the possible solutions to the problem within this framework.

3.1.3. Law and economics analysis of the free-riding problem

The law and economics approach towards the free-riding problem developed in this thesis is different from the earlier literature on the problem in two main respects. First of all, all relevant parts of the legal framework causing the problem are systematically integrated into the analysis. Second, having identified the parts of the legal framework causing the problem, under this approach the actors are identified, who have the power to change the constitutional framework. Their incentives to solve the problem are taken into account. The solutions are then derived and classified according to the constitutional changes they imply, and the political processes that are necessary to implement them.

3.1.3.1 Free-riding as a problem of constitutional design and interpretation

This section will frame the free-riding problem as a problem of constitutional design. The primary addressees of constitutional law are politicians. Constitutional law sets the incentives for political decision making. These incentives determine whether or not a constitution fulfils its most important functions, which are to organise and constrain political power. In general, modern democratic constitutions in the Western world have two functions. First, they organise the allocation of political power. They split public authority into parts, assign these parts as competencies over different areas to different layers of government and organise the political process as a competition between different parties to assume legislative control over the different

parts of public authority. Secondly, constitutions protect individual citizens against the majority by the guarantee of individual rights, which constrain the decision making power of elected politicians.

The competition for the holding of competencies can be interpreted as a competition for political property rights. Following *Moe*, in this thesis, a political property right within a democracy is defined as the right to use democratically transferred political power within the boundaries of the constitution for the term of office.³⁷⁴ In contrast to conventional economic property rights, political property rights have a temporary character.³⁷⁵ They are temporary because they are only assigned to their holders for a certain time. After this time, politicians again have to compete in elections to stay in power and to retain their political property right. Political property rights are therefore bounded by elections. Outcomes in an election are here interpreted as the returns to political property rights. Politicians use their political property rights to win the election. They can only hold on to their property rights if they maximise the return from their property rights.

Organising and restricting political power, constitutions are crucial for the two most important functions of democracy: aligning the interests of the politicians with the interests of the citizens; and facilitating political cooperation to realise gains from collective action. The best way to align the interests of citizens and officials exercising public authority is generally agreed to be via a democratic competition for political property rights.³⁷⁶ Nevertheless, even this 'best' organisation of the political process has its drawbacks. In a democracy, decisions are taken by majorities. The majority has a strong incentive to transfer wealth to its members by creating public benefits for its members only, e.g. by limiting access to higher education financed out of general taxes borne by all citizens.³⁷⁷ To avoid exploitation of the minority by excluding them from enjoying benefits, access to public benefits has to be equally secured for all members of society. Access is secured by the second defining feature of modern constitutions, the protection of individual rights.³⁷⁸ Individual rights limit the decision making power of politicians, and thus also place boundaries on the political property rights. Non-discrimination rights with regard to access to public benefits are one important means by which to avoid redistribution by the majority to themselves, and to encourage investment. Political property rights thus have the following defining elements: the

³⁷⁴ For a definition and discussion of the concept of political property rights see *Moe* 1990 p. 227 and *Richter and Furubotn* 2003 p. 521. *Alston and Mueller* 2006 e.g. p. 89 and *Engelhardt* 1998 e.g. p. 11 also refer to political decision competencies as political property rights.

³⁷⁵ For an overview of the theory of conventional economic property rights see *Schäfer and Ott* 2005 and *Richter and Furubotn* 2003 chapter III.

³⁷⁶ *Cooter* 2000 p. 359-360.

³⁷⁷ *Ibid.* p. 109.

³⁷⁸ *Ibid.* p. 241 ff.

policy competency per se; and, the temporal, spatial and individual rights boundaries of this competency.

Finally, recent theories of political governance interpret democracy, not only in the traditional way as a means of preference aggregation.³⁷⁹ They also interpret it as a tool by which to establish the credible commitment of a government.³⁸⁰ The most important premise of this approach is that politicians, comparable to entrepreneurs in economic bargains, try to realise joint surpluses in their political bargains.³⁸¹ These political bargains are subject to all the traditional problems of bargaining that prevent a deal from being reached or the outcome from being efficient, e.g. renegeing on promises and hold up.³⁸² These impediments to successful bargaining increase the transaction costs of political bargaining. The extent of the impediments to the transactions, and therefore the extent of the transaction costs incurred during political bargaining, crucially depends on the design of political institutions, and on the allocation of the political property rights.³⁸³ From this perspective, constitutional design and the definition of the political property rights influences the likelihood of political cooperation across levels of governments, and the terms of agreement between governments.

In the case of higher education finance in Germany and Europe, it is the governments at the decentralised level which possess the political property right to decide about the amount and form of financing given to higher education. This competency is bounded by the other provisions of the German Constitution and the EC Treaty. Therefore, the political property rights with regard to higher education policies are attenuated by the individual rights of equal access to higher education. According to the theoretical approach just outlined above, the rights to equal access in general, are supposed to discourage excessive redistribution and encourage productive public investment in higher education, which is accessible to all citizens. However in fact, non-discrimination in access to higher education does not increase investment in higher education with regard to all criteria.

Non-discrimination with regard to students' prior residence, in contrast to non-discrimination with regard to race, gender, religion or age, decreases the incentives of politicians to invest in higher education. If governments must not discriminate against students from other constituencies, then this means that the right to equal access to higher education is effectively

³⁷⁹ *Arrow* 1963.

³⁸⁰ *Alt and Shepsle* 1990.

³⁸¹ *Masten* 2005 p. 650.

³⁸² *Moe* 1990 p. 219 ff., *Cooter* 2000 p. 108 ff.

³⁸³ *Moe* 1990 p. 219 ff., *Cooter* 2000 p. 108 ff.

also granted to persons who do not live permanently in the constituency of the government responsible for providing higher education in that region. As graduates return home, the utility derived from higher education will spill over to other constituencies. These beneficiaries of the positive higher education externalities will not vote in the elections for the government which has financed the higher education. Therefore politicians investing in higher education will not be rewarded for their actions with the support of the beneficiaries from higher education investment. Thus they will have lower incentives to invest in this public service than otherwise. In addition, knowing that some students will leave the state to study and return later, politicians also have the option to benefit from the investments made in other constituencies. Thereby they have an incentive to lower their own investments in higher education and to rather spend their tax revenues on other politically rewarding objectives.

The Constitution assigns policy competencies over higher education to the decentralised level, and protects the right to equal access to all students regardless of their prior residence. This constitutional framework creates mismatch between the group of beneficiaries and voters, which leads to the free-riding problem. Thus, the problem is one of incorrect incentives being set by constitutional law. The approach to the problem taken here is analogous to that taken by *Coase*. *Coase* argued that an externality problem was neither caused by only the injurer nor by the victim suffering the loss, but originated from the interaction between the two parties.³⁸⁴ In the same way, the externality in this example is not caused by the migrating student and suffered by the decentralised government which has financed the higher education. Instead, the problem arises from the combination of these two features in the provisions of the Constitution, the two dimensions of the political property rights. The problem can therefore be theoretically solved by re-defining either one.

As argued above, most authors dealing with this problem tend to focus on changing the allocation of competencies within the Constitution in order to solve the problem. The literature has discussed in depth the different possible allocation of competencies which might solve the problem. It has, with the exemption of *Schwager* 2007 and *Gérard* 2007, not paid sufficient attention to the fact that the free-riding problem is equally caused by the Constitutional protection given to the right to equal treatment. Framing the problem as jointly caused by the allocation of competencies in conjunction with the interpretation of individual rights, opens up a new way of deriving and classifying solutions.

³⁸⁴ *Coase* 1960.

3.1.3.2 Constitutional design according to “institutional congruence” solves problem

If badly designed political property rights have caused the free-riding problem, the crucial question is which design of political property rights will avoid the free-riding problem. In order to address problems of federal constitutional design, *Blankart* has developed the concept of institutional congruence. Institutional congruence defines how political decision making competencies should be allocated within federal entities.³⁸⁵ According to *Blankart*, institutional congruence exists if the allocation of a political competency about the provision of a public good leads to an identity between three groups of people. These three groups, which have to have identical members under institutional congruence, are the beneficiaries of the public good, the taxpayers financing it and the decision makers, here the voters, who elect the government responsible for providing the public good. If this correspondence in identity exists, benefits, costs and political rewards of a public good all occur within the same group. Then, the decisions of democratically elected politicians have no externalities, neither with regard to benefits, nor with regard to costs, nor with regard to political feedback, in the form of votes.

From this perspective, the free-riding problem with regard to higher education investment in Germany and Europe is caused by allocating political property rights in a way which does not adhere to the principles of ensuring institutional congruence. Institutional congruence is destroyed because, given decentralised higher education policy competencies and rights to equal access, mobile students who return home after graduation generate utility spillovers. Utility is enjoyed by the beneficiaries, who are the residents of the constituency where the graduate has migrated to, and not by the voters and taxpayers who are the residents in the constituency which has financed the university where the graduate has studied. If political property rights would have been designed taking into account the institutional congruence requirements of higher education finance, these collectives would have been identical, and no free-riding problem would have occurred. Henceforth, finding solutions to the free-riding problem by redefining political property rights will be guided by the concept of institutional congruence. If we are able to establish that the beneficiaries of, voters for, and taxpayers for, a public good are identical, then we are able to re-establish institutional congruence. There are several ways in which this may be done. These options include the solutions to the free-riding problem identified in the literature: (1) centralisation; (2) transfer payments; and (3) differentiated tuition fees.

The obvious option is to restore institutional congruence by centralising the decision competency over higher education policy to the Federal or EU level. If higher education policy is centralised,

³⁸⁵ *Blankart* 2008 chapter 26. For a critique see *Borck* 2003.

then even students who move between States will still be attending university within the geographic boundaries of the entity which has competency over higher education financing. Thus (1) the classical centralisation solution to the free-riding problem would also restore institutional congruence.³⁸⁶ Additionally, institutional congruence can also be restored while retaining the decentralised allocation of competencies. If the migrant students' host state were to be compensated for its expenses incurred in educating the migrant students, then institutional congruence would also be restored. These compensation payments could either be made by the student's home state in the form of transfer payments (2) or by the students themselves in form of higher tuition fees (3). In this case, the groups of taxpayers, beneficiaries and voters on higher education involved would also be identical, as the education of mobile students would no longer be being financed by the host state. Therefore differentiated tuition fees and transfer payments, the other two solutions suggested by the literature, also re-establish institutional congruence.

Differentiated tuition fees, the third solution by which to restore institutional congruence while leaving the allocation of competencies unchanged, solves the problem by restricting student mobility. This mechanism points to a fourth solution. Restrictions on student mobility could also be implemented by either giving decentralised governments the right to exclude mobile students from their universities. This solution (4) could only be implemented if the right to equal treatment regardless of the students' prior residence was abolished. This solution has until now been rather neglected in the literature, probably because abolishing the right to equal treatment in regard to student's prior residence has not been considered legally feasible.³⁸⁷

Compared to the classical economic theory of fiscal federalism, the advantage of choosing the framework of institutional congruence to discuss solutions to the problem of competency allocation within a federation is that institutional congruence has no in-built tendency towards centralisation.³⁸⁸ Instead, institutional congruence defines the prerequisites necessary for decentralised decision making, without externalities. If political decisions have no externalities, governments can credibly enter into bargains to internalise the utility spillovers of public goods. Its focus on facilitating intergovernmental bargaining is the main advantage of this concept and the reason why it is applied here.

³⁸⁶ *Blankart* 2008 chapter 26.

³⁸⁷ One exception is *van der Mei* 2005, who suggests a system of quotas for mobile students within the EU, to limit the potential impact of the EU right to equal access to publicly financed universities on Member States' public finances. In our example, the quota for foreign students would be reduced to zero.

³⁸⁸ *Blankart* 2008 chapter 26 C 3.

The concept of institutional congruence can also be related to the concept of political property rights. If there are no externalities generated by political decisions, politicians are able to reap the full reward of their decisions. In such cases they can credibly enter into bargains with other governments to realise the potential surplus from cooperation. If institutional congruence does not exist, then the incentives of the politicians to bargain with each other and reach an agreement are decreased, and the terms of any agreement reached are changed. Defining political property rights so as to create institutional congruence facilitates intergovernmental bargaining and reduces the transaction costs of political bargaining.

Expressed in the terminology of political property rights, institutional congruence can be re-established in two ways. Either the geographical boundaries of the political property right could be redefined, in our example by centralising higher education policy. Or, in order to achieve the same effect, the individual boundaries of the political property right, the right to equal treatment for the migrant students, could be restricted or even abolished. However, the third solution, a system of transfer payments, would not require any changes in the political property rights. Instead, it would need consent between the States. This leads to a second categorisation according to the political actors, who need to consent to implement a solution. These two dimensions of categorisation led to the following matrix:

Table 3: Solutions to the free-riding problem

Political property rights / Political process	Change geographical boundaries	Change individual rights boundaries	No change in political property rights
Cooperation	Centralisation (1)		Transfer payments (2)
No cooperation		Differentiated fees (3) Exclude migrant students (4)	

On the horizontal axis, the possible solutions to the free-riding problem are classified by the necessary changes in the design of the political property right. The first category requires a change in the geographical boundaries of the political property rights. This category is comprised only of solution (1) centralisation. The second category of solutions requires a restriction or abolishment of the individual boundaries of political property rights. This category comprises the solution and (3) giving them the right to introduce differentiated tuition fees and (4) giving decentralised governments the right to exclude migrant students from their universities.

On the vertical axis of Table 3, solutions are ordered according to level of cooperation necessary to implement them. Some solutions can be implemented by the State legislator independently and some in only in cooperation with other legislators. If governments agreed on a system of transfer payments, which compensated the host State for the expenses spent on higher education for migrant students, the free-riding incentives would disappear. As there is no institutional structure preventing governments from cooperating, political cooperation could in fact also solve the free-riding problem. Therefore, the introduction of (2) transfer payments is classified as requiring political cooperation. Also this group includes solution (1) the centralisation of competencies. In Germany, transfer payments could be negotiated between the State governments only, without the involvement of the Federal Government. Centralisation, on the contrary, would require changing the German Constitution, especially Articles 70 GG and 72 GG, and thus would require the votes of three quarter of Members of the *Bundestag* and the *Bundesrat* representing the States. Therefore, the different political solutions would require the consent of different political actors.

Alternatively, there are solutions, which can be unilaterally implemented by a decentralised government. These solutions are (3) the introduction of differentiated tuition fees and (4) the closure of universities to migrant students. These policy measures would infringe the right to equal treatment, and the GFCC and possibly the ECJ would finally have to decide whether they were constitutional or in accordance with the EC Treaty. But, in the beginning, State governments would be free to legislate on these issues without the consent of other legislative bodies.

3.1.3.3 Relation between the solutions

If governments were to agree on (2) a system of transfer payments, within which the State of origin would have to compensate the host State for the educational expenditures made on its migrant students, this system would create the best of all worlds. In this best of all worlds, politicians' incentives to invest in higher education would be increased because the free-riding incentive would disappear. Also the principles of non-discrimination with regard to students' prior residence could be applied, maintaining an individual's right to free choice of occupation and student mobility. If it was implemented, this solution would be superior to any other solution. However, for the implementation of this solution to be possible, certain conditions have to be fulfilled.

First cooperation is needed to establish a system of transfer payments, through which to internalise the externalities of higher education finance. The free-riding incentives arise because

the government of one State provides a positive externality, a benefit, to the government of another State.³⁸⁹ Successful bargaining to internalise the externalities presupposes that there is a cooperative surplus, and that governments can credibly commit to the bargain. For voluntary exchange between actors to take place, well-defined property rights are a prerequisite.³⁹⁰ If economic property rights are well-defined, actors can bargain and agree to transfer the property right to the individual valuing it most. Thus economic property rights further exchanges in the private market. As already mentioned above, also in the political market, the definition of political property rights is important for the outcome of the political bargaining process. The definition and boundaries of political property rights influence the likelihood of an agreement being concluded and the distribution of the surplus realised by the bargain. Bargaining theory can be used to identify the factors which make an agreement more likely and which determine the distribution of the surplus.³⁹¹

To solve the free-riding problem completely, a bargaining agreement between all German States would be necessary as every State exports at least some students to all the other States and imports some as well.³⁹² The first condition for the concluding of an intergovernmental agreement between the German States or the European Member States on the assignment of the cost of higher education for migrant students is the existence of a cooperative surplus. Second, even if a surplus exists, then the transaction costs involved in bargaining must not be prohibitively high. The transaction costs of bargaining, and thus the likelihood of the agreement, are influenced by the constitutional allocation of rights. Third, the relative bargaining power of the parties determines the distribution of the surplus.³⁹³ With regard to the financing of higher education we have a situation where already the first condition is unfulfilled. No cooperative surplus between governments can be seen to exist.³⁹⁴

Presently any cooperative surplus is destroyed by the imbalances between net student importing and net student exporting States within Germany and Europe and the current right of equal access to publicly financed universities.³⁹⁵ The net student exporting States have no interest to participate in a system of compensation for the cost of student mobility. Under a system of transfer payments the net student exporting countries would become net-contributors. The

³⁸⁹ Cooter 2000 p. 109.

³⁹⁰ Cooter and Ulen 2008 p. 193.

³⁹¹ Cooter 2000 p. 111.

³⁹² Compare Table A on mobility of students within Germany 2003 by the Kultusministerkonferenz: www.kmk.org.

³⁹³ Cooter 2000 p. 111.

³⁹⁴ The only way to create a surplus would be to include other political problems in the bargain.

³⁹⁵ See section 3.1.1 of this thesis.

contributions to the scheme would shift the cost of student mobility from the host country to the country of origin. Since it would only increase their costs without creating any additional benefits, the net student exporting countries have no incentives to enter into such cooperation.

If however, the right to equal access was restricted or abolished, then these incentives would be changed. Thereby, the two solutions of the free-riding problem are interconnected. Restricting or abolishing the right to equal access to higher education would change the potential welfare gains and welfare losses the decentralised governments could derive from bargaining. Under the altered legal framework, a cooperative surplus would exist. This surplus could then be realised by bargaining. Therefore, restricting the right to equal treatment in its operation to higher education would make a system of transfer payments more likely. Under such a system, net student importing countries could threaten to close their universities to migrant students, or to charge them full cost fees. Then, if States thought it advantageous for them to spend less on their own domestic higher education system, they would have to compensate other countries for educating their high school graduates to a tertiary level instead of educating them at home. That is, net student exporting countries would then have to offer financial compensation for their student outflows.

The likelihood of such a bargain being concluded between States would again depend on the decision rule being applied.³⁹⁶ There are two important decisions rules: unanimity rule vs. majority rule. In both Germany and Europe, the current decision rule for intergovernmental bargains is unanimity. Under the unanimity rule, the probability of concluding an agreement decreases with the number of actors bargaining with each other. Higher education policy is completely allocated to the State level in Germany, and under the EC Treaty is retained by the Member States according to the allocation of competencies in Article 149 EC. As with the 26 cantons of Switzerland, the 16 German States could agree on a transfer scheme. The 27 Member States of the EU might also strike a deal, but it will be much more difficult than it would be within Germany because the number of veto players is higher.

In the US, a system of differentiated fees does exist.³⁹⁷ As yet, no bargaining agreements have taken place to increase the choice of university for students by creating a right to equal access in other States. This observation has several possible explanations and does not rule out the possibility of an agreement in Germany or Europe. 50 US States might just be too many to come

³⁹⁶ Cooter 2000 p. 111 ff.

³⁹⁷ For an overview of the US system see *van der Mei* 2003 p. 401 ff.

to an agreement about sharing the costs. Second, voters in the US do not oppose tuition fees to the same extent as the German and European voters do. This may be because the many private American universities charging high fees, but also offering high quality higher education, have created the notion that a high price also indicates a high quality of higher education. Third, the States in the US are much bigger than the German States, even though they are not bigger than most European Member States. Therefore students still have a lot of choice between universities in their State and they just might not impose enough political pressure for US State governments to overcome the obstacles of costly political negotiations. Also, the terms of the agreement would be influenced by the relative bargaining power of the different states. The unanimity rule shifts the bargaining power to the party that needs cooperation least.³⁹⁸ Majority rule shifts bargaining power to members of the national coalition.³⁹⁹

3.1.4. Conclusion

In this section the free-riding problem has been framed from a law and economics perspective, as a problem of misspecification of political property rights. Based on this framework, solutions to the problem have been derived from the optimal design of political property rights. The optimal design of political property rights has been based on the concept of institutional congruence. The solutions found can be classified according to the aspect of the political property right which need to be changed for their implementation. Political property rights have two defining aspects: the allocation of a political competency; and the boundaries of the fundamental rights and elections, which restrict the exercise of the political competency. The classification of solutions according to the aspects of the political property rights involved leads to two alternative solutions: redefining the geographical boundaries of the political property right; or redefining the individual boundaries of the political property right. Redefining the geographical boundaries leads to centralisation as a solution. Redefining the individual boundaries of the political property right by restricting or abolishing the right to equal treatment implies giving decentralised governments the right to exclude migrant students from their universities, or to charge migrant students higher tuition fees, as alternative solutions. Thus, the problem could be resolved by intergovernmental bargaining, if the right to equal treatment did not exist. This insight represents the value added by applying economic analysis of law to this problem.

The third solution, transfer payments, leaves the boundaries of the political property right unchanged. Instead it leads to an alternative classification. Alternatively, the solutions can be classified according to the degree of political independence with which they can be implemented.

³⁹⁸ Cooter 2000 p. 112.

³⁹⁹ Ibid. p. 363-364.

In this context, only independence and cooperation become relevant. From this perspective, to solve the problem, a decentralised government could introduce a statute independently, which restricts the right to equal treatment. This statute would then only be subject to review by the GFCC or ECJ. Alternatively, the decentralised government could try to bargain with other decentralised governments to solve the problem by establishing a system of transfer payments, or a reallocation of competency.

3.2 Hypothetical ‘Higher-fees-for-migrant-students’ case

Among the solutions to the problem of free-riding in higher education finance, transfer payments and centralisation are the classic, and most often suggested solutions. From a political economy perspective however, their implementation is very unlikely. In the United States, on the other hand, the problem of free-riding in higher education investment is avoided by differentiated tuition fees. Differentiated tuition fees would be a much easier solution to implement because of the fact above discussed that States legislators can decide upon them independently from other legislative bodies. The implementation of differentiated tuition fees would therefore only depend on the review of the GFCC on the German level, and of the ECJ on the European level. Therefore, this solution to the problem and potential alteration to the design of tuition fees has been chosen to be discussed in detail in this thesis.

This chapter starts from the hypothetical assumption of a German State introducing by legislation differentiated tuition fees according to State of prior long-term residence. The State’s government argues that increasing investment in higher education without introducing differentiated tuition fees will induce neighbouring States to reduce their spending on higher education and to free-ride on its higher education investments. After the first State has introduced this legislation, the other 15 States are assumed to follow quite quickly and introducing identical hypothetical statutes, because they wish to avoid that they have to receive migrant students from other States without financial compensation but cannot send any to other States. This leads to a hypothetical scenario of a system of differentiated tuition fees according to place of prior residence in Germany.

The hypothetical statutes will be the basis for discussing the social desirability of tuition fee differentiation both in Germany and also in Europe. An analogous assumption will be made at the beginning of chapter four to take the analysis to the European level. All State governments implement the following policy of higher education finance by legislation:

- Students, who have lived permanently, which is defined as longer than five years, outside the State before they apply to university, have to pay full cost tuition fees. The full cost fees are charged to students coming from other German States, from other European Union Member States, and from all other foreigners.
- Students, who have lived permanently, which is defined as more than five years, in the State financing the university before applying to university pay tuition fees of € 500 per semester.
- The State provides a system of income-contingent loans, but the loan system offers financing of tuition fees only for its in-State students.

This chapter seeks to normatively evaluate such a system of differentiated fees under the *Van-Aaken*-approach in Germany. As the *Van-Aaken*-approach infers social desirability from the constitutionality of a piece of legislation, this thesis will now discuss the constitutionality of the hypothetical scenario just created. For the sake of a more vivid analysis, the problem will now be framed as a hypothetical case. The case will be referred to as *Higher fees for migrant students case*. It will be assumed that the Federal government challenges all the *Higher fees for migrant students* statutes [hereinafter *Higher Fees* statutes], separately before the GFCC arguing that every *Higher Fees* statute infringes potential students' right to equal access to publicly provided higher education according to Article 12 (1) GG in combination with Article 3 (1) and 20 (1) GG, her right to free choice of place of training according to Article 12 (1) GG and her right to non-discrimination according to Article 3 (1). The GFCC accepts the cases and bundles them into one proceeding of one representative *Higher Fees* statute. The following analysis will discuss the constitutionality of this representative *Higher Fees* statute. However, when discussing this representative case, implicitly, the whole situation of differentiated tuition fees in all German States is discussed.

To discuss the same problem on the European level, an analogous assumption is taken. It is assumed that the other European Member States observe the changes in the German legal situation with regard to tuition fees. The EU Member States are also assumed to react and to introduce hypothetical *Higher Fees* statutes. To evaluate this situation under the *Van-Aaken*-

approach, in chapter four, the Commission is assumed to challenge the European *Higher Fees* statutes before the ECJ with regard to the differentiation of tuition fees between European citizens.

The alternative to introducing differentiated tuition fees for State governments would be to completely stop admitting inter-state students to its universities. In addition to the first statute above, it is assumed that the State legislators have designed second alternative statutes. These are referred to as the *No admission of migrant students* statutes [hereinafter *No Admission* statutes]. If they were introduced, these hypothetical statutes would be assumed to contain the following main points:

- Students, who have lived permanently, which is defined as longer than five years, outside the State before they apply to university, do not have to be admitted to a publicly financed university in that State.
- In-State applicants, having lived longer than five years in the State, get preferential treatment and are admitted before out-of-State students. This applies to students coming from other German States, from other Member States of the European Union and students from third countries.
- With respect to all the other conditions, in-State and out-of-State students are treated identically.

From the perspective of the State legislators, the aim of the statute is to stop other States from free-riding on their investments in higher education, and thereby to increase the quality of higher education available to their inhabitants. To assess the constitutionality of the representative *Higher Fees* statute, which will be the primary aim of this chapter, it will be necessary to show in the necessity test that the *Higher Fees* statute is the mildest means to achieve the aim of the legislation. To discuss, whether there are milder means than differentiated tuition fees, the impact of the *Higher Fees* statute on the realisation of normative principles will be compared to the consequences of the alternative measure, the *No admission* statute. To prepare this comparison, which will only be taken much later in the analysis, the impacts of the *No admission* statute will already be discussed here. It has been pointed out earlier already that the assumptions with regard to the *Higher Fees* and *No Admission* statutes, especially with regard to the financing of fees for out-of-State students have important consequences for the impact of these statutes. In case, we would for instance assume, that student loans or grants for out-of-State students were available,

this would change the results. Having this reservation in mind, we will now embark on the economic impact assessment of the two statutes under discussion here.

3.3 Economic impact assessment

The introduction of a hypothetical *Higher fees* statute and its alternative of *No admissions* statute by a State legislator would have important, real consequences on the behaviour of both States and students. The analysis of these consequences will later form the basis for their normative assessment according to constitutional principles in the proportionality test. In this section, the impacts that charging differentiated tuition fees to migrant students, and introducing a stop to the admission of migrant students would have on demand for, and supply of, higher education will be discussed based on economic theory.

This section is structured as follows. First, the impact of the hypothetical statutes on demand for higher education is analysed with regard to three aspects of demand: overall demand; the distribution of demand between different institutions; and the effect on demand of students from different socio-economic backgrounds. Then, the impact of both statutes on the supply of higher education is analysed. This part draws on the analysis on public incentives in higher education conducted in the preceding chapter. Finally, the overall impact such statutes would have on human capital formation is discussed. This is influenced not only by the level of investment in education, but is also influenced by reduced student mobility.

3.3.1. Demand for higher education not affected

The introduction of differentiated tuition fees would not have a strong impact on the overall demand for higher education. Demand for higher education in general depends on its price. The statute should not decrease demand because in the scenario underlying this thesis in-State tuition fees would still be very moderate, and backed up by income-contingent loans. If migrant students had to pay full cost tuition fees, the price discrimination would definitely impact on students' decision to study in another State. As most students would not be able to afford an out-of-State higher education, if full cost fees were charged, the overwhelming majority of students would have to study in their home States. Thus, the demand of individual students would simply be redirected to the universities in their home State. The reason there would be no decrease or change in overall demand is that higher education would continue to be available in State at the same price as the status-quo. However, student mobility within Germany and within Europe would be reduced significantly.

The alternative legislative measure, the *No Admission* statute, would have similar impacts on demand for higher education. Since, also under this statute, in-State higher education would still

be available at a tuition fee of € 500 per semester, overall demand for higher education would also not decrease. However, if all States introduced such a statute, the admission stop on migrant students would potentially reduce student migration to zero.

In addition, the *Higher Fees* statute would affect the choice of university of students from lower socio-economic backgrounds more than students from high socio-economic backgrounds. Students with affluent parents, who are determined to study out-of-State, may still be able to finance the full cost tuition fees, even without a system of publicly provided student loans. However students from lower socio-economic backgrounds will definitely not be able to afford the full cost fees and therefore would be forced to study in-State, or not all.

The complete exclusion of migrant students from publicly financed universities altogether, as contained in the *No Admission* statute, would impact on the choices available to students from all kinds of socio-economic backgrounds identically. They all would have no other chance for getting access to a German university, other than in their home State. However children from affluent backgrounds would still have more opportunities to substitute public education by private education. Thus, students from lower socio-economic backgrounds would be more restricted in their choice of university under both legislative measures, the *Higher Fees* statute and the *No Admission* statute than their richer colleagues.

3.3.2. Supply of higher education increased

This section will analyse the impact of a system of differentiated tuition fees according to prior residence on supply of higher education. First, the impact of differentiated tuition fees on spending on higher education will be analysed, which determines supply of higher education. Up to now, spending on higher education was used as a proxy for human capital, the outcome of higher education, which determines the economic and social importance of higher education.⁴⁰⁰ Student mobility, however, also directly affects the formation of human capital. Therefore, first the impact on spending and then the impact on human capital are analysed.

Under the current legal situation in both Germany and Europe, governments are provided with incentives to free-ride on their neighbours' higher education investments. Free-riding reduces overall investment in higher education.⁴⁰¹ The corresponding reduction in the overall supply of higher education may result in two potential effects. Either, the quality of higher education for every student is reduced if fewer resources are spent on the same number of places at university.

⁴⁰⁰ See above section 2.2.

⁴⁰¹ See above section 3.1.3.1.

Or, decreased spending reduces the supply by reducing the number of places provided at universities. As has already been discussed in the preceding section, legislative restrictions on student mobility would solve the free-riding problem in higher education finance. By all States introducing a corresponding statute, the free-riding incentives currently presented to governments would disappear.⁴⁰² The probability that rational politicians will sooner or later react to changed incentives is very high. C.p., the *Higher Fees* statute would, with a high probability, cause overall investment in higher education to increase.⁴⁰³

Since in Germany around 30% of students move interstate to study, compared to less than 5 % in Europe, the increase in incentives which would arise through the introduction of differentiated tuition fees would presently be far higher in Germany than in Europe.⁴⁰⁴ However the Bologna process will increase the mobility of students within Europe. In addition, the low average level of student mobility within Europe hides the fact that between some neighbouring States mobility is much higher. This movement between such States also implies there is a higher potential for free-riding between these States. There are no reliable data available to indicate the amount of increase in higher education investment which would be expected.⁴⁰⁵

Investment in higher education is important because it is a prerequisite for the formation of human capital. Increasing investment in higher education is considered a proxy for increasing human capital. Increased spending on higher education would definitely increase the formation of human capital, the outcome of the higher education process we are interested in. The human capital which is generated creates externalities and has a positive impact on growth. The effect of differentiated fees on the creation of human capital will however be ambiguous and may be mitigated again by a negative effect of reduced student mobility on human capital formation. Since student mobility has a positive impact on human capital any measure which would reduce student mobility would also reduce the development of human capital.

The predicted reduction in student mobility by either of the two legislative alternatives would have a countervailing negative effect on the amount of human capital formed in the higher

⁴⁰² See above section 3.1.3.2.

⁴⁰³ The differentiation of tuition fees according to the student's place of prior residence would however also create administrative costs. However, as the registries of residence in Germany work very well, the magnitude of the administrative costs would very likely be much smaller than the positive effect tuition fees would have on the investment incentives of politicians.

⁴⁰⁴ See above section 3.1.1.

⁴⁰⁵ The results of the only empirical study, *Büttner and Schwager 2006*, suffer from problems of measurement and missing data. *Büttner and Schwager 2006* p. 23. See above section 3.1.1 for in depth analysis of this question.

education system due to two main reasons. The first negative effect would arise because student mobility increases the chances of properly matching students with the right university and course. In addition, movement in itself increases the skills of students. These two positive effects would be lost or at least diminished should students be forced to study in their home state. As students differ in ability, and universities in quality and in specialisation, there is a matching problem between students and universities in the market for higher education.⁴⁰⁶ Student mobility helps to solve the matching problem and a positive matching effect arises from student mobility. The right to equal access increases the choices available to students when selecting a university and increases the chances that students will be assigned to the university which offers them the best training, given their particular talent. By matching talent and courses, the quality of human capital formed by higher education is increased. This additional human capital would be lost, if student were less mobile due to differentiated tuition fees according to State of prior long-term residence.

The second positive effect of students' mobility, which would be lost, is the increase in skills through moving.⁴⁰⁷ This skills effect derives from the fact that in addition to the knowledge acquired through classes students acquire additional skills simply by moving to another city. These non classroom skills also increase the amount of human capital formed by the higher education system. The additional skills are acquired by having to cope within a completely different environment without the support of family or friends, and perhaps being exposed to a culturally different environment.⁴⁰⁸ The experience of a new and different environment increases personal flexibility and the ability of students to cope with unforeseen situations. Individuals, who have this capability, will usually be more productive and more resilient. The increase in skills gained by moving to a new city is probably relatively small within the national context of Germany. However within the context of Europe, it is much bigger, because often the necessity arises to learn or improve a foreign language to live in another European Member State. In the European context, student mobility supports mutual understanding and support for European Integration.⁴⁰⁹ By improving the outcome of the matching process and by creating additional skills, student mobility gives rise to further positive externalities of higher education.

Additionally, the literature assumes that student mobility creates a competition effect.⁴¹⁰ If a significant part of the migrant student population remained in their host country after graduation, then competition between governments with regard to university quality would occur.

⁴⁰⁶ *Winston 1999, Hansmann 1999.*

⁴⁰⁷ *Mechtenberg and Strausz 2008 p. 110.*

⁴⁰⁸ *Callender 2006 p. 123.*

⁴⁰⁹ *King and Ruiz-Gelices 2003.*

⁴¹⁰ *Mechtenberg and Strausz 2008 and Kemnitz 2005.*

Governments would have an incentive to increase spending on higher education in order to attract more talented students to their jurisdiction. The importance of this effect depends on the probability that migrant students remain in their host region or country following graduation. This thesis assumes, based on the mobility data and on qualitative arguments, that the probability graduates return to their State of origin is very high.⁴¹¹ Thus, the competition effect is here assumed to be small and will not be discussed in detail.

The overall effect of the *Higher Fees* statute on the supply of human capital thus depends on the following factors. The increase in human capital by increasing public incentives to invest in higher education has to be larger than the loss in human capital through the loss of the matching and the skills effect. The extent of the loss in human capital through less appropriate student/university matching depends on the quality difference between the universities and university systems.⁴¹² Due to the German higher education policy which for a long time was aimed at equalising quality of all universities within Germany, the matching effect within Germany is not very important. Almost all States have one full university offering all important subjects at high academic standards.⁴¹³ The skills effect within Germany is probably also negligible because the increase in skills from living in another German State is probably also quite small.

Within Europe, the trade-off is also argued to still generate positive effects on human capital. However, the matching effect will be a little higher in Germany as the quality differences between the university systems of the Member States are higher. In particular, some of the newly acceded EU Member States lag behind with regard to the quality of their higher education system.⁴¹⁴ However overall, the quality differences are not so high, that dramatic effects on the human capital of whole nations would have to be expected. Within Europe it is also hard to tell, to what an extent intercultural skills increase the productivity of individuals.

From this brief discussion, it seems clear that in both Germany and Europe, the overall increase in human capital formation through increased investment incentives will be bigger than any decrease in human capital that may arise from reducing student mobility. Thus, human capital

⁴¹¹ See above section 3.1.

⁴¹² I am grateful to Eberhard Fees for pointing out this argument to me.

⁴¹³ German university quality is still relatively equal. In the Shanghai Jiao Tong University Academic Ranking of World Universities, 40 German universities are ranked among the Top 500 of the world, however only 6 among the Top 100, compare www.arwu.org. This situation may change in the future, as the Federal Government and the States have started to differentiated funding for universities more according to quality of research. However, this funding is assigned exclusively to research and not so much to finance teaching.

⁴¹⁴ *Aghion, Dewatripont, Hoxby, Mas-Colell and Sapir* 2008 p. 27.

formation would be positively influenced by the *Higher Fees* statute as well on the German as on the European level. The impact of the *No Admission* statute on the formation of human capital would be very similar to that of the *Higher Fees* statute. The effect on the investment incentives would be identical, whereas the reduction in student mobility would probably be a little more severe. Thus, overall human capital formation might be a little lower under the *No Admission* statute than under the *Higher Fees* statute.

3.3.3. Summary

Under both the hypothetical *Higher Fees* statute and the *No Admission* statute, higher education would still be available to all students at in-State universities at the moderate tuition fees of € 500 per semester. Thus, overall demand for higher education would not decrease. However, student mobility would definitely decrease, and the demand of individual students would be redirected towards their in-State universities. The remaining student mobility, which would probably be marginal, would be concentrated on students from affluent background who could afford full cost tuition fees. As the incentives faced by the State governments to invest in higher education would be increased, the *Higher Fees* statute would increase spending on higher education with a high probability.

However, spending on higher education is regarded as important because it proxies human capital formation. On human capital formation, the *Higher Fees* statute would have an ambiguous effect. On the one hand, as either the quantity of higher education graduates, or the quality of their training would be increased by finding a solution to the free-riding problem, human capital formation would be increased. On the other hand, the decrease in student mobility would have a negative impact on the amount of human capital formed in the higher education system due to the loss in skills and decreased quality of matching. However, the loss in human capital by worse matching between universities and students depends on the difference in quality between higher education systems. This quality difference is very small between German States and also rather small within Europe. Also the skills effect would be small in Germany and only a little more important in Europe. Therefore, the overall impact of tuition fee differentiation on human capital formation will still be positive on both levels, German and European.

Up to now, the statute's aggregated effects on supply and demand of higher education have been analysed. From a legal perspective, these two effects take place within different legal orders. Therefore, when conducting an analysis of the hypothetical statutes using the *Van-Aaken*-approach, they will have to be evaluated according to two different normative benchmarks, one

derived from German Constitutional law, the other from European Union Law. The next section will derive the relevant benchmark from the German Constitution.

3.4 Normative benchmark of constitutional principles

The just analysed impacts on demand for and supply of higher education map into impacts of the *Higher Fees* statute on Constitutional principles. A number of different Constitutional principles are implicated by the proposed hypothetical statute. The discussion starts from the observation that the *Higher Fees* statute will impact on students' choice of university. This implicates the Constitutional principle of free choice of place of training [hereinafter free choice principle]. The following section starts with the definition of the free choice principle. Then, referring back to the earlier definitions of the three principles, the *Higher Fees* statute's impacts on the higher education principle, the non-discrimination principle and the equal access principle will be discussed.

3.4.1. Free choice of place of training

The *Higher Fees* statute would increase the costs incurred by students who choose to study outside their State of long-term residence. As argued in section 3.3.1, the increase in fees would definitely influence students' choice of university towards in-State universities, and restrict the choice between different universities. Free choice of university can be argued to fall under the constitutional right of free choice of occupation guaranteed in Article 12 (1) GG, protecting it as an individual right. Thus, the German Constitution assigns intrinsic cultural value to the right to be able to freely choose a place of training and it can be considered a constitutional principle. In this section an outcome based concept of freedom will be introduced, which the conceptualisation of the free choice principle will in turn be based on.

3.4.1.1 Free choice of place of training as an objective constitutional value

Free choice of place of training is protected by the German Constitution. Article 12 (1) GG grants citizens a fundamental right to occupational freedom. It serves as a classic liberal right buttressing against state encroachment of individual freedom. The right also includes decisions with regard to citizens' further education, including the choice of institution and the type of a higher education degree.⁴¹⁵ By protecting it as an individual right, the German Constitution assigns a normative value to the freedom of choice of place of training. Thus, free choice of place of training is considered to be a constitutional principle. The more freedom the individual enjoys with regard to her choice of place of training, the better from the normative perspective of the

⁴¹⁵ BVerfGE 33, 303, 329. Compare also BVerfGE 108, 1; BverwG NJW 1992, 2243; VGH Baden-Württemberg DÖV 1998, 973 and *Tettinger* in *Sachs* 2003, Article 12, paragraphs 67-70.

Constitution. Constitutional welfare is assumed to increase, if the realisation of the principle of free choice of training increases, and vice versa.

3.4.1.2 Outcome based concept of freedom

In order to compare the impacts on the realisation of the free choice principle, first, its concept must be defined more precisely. In the following analysis, an outcome based concept of freedom is selected. This concept defines freedom as the existence of a number of outcomes among which an individual can choose according to her preferences.⁴¹⁶ This is the traditional approach taken in welfare economics and is summarised as ‘Individual freedom is reflected in the set of all mutually exclusive feasible outcomes available to the individual’.⁴¹⁷ With regard to higher education, this formulation of freedom implies that an individual’s freedom increases with the number of universities which she can practically choose amongst, because she could get admitted to them and they are affordable to attend.

3.4.1.3 Definition of the free choice principle

From the normative perspective of the Constitution, the greater the amount of individuals’ freedom with regard to choice between universities and institutions of higher education is, the better it is. The abstract definition of free choice of place of training implies that public measures can restrict this principle in three ways. First, by setting the level of subsidies granted to higher education, the state influences the set of existing universities, and thus the maximal size of the individual’s choice set. Secondly, the state can influence the rules according to which places at public universities are allocated. Such rules may restrict the number of universities to which an individual can get admitted and thus the potential size of the choice set of universities actually available to the student. Third, the state can determine the price of the higher education by setting or setting the limits for tuition fees. This thereby potentially reduces the choice set of individuals further.

The state is required by the Constitution to invest in higher education.⁴¹⁸ In addition to fulfilling its primary goal of providing higher education as part of a civilised nation⁴¹⁹, this has the additional benefit of increasing the degree of free choice enjoyed by individuals when choosing an institute of higher education. Additionally, the proportionality principle in general obliges the legislator to maximise the realisation of all Constitutional principles to the greatest degree possible by minimising the interference with them. Thus, the state is also required to interfere as

⁴¹⁶ *Pattanaik and Xu* 2007 p. 28 ff.

⁴¹⁷ *Ibid.* p. 8.

⁴¹⁸ See above section 2.3.2.

⁴¹⁹ See above section 2.3.2.

little as necessary with the freedom it has created by designing the conditions of access to and studying at the universities. The state may only restrict this freedom for the realisation of conflicting normative aims.

Based on the definition of freedom as choice from the set of all mutually exclusive feasible outcomes available to an individual, three public measures may be identified which have a negative impact on the realisation of the free choice principle. These measures are:

- Decreasing public investment in higher education to the extent that places, degrees or even whole universities have to be discontinued. Such a measure would decrease the maximal choice set of universities faced by any individual;
- Increasing the price of higher education by charging/increasing tuition fees. This would restrict the choice of students to those universities affordable to them;
- Creating regulation which restricts free competition between applicants for places at universities according to academic merit. Such a measure will restrict choice by limiting the universities which the applicants are qualified for.

We have now finished identifying and defining the final constitutional principle relevant to the analysis of the *Higher Fees* statute. Therefore the following part of the section will turn to a discussion of the impacts of the statute on the realisation of the potentially implicated constitutional principles: free choice of place of training, investment in higher education, non-discrimination, and equal opportunities.

3.4.2. Impact on the free choice, non-discrimination and higher education principles

According to the definition of the free choice principle, the *Higher Fees* statute impacts negatively on the principle. The statute restricts the choice of students between universities by increasing the price of attending university for parts of the students. This negative impact will be discussed from a legal perspective in section 3.5 and will be interpreted as an infringement of the fundamental right of free choice of occupation.

The *Higher Fees* statute will also impact negatively on the non-discrimination principle. The non-discrimination principle has been defined and discussed in detail in section 2.3.1. The discussion of the principle in this chapter will also be based on its earlier definition. The constitutional non-discrimination principle is based on the protection of equality between persons according to Article 3 GG as a fundamental right. The principle is implicated if the legislator treats applicants

to university different with regard to any other criterion than academic merit. The *Higher Fees* statute fulfils these conditions because the legislator discriminates tuition fees between applicants according to their place of prior long-term residence. Thus, the *Higher Fees* statute impacts negatively on the non-discrimination principle.

The equal access principle has also already been defined in section 2.3.1. Like the non-discrimination principle, the equal access principle is also based on Article 3 GG. The difference to the non-discrimination principle with regard to higher education is that in the equal access principle the group of people, who are compared with regard to the objective, consists of the whole cohort of children. According to the non-discrimination principle, the group of people compared is only the group of people within the cohort who have applied to higher education.

The realisation of the equal access principle was defined as being maximised if the probability that any given child in a cohort gains access to higher education only depends on her academic merit, and not on any other personal characteristics. The analysis of the consequences of the *Higher Fees* statute in section 3.3.1 has shown that the differentiation of tuition fees according to place of prior residence would not influence overall demand for higher education, but only redirect the individual's choice to in-State universities. The University system in every German State offers almost all subjects at an evenly high quality⁴²⁰ and in-State tuition fees are still moderate and backed up by income-contingent loans. Therefore general access to higher education is not endangered by the *Higher Fees* statute. The same arguments hold for the *No Admission* statute. As was also already argued in section 3.3.1, differentiated tuition fees according to place of prior residence might reduce the choice between universities more for students from lower socio-economic backgrounds than for students from affluent backgrounds. However, the probability of access to the higher education system at all will not be severely affected by this impact. Therefore, it is concluded that the *Higher Fees* statute does not influence the realisation of the equal access principle.

The aim of the legislation is to increase investment in higher education. The German Constitution protects investment in higher education as an intrinsic cultural value. This protection implies that there is a constitutional principle encouraging investment in higher education. This principle has been defined in section 2.3.2. According to the analysis in section 3.1, the current practice of granting equal treatment to all students, within the German system of decentralised decision making on higher education finance decreases politicians' incentives to

⁴²⁰ See above FN 413.

invest in higher education by creating a free-riding problem. By removing the incentives of other State governments to free-ride, full cost tuition fees for out-of-State students would very likely increase the incentive of State governments to invest in their higher education system. The increase in funding should increase the formation of human capital. This positive impact is only partially countervailed by a decrease in human capital formation according to reduced student mobility.⁴²¹ Thus, the *Higher Fees* statute would impact positively on the realisation of the higher education principle.

Having reached this conclusion, the next step is to subsume this abstract analysis of the statute's impact on the realisation of normative principles, into a legal analysis under concrete provisions of constitutional law. The two principles, which are negatively implicated, the free choice principle, and the non-discrimination principle, have been derived from fundamental rights in the Constitution. The negative impact on their realisation thus implies that it is highly likely that the *Higher Fees* statute would also infringe the fundamental rights of Articles 12 (1) GG and 3 (1) GG. The interference of the hypothetical statute with the fundamental rights and the standard of a potential justification are discussed in the following section.

3.5 Constitutionality of Higher Fees statute

As yet there appears to have been no extended legal debate amongst German academia with respect to the constitutionality of differentiated tuition fees according to the State of *prior* long-term residence. The option to differentiate tuition fees according to long-term residence was first proposed by Rhineland Palatia and Berlin in the political debate in 2005. However since then it has not featured prominently in the discussion.⁴²² Consequently, also no extended legal debate has followed. *Gärditz* 2005 and *Caspar* 2003 are among the few commentators who have written on the question. *Gärditz* 2005 argues that differentiated tuition fees according to place of prior residence violates Article 33 (1) GG and Article 12 (1) GG in combination with Article 3 (1) GG, and thus would not be constitutional.⁴²³

However, as already mentioned in the introduction, tuition fee differentiation according to place of residence *while* studying, has not only been discussed as a political option, but has already been introduced by the State legislators of Hamburg and Bremen.⁴²⁴ These statutes have been brought before the Administrative Courts of Hamburg and Bremen, which has sparked a small debate on

⁴²¹ See above section 3.3.2.

⁴²² See FAZ of 28.01.2005, p.4 (Rhineland Palatia) and FAZ of 14.02.2005, p. 5 (Berlin).

⁴²³ *Gärditz* 2005 p. 159 ff.

⁴²⁴ Bremische Studienkontengesetz (BremStKG) as 18.10.2005, BremGBI. p. 550, § 2,6,7,13; Hamburgisches Hochschulgesetz (HmbHG) as 18 July 2001, revised 27 May 2003, HmbGVBl. p. 138,170,228, § 6 (5-8).

their constitutionality.⁴²⁵ Both statutes were found not to be constitutional in expedited proceedings.⁴²⁶ Since in Hamburg the statute was replaced by general tuition fees, the lawsuit was dropped after the expedited proceedings. The lawsuit before the Administrative Court of Bremen, on the other hand, was transferred to the GFCC.⁴²⁷ The Administrative Court of Bremen doubted the constitutionality of the statute because it violates Articles 11 GG and 12 (1) GG in combination with 3 (1) GG. The final decision of this case is only expected to be handed down sometime in 2009.

The literature has adopted different positions towards the introduction of differentiated tuition fees according to State of residence while studying. *Gärditz* 2005 and *Caspar* 2003 again take a very restrictive position and argue that differentiated tuition fees would not be constitutional. Meanwhile *Pieroth* 2007 comes to the opposite conclusion that Bremen's tuition fee differentiation according to residence while studying would be constitutional. Even once the GFCC has decided the Bremen case it is very debatable, whether the decision should be interpreted as relevant to the case discussed here. There are very important differences between the statute introduced by Bremen and our hypothetical *Higher Fees* statutes. First, Bremen only introduced tuition fees of € 500 for students living out-of-State as opposed to € 0 for students living in-State, whereas in this thesis full cost tuition fees have been assumed, which would be significantly higher. Secondly, the legislators in Bremen differentiated tuition fees according to students' residence while studying whereas in this thesis tuition fee differentiation before studying is the main topic of interest.

This observation also points to an even more important difference between the two cases: tuition fee differentiation according residence while studying would not increase politicians' incentives to invest in higher education. It has been argued above that the overwhelming majority of students will return to their home State after graduation. Students can change their State of registered residence to the State where they study and then after graduation change it back home. Then, the State financing the university will still subsidise students, who do not live in the State in the long run. Thus, the results from the constitutionality review of the Bremen case would not automatically also apply to the case discussed here and vice versa.

⁴²⁵ *Verwaltungsgericht Hamburg*, Decision of 31 January 2005, Az 6 E 4707/04, *Verwaltungsgericht Bremen*, Decision of 16 August 2006, Az 6 V 1583/06, 6V 1586/06, 6 V 1588/06, *Verwaltungsgericht Bremen*, Decision of 16 August 2006, Az 6 V 1583/06, 6V 1586/06, 6 V 1588/06. See also *Pieroth* 2007.

⁴²⁶ *Verwaltungsgericht Hamburg*, Decision of 31 January 2005, Az 6 E 4707/04, *Verwaltungsgericht Bremen*, Decision of 16 August 2006, Az 6 V 1583/06, 6V 1586/06, 6 V 1588/06, *Verwaltungsgericht Bremen*, Decision of 17 September 2007, Az 6 K 1577/06, 6 K 1582/06 und 6 K 1587/06.

⁴²⁷ *Verwaltungsgericht Bremen*, Decision of 17 September 2007, Az 6 K 1577/06, 6 K 1582/06 und 6 K 1587/06.

For the sake of the following discussion of the constitutionality of differentiated tuition fees under the German Constitution, we have assumed above in section 3.2 that the hypothetical *Higher Fees* statutes are brought before the GFCC by the Federal Government, which believes that the statutes infringe potential students' fundamental rights. The Federal Government bases its case on the argument that the *Higher Fees* statutes interfere with the fundamental rights under Articles 12 (1) GG and 3 (1) GG and are thus unconstitutional. Thus, the GFCC has to make a decision about the constitutionality of the statutes and discusses a representative *Higher Fees* statute in the context of a whole system of differentiated tuition fees. If this representative statute is found not to be constitutional, the conclusion would apply to the whole system of differentiated fees. This section discusses from a law and economics perspective, whether the Court should declare the representative hypothetical statutes unconstitutional. It is structured as follows. The interference of the *Higher Fees* statute with the scope of fundamental rights guaranteed in the German Constitution is discussed and then the proportionality principle as the standard of justification for the interferences is derived.

3.5.1. Interference with fundamental rights

It has been established that the *Higher Fees* statute impacts negatively on the realisation of the free choice and non-discrimination principles. These negative effects could constitute an interference with the fundamental rights (*Eingriff in Grundrechte*). The negative impact of differentiated tuition fees on the realisation of the free choice principle could imply an infringement of the fundamental right of free choice of profession guaranteed in Article 12 (1) GG. Likewise the infringement of the non-discrimination principle may implicate the fundamental right to equal treatment guaranteed in Article 3 (1) GG. In addition, the fundamental right to equal participation in publicly provided higher education, which is based on the combination of Article 12 (1) GG, Articles 3 (1) GG and 20 (1) GG, could be infringed. In this section, each of these fundamental rights and their corresponding Constitutional provisions will be discussed in turn.

3.5.1.1 Freedom of occupation, Article 12 (1) GG, violated

The GFCC has interpreted the scope of Article 12 (1) GG not only to cover freedom of occupation in general but also free choice of occupation.⁴²⁸ Also, the free choice of "Ausbildungsstätte", meaning place of training, is explicitly contained in Article 12 (1) GG. Thus, Article 12 (1) GG contains a comprehensive right to make free decisions with regard to citizens' further education including the choice of place of training.⁴²⁹ According to the GFCC, the choice

⁴²⁸ BVerfGE 33, 303, 329. Compare BVerfGE 108, 1 and VGH Baden-Württemberg DÖV 1998, 973.

⁴²⁹ According to its text, Article 12 GG is only a right granted to German citizens according to Article 116 GG. But as a matter of fact, the right also applies to Union citizens. Article 2 GG in combination with the

of place of training is infringed by all kinds of legislative measures, which have a direct impact on the conditions of working or studying, and as a consequence, interfere with Article 12 (1) GG.⁴³⁰ Tuition fees are considered to influence the conditions of studying,⁴³¹ and thus interfere with the fundamental right to free choice of profession.⁴³²

Since they would substantially increase the costs of studying for migrant students, full cost tuition fees would have a very strong impact on individual choice of university.⁴³³ Therefore, a *Higher Fees* statute introducing full cost tuition fees for migrant students would definitely interfere with the fundamental right to free choice of place of training.⁴³⁴ These results depend, as was already pointed out, on the assumption that no student loans or grants are available for out-of-State students. The protection governed by Article 12 (1) GG is however not absolute, and may be restricted by legislation, as long as the restriction is justifiable under the Constitution.⁴³⁵ The standard of justification which must be met for an interference with Article 12 (1) GG to be considered legal is the proportionality principle.⁴³⁶

3.5.1.2 Right to equal treatment, Article 3 (1) GG, violated

In addition to interfering with occupational freedom, full cost tuition fees for migrant students would establish a formal discrimination between students, who have lived in different States on a permanent basis before starting to study. The German Constitution protects general equal treatment of persons in Article 3 (1) GG and equal treatment of German citizens more specifically in Article 33 GG. Therefore the formal discrimination created by the *Higher Fees* statute could potentially violate or interfere with either or both of the two norms. This section will discuss the potential infringement of both norms, however, finally only come to the conclusion that Article 3 (1) GG is violated by the *Higher Fees* statute. The discussion starts out with the debate about a potential infringement of the more specific provision Article 33 (1) GG and then turns to the more general norm Article 3 (1) GG.

fundamental freedoms of the EC Treaty gives the same protection to EC nationals. *Dieterich in Dieterich* 2007, Article 12, paragraph 12.

⁴³⁰ *Tettinger in Sachs* 2003 paragraph 73.

⁴³¹ See also BVerfGK 7, 465. The GFCC also considers tuition fees for students who have not graduated during the normal period of study as an infringement of Article 12 (1) GG.

⁴³² *Waldhoff* 2005.

⁴³³ See above section 3.3.1.

⁴³⁴ With regard to tuition fees differentiated according to the residence while studying compare *Verwaltungsgericht Hamburg*, Decision of 31 January 2005, Az 6 E 4707/04 paragraph II.1.b.aa and *Verwaltungsgericht Bremen*, Decision of 17 September 2007, Az 6 K 1577/06, 6 K 1582/06 und 6 K 1587/06 paragraph II.2.b.1.

⁴³⁵ *Pieroth and Schlink* 2002 paragraph 44.

⁴³⁶ *Ibid.* paragraph 846.

Article 33 (1) GG bans discrimination between citizens of different German States. It confers identical citizenship rights and duties on all citizens in all German States.⁴³⁷ Some commentators have argued that differentiated tuition fees according to place of prior residence infringe Article 33 (1) GG.⁴³⁸ With regard to the *Higher Fees* statute, Article 33 (1) GG could prevail as *lex specialis* over Article 3 (1) GG as *lex generalis*. However, running counter to this argument is the fact that Article 33 (1) GG presupposes a separate State citizenship, in addition to the general Federal German citizenship. Separate State citizenships as a legal entitlement only existed during the Weimar Republic (*Weimarer Republik*).⁴³⁹ With the introduction of the German Constitution in 1945, State citizenships were replaced by the general German citizenship according to Article 116 GG. Thus, nowadays Article 33 (1) GG lacks the main reference point its text refers to. However, the prevailing opinion in constitutional law scholarship still attaches meaning to Article 33 (1) GG.⁴⁴⁰ Article 33 (1) GG is now interpreted to prohibit discrimination according to criteria which approximate citizenship, e.g. the place of long-term residence.⁴⁴¹

Despite the prevailing opinion in the academic literature, the GFCC has not yet based any decision on Article 33 (1) GG.⁴⁴² This has led other scholars to argue that Article 33 (1) GG thus has no content.⁴⁴³ As no formal State citizenship exists, they argue that all approximating criteria to State citizenship will remain arbitrary and debatable. According to them, Article 3 (1) GG protects inhabitants of the different German States against disproportionate discrimination with regard to place of residence. Article 3 (1) GG explicitly states that the State must not discriminate according to place of origin and descent, which are the two most important criteria discussed with regard to Article 33 (1) GG.⁴⁴⁴ As Article 33 (1) GG cannot be interpreted unambiguously, it seems at least doubtful that the provision is applicable. As the provision has not been applied by the GFCC, there is also no case law on which to base the application of Article 33 (1) GG. Finally, non-discrimination between German citizens is also protected by the more general protection of equality between persons according to Article 3 (1) GG. The provision does not add additional force to the Constitutional protection of equality in Germany. Therefore, the

⁴³⁷ *Verwaltungsgericht Bremen*, Decision of 17 September 2007, Az 6 K 1577/06, 6 K 1582/06 und 6 K 1587/06, *Verwaltungsgericht Bremen*, Decision of 16 August 2006, Az 6 V 1583/06, 6V 1586/06, 6 V 1588/06, *Oberverwaltungsgericht Hamburg* 27.10.2005, *Verwaltungsgericht Hamburg*, Decision of 31 January 2005, Az 6 E 4707/04, *Pieroth* 2007, *Caspar* 2003, *Gärditz* 2005 all discuss an infringement of equality but according to either Article 12 (1) GG in combination with Article 3 (1) GG or according to Article 33 (1) GG or according to Article 3 (1) GG.

⁴³⁸ *Gärditz* 2005 p. 159 ff. and *Caspar* 2003 p. 52 ff.

⁴³⁹ *Pieroth* 2007 p. 234.

⁴⁴⁰ *Ibid.* p. 235 ff.

⁴⁴¹ *Ibid.* 235.

⁴⁴² *Ibid.* p. 237.

⁴⁴³ *Lübbe-Wolf* in *Dreier* 1996 Article 33 GG, paragraphs 27-28.

⁴⁴⁴ *Lübbe-Wolf* in *Ibid.* Article 33 GG, paragraphs 27-28.

discriminatory effects of the *Higher Fees* statute will not be considered to interfere with Article 33 (1) GG and the statute will only be subsumed under Article 3 (1) GG.

The statute determines that in-State students have to pay less tuition fees than out-of-State students, thus the *Higher Fees* statute interferes with Article 3 (1) GG. This is because both groups of students are treated differently under the Statute's provisions. Individuals in both groups can be united under the generic criterion 'student', therefore the *Higher Fees* statute can be considered to discriminate between in-State and out-of-State students with regard to their tuition fees. This discrimination interferes with Article 3 (1) GG. Therefore in order for the legislative measure to be upheld by the GFCC it has to be justified under the Constitution.⁴⁴⁵

With regard to the standard of justification required for the constitutionality of an infringement of Article 3 (1) GG, the GFCC differentiates between discriminations of low and of high intensity.⁴⁴⁶ Discriminations of low intensity can be justified by any legitimate reasons (*Willkürformel*).⁴⁴⁷ In contrast discriminations of high intensity require, according to the new formula of the GFCC (*Neue Formel*),⁴⁴⁸ justification under the proportionality principle. As argued above in section 3.3.1 and assuming that no loans or grants to finance the higher out-of-State fees exist, the *Higher Fees* statute would have a significant impact on the choice of universities for students in Germany and restrict choice of higher education to in-State universities.

3.5.1.3 Equal access to higher education, Articles 12 (1) GG, 3 (1) GG and 20 (1) GG, violated

By providing and funding higher education institutions, the state creates the prerequisites necessary for citizens to exercise their right to free choice between these institutions. Even with moderate tuition fees, every student, who is admitted to a higher education institution in Germany, still receives a substantial subsidy.⁴⁴⁹ Therefore, admission to higher education also entitles students to a publicly provided benefit. For the existence of the individual freedom to choose, the amount of public investment in higher education is just as important as the government being restrained from restricting students' choice between different universities.

⁴⁴⁵ See on this below section 3.6.

⁴⁴⁶ *Pieroth and Schlink* 2002 paragraph 438.

⁴⁴⁷ BVerfGE 1, 14, 16.

⁴⁴⁸ BVerfGE 55, 72, 88.

⁴⁴⁹ Based on 2005 data on average spending per student, in Germany tuition fees of €1,000 per year cover between 3.9% of the costs of educating one student in medical studies and 21% in social sciences. *Statistisches Bundesamt* 2008.

The GFCC has ruled that due to the exceptional importance higher education attainment has on the life chances of every individual, a right to equal participation in publicly provided higher education institutions exists. This right implies that students are presented with equal chances to participate, according to their preferences, in the public benefits provided in the form of subsidised higher education.⁴⁵⁰ This right is based on the combination of Articles 12 (1) GG, protecting free choice of place of training, with 3 (1) GG protecting equal treatment and 20 (1) GG protecting social justice. This right guarantees that choice between and access to, publicly provided higher education institutions is not impeded by any irrelevant public discrimination, and is not skewed in favour of students from higher socio-economic backgrounds. This fundamental right can also be restricted by law.⁴⁵¹ However, any restrictions have to be justified according to the theory of scales (*Stufenlehre*) of the GFCC developed in the context of infringements of Article 12 (1) GG, which follows the structure of the proportionality principle.⁴⁵²

The right to equal participation in publicly provided higher education institutions is violated by any measure, which influences a student's choice between universities. This is because these measures automatically influence an individual's chance of attending the publicly provided university of her choice. The differentiation of tuition fees is such a measure. Differentiated tuition fees, even if they formally only affect the financial conditions of access, and do not introduce special admission criteria, would still decrease a student's chances of participating in publicly provided universities in other States.

Even though State legislators may in general implement legislation which gives preferential treatment to their own citizens, they may only do so with respect to issues which are not of general, nationwide importance.⁴⁵³ The GFCC has stressed that the system of higher education is of nationwide importance.⁴⁵⁴ The *Higher Fees* statute impacts on student's choice of their higher education institution and make access to universities outside the own State of long-term residence impossible for the overwhelming majority of students. Therefore the proposed hypothetical statute creates unequal participation in publicly provided higher education institutions. Thus, on the basis of the arguments just discussed, the analysis here comes to the conclusion that the statute has to be considered to violate the right to equal participation in publicly provided higher education institutions.

⁴⁵⁰ BVerfGE 33, 303, 339 ff.

⁴⁵¹ Ibid., 336.

⁴⁵² Ibid., 337 ff.

⁴⁵³ Ibid., 352.

⁴⁵⁴ Ibid., 352.

3.5.2. Proportionality principle standard of justification

The *Higher Fees* Statute has been identified to infringe three fundamental rights: the right to free choice of place of training (Article 12 (1) GG); the right to equal treatment (Article 3 (1) GG); and, the right to equal participation in publicly provided higher education (combination of Articles 12 (1) GG, 3(1) GG and 20 (1) GG). If the statute is to be considered constitutional from a legal perspective, then all three interferences have to be justified. It has already been discussed in the preceding section that the proportionality test is the standard of justification used to evaluate interferences with all three of the fundamental rights implicated here. This justification will be discussed in the following section.

3.6 Interferences cannot be justified by the proportionality principle

A statute has to be considered unconstitutional, if its violation of one fundamental right cannot be justified. Therefore, on principle, the justification of each of the infringed fundamental rights has to be discussed separately. However, in practice, the first three steps of the proportionality principle, the legitimate aim-, the suitability- and the necessity-test are identical for all three violated fundamental rights. Thus, they will only be discussed once in this thesis. Finally, the last step of the proportionality principle, the test of proportionality in a narrow sense, discusses whether the positive impact on one constitutional principle justifies the negative infringement of another fundamental right. This step will be discussed separately for each fundamental right, because here the balancing may turn out different for each violated right. For the *Higher Fees* statute to be found constitutional, the statute's positive effect would have to prevail separately when balanced against every infringed fundamental right.

3.6.1. Aim of statute legitimate

It has been assumed throughout this work, that the hypothetical *Higher Fees* statute is aimed at increasing the levels of higher education investment enjoyed by the citizens of the State, whose government has introduced the legislation.⁴⁵⁵ In this section, the question is discussed whether this aim is legitimate under the German Constitution. There is no clear doctrinal definition as to what kind of legislative aims can be legitimately pursued by the German legislator, or where the limit lies to illegitimacy.⁴⁵⁶ The reason for this gap in the otherwise refined doctrine of the German Constitution is that today no one normative view can any longer be considered as binding upon everyone.⁴⁵⁷ The German Constitution has only codified a minimum of normative values; it does not impose a complete normative programme on the German legislators. Thus, in general there is wide room for normative interpretation of the German Constitution. The GFCC

⁴⁵⁵ See above section 3.2.

⁴⁵⁶ *Engel* 2002 p. 3.

⁴⁵⁷ *Ibid.* p. 6.

has filled this gap through its case law and in the past decades has developed a system of legitimate aims. The aims it considers legitimate include the State provision of public goods as solution of collective choice problems.⁴⁵⁸

The legislative goal of increasing investment in higher education can be considered a legitimate aim from two perspectives. First, as has been argued above, the Constitution assigns intrinsic cultural value to investment in higher education. Thus, increasing investment in higher education is in line with one of the fundamental normative requirements of the German Constitution. In addition, higher education causes many positive externalities and is thus a public good.⁴⁵⁹ Public goods fall in *Alexy's* framework of constitutional principles into the category of collective goods. The provision of many collective goods is also protected in most constitutions by constitutional principles. In the German Constitution, the legislative competence about the provision of higher education is explicitly mentioned in Article 72 GG. On the basis of this Article, also a constitutional principle of the provision of higher education can be derived from the German Constitution. Therefore, even if the Constitution did not assign intrinsic value to investment in higher education, increasing investment in higher education would still properly be considered a legitimate aim. As it is a public good, public provision of higher education furthers the common good. Thus, increasing investment in higher education is considered a legitimate aim under the German Constitution.

3.6.2. Statute suitable

The second test in the proportionality test, suitability, asks whether the chosen means is suitable to reach the aim of the statute. The set of constitutional policy measures is screened for arbitrary policy measures, which do not even have any positive impact on their aim. As has been argued theoretically above in section 3.1.3, the *Higher Fees* statute has a positive impact on investment in higher education. Generally, charging higher fees from migrant students leads most of the students to study in their State. This will remove the incentive for the State to cut down investment in higher education and externalise some of the cost of higher education for in-State students. In case those migrant students still decide to study in the State, the host State will receive additional tuition fee revenues. Finally, the statute will increase the incentives for an agreement about transfer payments. In case some of the other net student exporting States would still like to send their students to study in the States, where now differentiated tuition fees are charged, they may decide to offer financial compensation to the host State in the form of transfer

⁴⁵⁸ Ibid. p. 37-38.

⁴⁵⁹ See above section 2.2.2.

payments. Such a system of transfer payments would also solve the free-riding problem. Thus, overall the *Higher Fees* statute is suitable to reach its aim.

3.6.3. Statute necessary

The necessity test asks whether there is an alternative legislative measure to the *Higher Fees* statute which has the same positive impact on the legislation's aim but less negative impact on other constitutional principles.⁴⁶⁰ The necessity test thus asks whether the means chosen by the legislator to reach its aim is the least restrictive means possible. In section 3.1.3, which discussed the free-riding problem inherent in decentralised funding of higher education from a theoretical perspective, alternative solutions were identified. These alternative solutions included the option to close universities for migrant students, to centralise higher education policy making, and to install a system of transfer payments. However, from the perspective of the State legislator, who aims at increasing investment in higher education in its State by stopping other States from free-riding on its investment, not all of these alternatives are available legislative measures. Centralisation and transfer payments are not true alternatives because the consent of other State governments is required to implement them, which is highly unlikely in practice. In addition, for centralisation also the consent of the Federal legislator would be needed. Thus, the only available alternative legislative measure from those identified here which solve the free-riding problem is exclusion of migrant students from its universities.⁴⁶¹ The next section will thus discuss, whether the two possible solutions have an identical positive effect on investment in higher education

3.6.3.1 Impact on the higher education principle moderate

In order to carry out the next part of the analysis, a scale of the intensity of the impact on the realisation of the higher education principle has to be defined. In section 2.3.2, it has already been derived that the intensity of legislative measures' impact on the realisation of the principle of higher education can be measured according to the amount by which investment in higher education will increase through the measure's implementation. If these amounts can be reliably predicted, then alternative legislative measures can be compared according to these amounts. In the case of the *Higher Fees* statute, and its alternative *No Admission* statute, a precise prediction of the exact increase is currently not possible, because no reliable empirical data on the magnitude of the free-riding effect exist.⁴⁶² Instead, in this case, categories of impacts have to be defined. Three categories of intensity of the impact on the higher education principle are assumed as categories of *light*, *moderate* and *high* impacts on State governments' investment incentives in higher education.

⁴⁶⁰ See above section 1.4.1.2.

⁴⁶¹ See above section 3.1.4.

⁴⁶² See above section 3.1.1 on student mobility, which summarises the the weak empirical evidence with regard to the extent of the free-riding problem.

A number of factors can be identified which may assist in determining into which category a measure belongs. Assuming that politicians are vote maximisers⁴⁶³ and like to increase their budgets in order to win more votes, a legislative measure's impact on the investment incentives of State politicians increases

- the more it increases the number of voters who care about higher education in that State or
- the more it positively impacts on the financial capacity of politicians by enlarging the budget, which can be spend by the politicians.

According to these criteria, the category of *light* impact on investment in higher education contains measures which either increase the number of voters affected by higher education slightly or it increases politicians' budgets also in a limited fashion. The category of *moderate* increases of higher education incentives would include measures which increased the number of voters caring about higher education in that State by more than 10%. Finally, the category *severe* increases in higher education incentives includes measures which increase the number of voters caring about in-State higher education or the budget of the politicians around 25%.

An examples for a piece of legislation which would fall into this category is a law changing the prerequisites for entering university by making graduates from certain degrees of vocational training eligible to apply to higher education. Such a measure would definitely increase the number of voters caring about higher education, but only by a limited extent. Consequently, the incentives of politicians to increase investment in higher education would only increase to a limited extent. Another example for a legislative measure increasing higher education investment incentives would be a Federal law, which makes Federal transfers to States dependent on State spending on higher education. Politicians are always interested in increasing their budgets in order to being re-elected. Thus, such a piece of legislation would create incentives for spending on higher education. Depending on the amount of Federal transfers, such a measure could fall into all three categories.

The *Higher Fees* statute and the *No Admission* statute under the current circumstances will be classified as having a *moderate* impact on higher education investment incentives of politicians. This effect will be equally intense because the practical effects of both statutes on the

⁴⁶³ This assumption goes back to *Downs* 1957.

overwhelming majority of students will be identical. As in all States, at least 10% of the students study in other States, tuition fee differentiation according to place of prior residence would increase the importance of in-State education for these 10% or more of high school graduates each year and their parents. But also the part of the student population, which is usually staying in their State of long-term residence, will be affected. Under the *Higher Fees* statute, it will become much more expensive for everyone to move to another State and vote with their feet, if the quality of the in-State universities seems not satisfying to them. Thus, the political awareness for the quality of in-State higher education will definitely go up and voters caring about higher education will become more numerous.

To establish the necessity of a specific legislative measure, the negative consequences of the two equally effective alternatives, the *Higher Fees* statute and the *No Admission* statute have to be compared. To discuss which statute is the least restrictive means, their impacts on all relevant constitutional principles has to be compared. The mildest means for reaching the aim of the legislation is the statute, which minimises the negative impacts on all other constitutional principles. In the comparisons, ordinal scales have to be used, which allow to order the statutes according to their intensity on the constitutional principles.

3.6.3.2 Impact on the free choice principle severe

In theory, the intensity of the impact a measure has on the realisation of the free choice principle can be conceptualised as a continuum. This continuum of different intensities of realisations ranges from providing completely free choice to students as to their place of training, to a situation of completely public allocation of students to universities. However in practice, it is only possible to divide the intensity of different impacts on the realisation of the principle into discrete measures.⁴⁶⁴ Thus, to compare the impact of legislative alternatives on the normative benchmark, a triadic discrete scale of different intensities will be developed by looking to the case law of the GFCC in a closely related area: freedom of occupation.

The GFCC has already been presented with the opportunity to decide about the infringements of Article 12 (1) GG.⁴⁶⁵ In this context, the Court has developed a classification of intensities of interferences with freedom of occupation.⁴⁶⁶ The classification made by the GFCC is very similar to the abstract welfare economics definition of freedom of choice. Through its case law the GFCC has developed a classification for infringements of Art 12 (1) GG. This classification, the

⁴⁶⁴ Alexy 2003a p. 443.

⁴⁶⁵ BVerfGE 7, 377.

⁴⁶⁶ Ibid. principle 5; See also with further explanations *Pieroth and Schlink* 2005 paragraphs 825 ff.; *Wieland* 1996 paragraph 106.

so-called *theory of scales (Stufenlehre)*, can be thought of as representing different stages of infringement.⁴⁶⁷ The GFCC's classifications start from the idea that an interference with occupational freedom is more severe, the more the *choice* of profession is restricted, as opposed to a restriction being placed on the way a profession *practiced*. The first and lowest category of infringements of Article 12 (1) GG is comprised of restrictions on the way in which a profession practiced, e.g. regulation of shop opening hours.⁴⁶⁸ The second and moderate category is comprised of measures regulating personal characteristics which restrict individuals' access to certain kinds of jobs, e.g. by requiring a certain qualification.⁴⁶⁹ The third and most severe category covers objective restrictions placed on entering a profession which are independent of the individual's qualifications, e.g. the issuing of only a maximum number of licences for certain professions.⁴⁷⁰

The same categorisation is usually applied to interferences with the right to free choice of place of training, because the right to free choice of place of training is directly derived from the right to free choice of occupation.⁴⁷¹ Thus, a measure's impact on the realisation of the free choice principle is assumed to be the more intense, the more choice of university, and not just the conditions while studying at the university is affected.⁴⁷² The categories described above, developed in the context of freedom of choice of profession, will be applied here to classify the impact of alternative legislative measures on the realisation of the free choice principle. The following categories will be distinguished:

- The first category, which is called *light*, is comprised of impacts on the conditions of studying e.g., a light increase in tuition fees or levels of investment in higher education.
- The second category of *moderate* impacts is comprised of measures somewhat influencing the conditions of access to universities faced by an individual. Restricted access in some subjects in some universities would be an example of a measure falling within this category.
- The third category of most *severe* impacts covers objective restrictions to gaining access to a university, which result in certain universities being completely excluded from the

⁴⁶⁷ For an overview of the theory of scales (*Stufenlehre*) and critical discussion see *Tettinger in Sachs 2003*, Article 12, paragraphs 100 ff.

⁴⁶⁸ *Pieroth and Schlink 2002* paragraphs 834-835.

⁴⁶⁹ *Ibid.* paragraphs 832-833.

⁴⁷⁰ *Ibid.* paragraphs 826-831.

⁴⁷¹ *Pieroth and Schlink 2005* paragraph 860.

⁴⁷² *Wieland 1996* paragraph 32.

choice set of individual students. These would include general restrictions on access to a subject in all German States, or the charging of prohibitively high tuition fees.

The realisation of the free choice principle is maximised when all students have free access to all universities. Restricting choice between universities by increasing fees for migrant students would harm the realisation of the free choice principle. Compared to the current framework regulating higher education finance, full cost tuition fees for migrant students would increase the costs faced by students enrolling in another State's university considerably. The discussion of the consequences of the *Higher Fees* statute has shown that this increase in cost would definitely influence students' choice of university.⁴⁷³ For the overwhelming majority of students, only in-State universities would remain affordable. Depending on the State of residence, students' choice between universities could be decreased considerably. Especially for students coming from small city States like Hamburg and Bremen, where there is only one full university, practically no choice between universities at all would remain should all German States introduce such a piece of legislation. The *Higher Fees* statute would thus impact negatively on the realisation of the constitutional free choice principle within Germany.

The impact of introducing a *No Admission* statute on the realisation of the principle of free choice of training would also be negative. If States were to admit no students who have lived in other States prior to enrolment, then for the overwhelming majority of students the chance of studying interstate would be decreased to zero. The only exception to this may be for students, who are able to afford private higher education in Germany or abroad.

The highest category of *severe* impacts on the realisation of the free choice principle encompasses all measures, which do not only impact on the conditions of access or the price of higher education, but also have a significant impact on the choice of university. Full cost tuition fees have a de facto exclusionary impact on migrant students. Since they make the majority of universities in the country unaffordable for large parts of the student population, they impact *severely* on the choice of place of training. In the case discussed here, the decrease in the choice of university resulting from the Statute's enactment has thus to be classified as belonging to the highest category. It has to be pointed out here that the classification of the *Higher Fee* statute's impact on the free choice principle as severe depends heavily on an assumption in the hypothetical case constructed here.⁴⁷⁴ In the hypothetical case it has been assumed that the State

⁴⁷³ See above section 3.3.1.

⁴⁷⁴ See section 3.2.

only provides income-contingent loans for its in-State students but not for out-of-State students. If out-of-State students had access to income-contingent loans to refinance their higher tuition fees, the impact may not be as severe as found above.

Both legislative alternatives belong in the highest category. The *No Admission* statute allowing the exclusion of migrant students would have an even more severe impact on the choice of place of training, and would thus also fall into the highest category of impacts on the realisation of free choice of place of training. If the category *severe* were to be divided into sub-categories, the impact of the *No Admission* statute would be categorised as being even more severe than the *Higher Fees* statute.

3.6.3.3 Impact on the non-discrimination principle severe

The non-discrimination principle has been derived from the protection of equality in Article 3 GG. The realisation of the non-discrimination principle is maximised, if two individuals or groups of individuals, who can be united under a generic criterion, are treated identically with regard to all objectives. Both of the hypothetical legislative alternatives discussed in this chapter as potential ways to solve the free-riding problem would influence the realisation of the non-discrimination principle negatively. Differentiated tuition fees treat in-State and out-of-State students, who all belong to the overall group ‘students’, differently with regard to the financial conditions of enrolling at university. The *No Admission* statute treats in-State and Out-of-State applicants to university, who all belong to the group of ‘applicants to university’, differently with regard to the admission to university. Therefore, both alternatives impact negatively on the realisation of the non-discrimination principle.

As argued in section 3.1.3.3, both legislative alternatives significantly increase the probability that decentralised governments will agree on a system of transfer payments to allocate the cost of student mobility to the State of origin. Ten German States currently offer fewer university places than they have high school graduates with the right to attend university. Should their neighbouring states introduce these hypothetical measures, then these ten States would immediately have to create new higher education capacity. This would be very expensive and very hard. Thus, these States would face high incentives to negotiate with the States with excess higher education places to agree on financial compensation for continuing to admit their migrant students at reasonable tuition fees.

A similar idea underlies the “*Hochschulpakt*”, an agreement between German States about the number of places to provide at universities in order to cope with the expected increase in high

school graduates in the coming years.⁴⁷⁵ A number of German States are anticipating that in the future the number of students from their State graduating with the Abitur will exceed their capacity to accommodate them at University. Concurrently, on the other hand, a number of newly acceded German States are expecting to see a decrease in demand for places at their higher education institutions. The *Hochschulpaket* is an agreement between these two groups of States, that those with excess university places will be compensated by the other States for not decreasing the number of places, but instead admit more students from those States. It shows that intergovernmental bargains are not impossible if there is a surplus to be realised from bargaining.

If a system of transfer payments, e.g. according to the example of Switzerland, was established under intergovernmental bargaining, tuition fee differentiation would no longer be necessary to solve the free-riding problem. In such a case, the realisation of the non-discrimination principle would no longer be negatively affected. Thus, even though both statutes impact negatively on the non-discrimination principle in the first place, this negative impact is maybe only short term and may be partly compensated for by the incentive effect it provides to the State governments to install transfer payments and remove the discrimination in the future.

As both legislative alternatives impact negatively on the realisation of the non-discrimination principle, the intensities of the impact have to be compared to discover which legislative measure has the stronger impact. Analogous to the free choice principle, the intensities of impacts on the non-discrimination principle will be categorised on the basis of the GFCC decisions on infringements of Article 3 (1) GG. According to the GFCC, the intensity of legislative measures' infringements of the right to equal treatment depends positively on:

- The similarity of the Statute's differentiation criterion to the prohibited differentiation criteria in Art. 3 III GG. These include gender, parentage, race, language, homeland and origin, faith, and religious or political opinions;
- The degree to which compatibility with the differentiation criterion cannot be influenced by the individual affected;

⁴⁷⁵ *Berthold, Gabriel, Hüning and Stuckrad* 2006. The Federal government and the German States agreed to share cost to increase the number of places at universities in the coming 12 years. The Federal government will pay 50% of the additional cost, which will partly be used to secure the existing places at universities in Eastern and city States, which face decreasing demand of students from their own State in the coming years. The big (Western) States of Germany agreed to create 90.000 additional places in the coming years.

- The degree to which the unequal treatment prevents the exercise of fundamental rights guaranteed in the constitution.⁴⁷⁶

Additionally, the intensity of a measure's impact on the realisation of the non-discrimination principle can only be compared by dividing them into discrete categories, here *light*, *moderate* and *severe* impacts. The criteria listed above, which were developed in the GFCC case law, will be used here to provide the guidelines for determining into which category a given legislative measure falls.

Light as a category includes all legislative measures, in which the criteria of differentiation is not identical or very similar to the forbidden criteria in Article III GG and whose discrimination criterion can be easily influenced and are not related to the exercise of fundamental rights. Such discrimination could be for instance a reduction in tuition fees according to good exam results. The discrimination criterion is not similar in this case to any of forbidden criteria in Article 3 (3) GG. Also, students can influence their exam results by studying harder and they are not prevented from the exercise of any fundamental right by this reduction.

The category of *moderate* impact on the non-discrimination principle includes discriminatory measures which discriminate according a criterion which cannot easily be influenced by the affected individuals and which also affects the exercise of fundamental right and may also be similar to the forbidden discrimination criteria of Article 3 (3) GG. An example for this category would be a discrimination of tuition fees or access to higher education according to age. The criterion cannot be influenced by the individual, it would affect the exercise of the fundamental right of free choice of occupation but the criterion is not a priori ruled out by the Constitution. Therefore, overall the impact would have to be classified as *moderate*.

In the category of *severe* impacts on the non-discrimination principle, all discriminations according to the forbidden criterion enumerated in Article 3 (3) GG are contained. Also all other discriminations fall into this category, which discriminate according to very similar criteria to these criteria and impact negatively on the exercise of fundamental rights. An example for this would be differentiation of tuition fees according to religion, gender or race. Another example would be the differentiation of tuition fees in the hypothetical cases discussed in this thesis. Under both our hypothetical Statutes, the charging of tuition fees is discriminated according to

⁴⁷⁶ BVerfGE 88, 87, 96; BVerfGE 91, 389, 401; BVerfGE 95, 267, 316 ff.; See also with further explanations *Pieroth and Schlink* 2005 paragraph 438; *Kannengießner* 2004 paragraph 17.

the student's place of registered residence. The differentiation criterion used in the Statutes of "place of registered residence before studying" can be related to at least two criteria in Article 3 (3) GG. These criteria are discrimination according to homeland and origin.⁴⁷⁷ The GFCC has decided that "homeland" refers to the place of birth or place of long-term residence.⁴⁷⁸ The criterion "origin" refers to the social or economic status of an individual's ancestors.⁴⁷⁹ Thus, there is a high similarity between the differentiation criterion stipulated in the hypothetical *Higher Fees* statute and the prohibited criteria in Article 3 (3) GG.

In addition, as the place where a student has grown up or lived at least for five years will usually have been chosen by her parents, the individual cannot influence the differentiation criterion. Finally, as has been argued above, the discrimination criterion has a severe influence on the exercise of the right to freely choose place of training.⁴⁸⁰ On the other hand, as also argued above, the introduction of differentiated tuition fees sets an incentive for governments to agree on a system of transfer payments.⁴⁸¹ Thus, with a positive probability, the discrimination may be removed. However because intergovernmental bargaining may fail, the installation of a system of transfer payments is still uncertain, compared to the certain discrimination which will arise should such a piece of legislation ever be implemented. Thus, the overall intensity of the impact on the realisation of the principle of discrimination has to be considered as *severe*. This result depends as well on the assumption that students do not have access to income-contingent loans or even grants to finance their higher tuition fees.

The second statute implying the total exclusion of migrant students from publicly provided higher education institutions, also has a *severe* negative impact on the realisation of the non-discrimination principle. The same arguments apply as above. As the criterion of differentiation with regard to admission to higher education is also prior long-term in-State residence, it is also very similar to the criteria of homeland and origin. The statute would also decrease free choice of place of training, and the criterion of differentiation cannot at all be influenced by the individual students. Thus, it falls into the same category as the *Higher Fees* statute, which is *severe*. However, if subcategories within that category were constructed, its impact on the realisation of the non-discrimination principle would be even *more severe* than the introduction of differentiated tuition fees. If the no admittance rule for students from other States would be implemented, then

⁴⁷⁷ German: "Heimat und Herkunft" Art. 3 III GG.

⁴⁷⁸ Heun 1996 paragraph 116, BVerfGE 48, 281, 287; BVerfG NVwZ 1983, 223, 224.

⁴⁷⁹ Ibid. paragraph 117.

⁴⁸⁰ See above section 3.6.3.2.

⁴⁸¹ See above section 3.1.3.3.

nobody from other States, even students who have access to sufficient financial resources to pay the tuition fees, could get access to other States' universities.

3.6.3.4 Statute least restrictive means

The following matrix summarises the results of the necessity test:

Table 4: German law necessity test of the *Higher Fees* statute

Normative benchmark / Legislative alternatives	Investment in higher education	Free choice of place of training	Non-discrimination
Differentiated tuition fees	1, moderate positive impact	1, severe negative impact	1, severe negative impact
Exclusion of out-of-State students	1, moderate positive impact	2, severe negative impact	2, severe negative impact

1: better alternative from a normative perspective (Stronger positive impact and less negative impact),
 2: worse alternative from a normative perspective.

The above analysis of the impact of the legislative alternatives on the factual realisation of constitutional principles shows that both alternative measures, the *Higher Fees* and the *No Admission* statute would have identical positive effects on the higher education principle. The comparison of their effects on the other constitutional principles, the free choice principle and the non-discrimination principle was the core of the necessity test. The analysis has led to the conclusion that the same principles would be affected to an even larger extent by the closure of universities to students from other States than be the tuition fee differentiation implied by the *Higher Fees* statute. Therefore, it can be concluded that the *Higher Fees* statute is the less restrictive alternative to solve the free-riding problem of the two and will be considered as the least restrictive means.

On the basis of the classifications developed to rank impacts of legislation on the constitutional principles in this section, the impact a piece of legislation has on the principles can then be directly integrated into the proportionality test. In the last step of the proportionality test, the infringements of fundamental rights generated by the statute in question have to be balanced against the positive effect the statute has on reaching its stated aim. The intensity of the statute's infringement on the fundamental rights is by definition, identical to the impact of the statute on the constitutional principles. The intensities of Statute's infringement taken together with the reliability of the empirical assumptions, and the abstract weights of the rights or principles under the constitution, can then be used to generate a result under the proportionality test's last step, which we will discuss in the following section.

3.6.4. Statute not proportionate in a narrow sense

The fourth step of the proportionality test, proportionality in a narrow sense, asks whether the negative impact on the fundamental right is not overly onerous compared to the positive impact of the legislative measure. If the violation of one fundamental right cannot be justified, then the statute will have to be termed unconstitutional. Therefore the proportionality in a narrow sense test must be separately conducted for each violated fundamental right. This will be done by separately balancing the infringement of the right against the positive impact of the hypothetical legislation on the competing constitutional higher education principle. This balancing of the competing normative principles is the most important part of the proportionality test and also the most difficult one. As here competing normative values have to be balanced against each other, it is usually impossible to find a common scale on which the respective degree of their infringement can be easily compared. In the prevailing doctrinal interpretation of the proportionality principles, no further rules on how to carry out the balancing are imposed on the judges.⁴⁸² *Robert Alexy* has developed in the context of his constitutional theory an approach of how to rationalise the balancing of competing normative principles as far as possible. The approach is called the weight formula and will be applied in this thesis. The following section first shortly explains the approach before it is applied to the *Higher Fees* statute.

3.6.4.1 Alexy's weight formula

The discussion of the *Higher Fees* statute under the proportionality principle up to this point has established that the statute has a positive impact on the higher education principle. However, the statute also infringes the fundamental rights of equal access to higher education, free choice of place of training and non-discrimination. As no less restrictive means to reach the same aim could be identified, these conflicting normative principles now have to be balanced against each other to decide whether the infringements of fundamental rights can be justified by the positive effect. The *Van-Aaken*-approach applied in this thesis, builds on the normative constitutional theory developed by *Alexy*. In this approach, Constitutional principles derived from the Constitution are normative requirements which should be maximised by the legislator. This concept of constitutional principles, whose realisation should be maximised, forms also the basis of *Alexy's* approach to the balancing problem. Their character as optimisation requirements makes them inherently prone to balancing.⁴⁸³

The balancing of competing normative principles is the most difficult step in applying the proportionality principle to a piece of legislation. Here the making of somewhat arbitrary value

⁴⁸² See above section 1.4.1.2.

⁴⁸³ For a critique see *Möller* 2007.

judgements cannot be completely avoided because the normative principles enshrined in the Constitution cannot be compared according to measures of their intensity made on the same scale. This reliance on the use of value judgments has led to the criticism that the balancing process conducted under this step is irrational and should be completely avoided, or, where it cannot be avoided, no rational discussion of the results should be attempted.⁴⁸⁴ *Alexy* argues, however, that the aim of constitutional theory should be to rationalise the balancing process as far as possible and make the underlying value judgements as transparent as possible.⁴⁸⁵ He argues that although value judgements cannot be avoided, they can be firmly routed in, and defended by, the empirical analysis of the case and the text of the Constitution.⁴⁸⁶ In order to achieve this, he has developed his so-called *Weight Formula*.

In order to conduct the balancing of two competing normative principles, he dubs the two involved principles principle *i* and principle *j*. Both principles are then categorised according to three different variables, which have the purpose of grounding the balancing outcomes in the empirical analysis of the case and the text of the constitution. The first variable is the statute's intensity of interference with the principle *i*, which is termed as I_i .⁴⁸⁷ This intensity of interference is the intensity with which the piece of legislation, which is being reviewed under the constitution, would infringe the constitutional right. It will be determined according to the empirical analysis of the facts of the case. The second variable is the reliability of the empirical assumptions underlying the predictions of the interferences, which will be referred to as R_i .⁴⁸⁸ It is also derived from the empirical analysis. Finally, the abstract weight of the principles under the constitution, dubbed as W_p , enters the balancing procedure. The abstract weight of both principles is determined according to the importance, which is given to a fundamental right or other normative principle by the text of the constitution.⁴⁸⁹

In the German constitution, e.g. the right to human dignity is given the highest abstract weight as it may not be infringed at all, whereas other normative principles such as the other fundamental rights, which are not guaranteed to such a high standard as human dignity, are assigned less abstract weights. The three variables have to be determined for the two competing principles and from the basis for the result of the balancing. As the variables are derived from the empirical

⁴⁸⁴ *Habermas* 1992 p. 315 and *Pieroth and Schlink* 2002 paragraph 293.

⁴⁸⁵ *Alexy* 2003b p. 448.

⁴⁸⁶ *Ibid.* p. 442.

⁴⁸⁷ *Alexy* 2003a p. 443 ff.

⁴⁸⁸ *Alexy* 2003b p. 446.

⁴⁸⁹ *Ibid.* p. 446.

analysis of the case and the constitution, their determination becomes open to discussion and has to be defended by rational arguments.⁴⁹⁰

In theory, all three variables, intensity of interference, reliability of the empirical assumptions and abstract weight of the principles are continuous. However in practice, none can be measured continuously. For simplicity, *Alexy* suggests classifying both, the intensity of interference with a principle and the abstract weight of the principle, according to a triadic scale of increasing intensity dubbed light (*l*), moderate (*m*) and serious (*s*).⁴⁹¹ The reliability of the empirical assumptions underlying the predictions of the intensity of interference is classified on another triadic scale of decreasing reliability with the categories: certain or reliable (*r*), maintainable or plausible (*p*) and not evidently false (*e*).⁴⁹² If necessary, these categories can also be further broken down into sub-categories. It has to be pointed out again that the assumption of a triadic scale to rank the realisation of the variables is very strong and simplifies the problem to a large extent. The decision to follow *Alexy* in this respect has been taken for tractability of the problem. However, it has to be acknowledged that the results depend strongly on this assumption.⁴⁹³

The classification of variables according to these scales for each principle is the most important part of the balancing procedure and determines the outcome. In order to balance the principles against each other, *Alexy* has developed a *Weight Formula*. The *Weight Formula* determines how the three variables, once they have been assigned a category, are combined in order to determine which principle prevails. Assuming equal normative importance of all three variables, *Alexy* multiplies all three variables for each principle. Principle *i* is always the infringed fundamental right and principle *j* is the positive impact which the legislator strives to achieve by introducing the legislation, which is being reviewed. The result of the multiplication for the principle *i*, which is the infringed constitutional right, is then divided by the result of the multiplication for principle *j*, the positively affected principle. Thus, the *Weight Formula* in an abstract form is depicted by the following fraction:

$$W_{i,j} = \frac{I_i * W_i * R_i}{I_j * W_j * R_j}$$

⁴⁹⁰ Ibid. p. 448.

⁴⁹¹ *Alexy* 2003a p. 440.

⁴⁹² Ibid. p. 447.

⁴⁹³ See also section 1.4.2.5 for a critical discussion of the weaknesses of *Alexy* approach.

The result of the fraction W_{ij} is termed the concrete weight, which is assigned to principle i under the circumstances of the case to be decided. The result of the balancing is termed concrete weight because it determines which of the principles has a higher weight under the given circumstances and should therefore prevail in this concrete case. This should not be confused with the abstract weight of the principles, which enters the balancing formula.

In order to determine the result of the balancing, *Alexy* suggests assigning the following numbers to the different categories of the three variables. The numbers represent the underlying premises about the normative importance of each variable. The variable intensity of interference has been defined to have three categories, light (l), moderate (m) and severe (s). *Alexy* assumes that the higher the intensity of impact on the constitutional principle, the more important the impact on the principle becomes. Therefore, the values assigned to the variable of intensity of interference increase according to the geometric sequence from low impact over moderate to severe impact. This implies the following values if the intensity of interference is low, the $l=2^0$; if it has been found to be moderate, $m=2^1$, and if it is considered severe, $s=2^2$. The same argument applies to the variable of abstract weight of the principle under the constitution. The higher the abstract weight, the more important the abstract weight becomes normatively and is therefore assigned numbers following exactly the same definition as the variable of intensity of interference.

Finally, the normative importance of the reliability of empirical assumptions decreases with increasing uncertainty. Therefore, to measure the reliability of empirical assumptions, *Alexy* assigns the decreasing values from $r=2^0$ to the category of most reliable empirical assumptions, to $p=2^{-1}$ to the category of moderately reliable empirical assumptions, and $e=2^{-2}$ to the category of uncertain empirical assumptions. These suggested values will also be adapted in the following analysis balancing the affected constitutional principles against each other.

Once the concrete weight has been determined, it follows which of the two principles prevails. The underlying normative assumption of the *Weight Formula* is that an infringement of a fundamental right can only be justified by an at least equally important if not more important countervailing normative principle. The variables have been defined, so that their numerical value increases with their normative importance. Therefore, if the concrete weight is greater than 1, principle i prevails over principle j , because it carries more normative value. Secondly, if the concrete weight of principle i is smaller than 1, principle j prevails over principle i . Finally, if the concrete weight of principle i is equal to one, then the two principles are of equal importance.

In this last case of a stalemate between the two principles, the statute is considered proportionate according to the following arguments. The sometimes quite crude categorisation of measures' impacts according to the triadic scales can cause stalemates between competing normative objectives under the Constitution.⁴⁹⁴ One option to avoid the problem of a stalemate would be to subdivide the triadic scales further so that finally the prevailing principle could be determined. However, the main advantage of the triadic scale is that the categories are relatively simple to define and in most cases work quite well. Thus, the alternative to further dividing up the categories is to argue that the Constitution only constrains the legislator with respect to measures which can be identified as clearly unconstitutional, whereas with regard to everything else the Constitution leaves the legislator scope for discretion.⁴⁹⁵ Thus from this perspective, a stalemate between two competing normative principles has to be interpreted as leaving the measure under review, which cannot be shown to violate the Constitution, within the legislator's discretion.⁴⁹⁶

3.6.4.2 Classification of the variables

The above analysis in the necessity test, which scaled the intensity of the *Higher Fees* statute's impact on the realisations of constitutional principles, will be used here to define the intensity of the legislations interference with the constitutional rights and the intensity of the positive impact on investment in higher education. In the previous sections, we saw that the statute's impact on the realisation of the free choice principle and its impact on the non-discrimination principle can be classified as *severe*. Thus, the legislation's infringement with the right to free choice of place of training, the right to equal treatment and the right to equal participation in publicly provided higher education institutions can also be defined as *serious*. On the other hand, the statute's impact on the realisation of the higher education principle has been classified as *moderate*.⁴⁹⁷ Based on this analysis the impact on the higher education principle will also be classified as *moderate*.

The abstract weights we will assign to the constitutional principles are determined according to the importance which the German Constitution assigns to the different normative requirements. Following *Alexy*, the abstract weights of the principles will be defined on a triadic scale of increasing normative value. The scale divides the abstract weight of principles into the categories of *light* (*l*), *moderate* (*m*) and *serious* (*s*). The highest normative requirements in the German Constitution are the cores of the fundamental rights (*Wesensgehalt*)⁴⁹⁸. According to the text of Article 19 GG, the core of every fundamental right must not be violated. A violation has as

⁴⁹⁴ *Alexy* 2002c p. 25.

⁴⁹⁵ *Ibid.* p. 21 ff.

⁴⁹⁶ *Ibid.* p. 22.

⁴⁹⁷ See above section 3.6.3.1.

⁴⁹⁸ Article 19 (2) GG. See also *Krüger/Sachs* in *Sachs* 2003, Article 19 GG, paragraphs 9 and 33 ff.

immediate legal consequence that the statute is considered unconstitutional.⁴⁹⁹ Thus, the cores of fundamental rights fall into the highest category –*serious*– of abstract weights. Among the next important normative requirements of the Constitution are the outer parts of the scope of the fundamental rights, infringements of which are justifiable under the Constitution. These fall into the medium category –*moderate*– of abstract weights. Also, collective goods of overarching importance, which can also be derived from the Constitution such as public health or higher education, are considered to have a *moderate* abstract weight. Collective goods, which are not mentioned in the Constitution but can be inferred from the constitution, are considered to have a *light* abstract weight

This classification allows us to determine the abstract weights of the three violated fundamental rights and the higher education principle. The fundamental rights are all infringed but not in their cores. Thus, the abstract weights of all three violated fundamental rights are most appropriately categorised as *moderate*. The abstract weight of the higher education principle is also classified as *moderate* even though the Constitution does not explicitly codify investment in higher education as a value. There are a number of reasons for this. First of all, the intrinsic value of investment in higher education follows from the fundamental right of human dignity. Thus, investment in higher education is normatively important because it derives its value from the most fundamental right guaranteed in the constitution. In addition, higher education is a collective good, which is of overarching importance for the economic and political development of Germany.⁵⁰⁰ Taking the importance of the collective good and the basis in the guarantee of human dignity in the German Constitution together, arguably makes it appropriate to assign *moderate* abstract weight to the higher education principle.

If the hypothetical *Higher Fees* statute was to be introduced by a German State, then the fundamental rights of free choice of place of training, non-discrimination, and right to equal participation in publicly provided higher education, would be infringed with certainty. Thus, the reliability of the empirical assumptions underlying the prediction of infringements of fundamental rights is classified in the highest category as *certain*. The potentially positive impact of the legislation on increased investment in higher education, on the other hand, does not occur with certainty. As the incentives for legislators may change, they may then, with a high probability, change their investment behaviour. However political decisions are influenced by a multitude of factors, among them the incentives provided by the constitutional framework, but

⁴⁹⁹ *Krüger/Sachs* in *Ibid.*, Article 19 GG, paragraphs 33 ff.

⁵⁰⁰ See above section 2.2.2 on externalities of higher education.

also voters' preferences, the general economic situation and ideology. Thus, it is less than certain that the positive impact sought to be brought about by the legislation would actually be realised. Therefore the reliability of the empirical assumptions can only be classified as *probable*.

3.6.4.3 Balancing

As a basis for conducting the actual balancing, the classification of the affected principles are summarised here with respect to intensity of interference, reliability of empirical assumptions and abstract weights:

Table 5: German law proportionality in a narrow sense test of the *Higher Fees* statute

	Intensity	Abstract weight	Reliability of empirical assumptions
Free choice of place of training	severe, s=4	moderate, m=2	reliable, r=1
Equal treatment	severe, s=4	moderate, m=2	reliable, r=1
Participation in publicly provided higher education	severe, s=4	moderate, m=2	reliable, r=1
Investment in higher education	moderate, s=2	moderate, m=2	probable, r=1/2

When we apply the weight formula to the infringement of the right to free choice of place of training (i), Article 12 (1) GG, against the positive impact on the higher education principle (j) comes to the following numerical result:

$$W_{i,j} = \frac{I_i * W_i * R_i}{I_j * W_j * R_j} = \frac{4 * 2 * 1}{2 * 2 * \frac{1}{2}} = 4$$

Applying to the weight formula to the infringement of the right to equal treatment (i), Article 3 (1) GG, against the positive impact on the higher education principle (j) comes to an identical result:

$$W_{i,j} = \frac{I_i * W_i * R_i}{I_j * W_j * R_j} = \frac{4 * 2 * 1}{2 * 2 * \frac{1}{2}} = 4$$

Applying the weight formula of the infringement of the right to equal participation in publicly provided higher education (i), Articles 12 (1) GG, 3 (1) GG and 20 (1) GG, against the positive impact on the higher education principle (j) finally also delivers the same result:

$$W_{i,j} = \frac{I_i * W_i * R_i}{I_j * W_j * R_j} = \frac{4 * 2 * 1}{2 * 2 * \frac{1}{2}} = 4$$

$W_{i,j}=4$ for i =free choice of training, non-discrimination and equal participation and j = investment in higher education. In all three cases, the numerical result of the weight formula is four, which is greater than one. Thus, under this analysis none of the three infringements of fundamental rights by the *Higher Fees* statute is proportionate in a narrow sense. With regard to all three fundamental rights, a reliably predicted and severe infringement of the fundamental right but only a moderate and probable positive impact on investment in higher education results from the introduction of differentiated tuition fees. As a result under the analytical method conducted here, the *Higher Fees* statute is found not to be constitutional.

3.7 Conclusion: Differentiated fees not socially desirable in Germany

This chapter has started out by giving a law and economics account of the free-riding problem inherent in the German and European higher education finance system and derived its possible solutions from the concept of institutional congruence. Based on institutional congruence, four solutions have been identified, centralisation, tuition fee differentiation, no admission of migrant students and a system of transfer payments. By differentiating tuition fees according to place of prior long-term residence, the legislator could therefore use tuition fees not only to increase direct investment in higher education by the tuition fee revenues but tuition fees would also have an indirect effect on investment in higher education. The solution of differentiated tuition fees has also been identified as a solution which could be unilaterally implemented by one or more State legislator(s) increasing its chances of being implemented. It has therefore been chosen as the solution which has been discussed in more detail. Differentiated tuition fees have then been assumed to be introduced in hypothetical statutes, our *Higher Fees* statutes, by all States in Germany. This chapter has discussed one approach the GFCC could take, should they have to decide a case similar to the representative hypothetical *Higher Fees* statute.

Based on the analysis of the negative impact of differentiated tuition fees on the realisation of the constitutional principles of free choice of place of training and non-discrimination, it has been

argued that the hypothetical *Higher Fees* statute would infringe three fundamental rights: the right to free choice of place of training, the right to equal treatment and the right to equal participation in publicly provided higher education. The justification of the infringements has been discussed according to the proportionality principle. The *Higher Fees* statute has failed the last step of the proportionality test with respect to all three violated fundamental rights and has thus not been found to be proportionate in a narrow sense. It has failed the last step of the test because all three infringements of the fundamental rights would be of *severe* intensity and occur with *certainty*, but the impact on the higher education principle would only be *moderate* and can only be predicted to occur with a *moderate* probability. Therefore, all three infringements are not proportionate in a narrow sense and cannot be justified. Thus, under the analysis based on the *Van-Aaken*-approach conducted here, the statute has not been found to be constitutional and it follows that the introduction of differentiated tuition fees as a means to solve the free-riding problem can also not be considered socially desirable.

This result is also in line with the limited legal discussion about tuition fee differentiation. Most commentators are very sceptical with regard to tuition fee differentiation according to place of prior residence and argue it to be unconstitutional.⁵⁰¹ This thesis adds as an additional argument to the discussion that tuition fee differentiation would increase the incentives for State governments to investment in higher education. This argument had previously been neglected by the commentators and should also be taken into account by the Courts, if such a case ever has to be decided in the future. This result may change if the case was constructed in a different way and e.g. loans or grants for out-of-State students were assumed to have been introduced.

However, the analysis has shown that under the assumptions made about the *Higher Fees* statute here, this positive effect would not be strong enough to turn the scales of balancing under the Constitution in favour of tuition fee differentiation. The same result would probably apply also to an introduction of the alternative solution to the free-riding problem, the exclusion of migrant students from State universities. In this chapter discussed as *No Admission* statute, exclusion of students is equally effective in solving the free-riding problem. However, it impacts more severely on the other constitutional principles. Therefore, it would be even more unlikely that a system of *No Admission* would be found constitutional. The main difference between the legal debate about differentiated tuition fees and this thesis is that none of the above cited papers systematically takes into account the effects of tuition fee differentiation on the investment incentives for

⁵⁰¹ See above section 3.5.

politicians. Therefore, integrating economic analysis into the legal discussion in this case generates new arguments which should be taken into account by any German Court.

4. Normative analysis of tuition fee differentiation according to prior residence in the EU

As we saw in the previous chapter, it is highly likely that the *Higher Fees* statutes would not be considered constitutional under the German Constitution. Remember, the hypothetical *Higher Fees* statutes have been assumed to introduce full cost tuition fees for students who have not been living on a long-term basis in the State before applying to university, while continuing to provide cheaper places with income-contingent loans only for long-term residents of the State.⁵⁰²

In addition to affecting the German interstate students discussed above, this system of tuition fee differentiation in Germany would also affect students from other EU Member States, who intend to leave their State of origin to study somewhere else in the EU, in this case Germany. As a consequence, it has been assumed above that also the other European Member States, seeing their students at a disadvantage compared to the German students going abroad, react by introducing differentiated tuition fees according to place of prior long-term (also minimum five years) residence within the EU. Therefore, as has already been mentioned in section 3.2 above, it is now assumed that in addition to the proceedings before the GFCC, the different statutes introducing differentiated tuition fees according to prior long-term residence in European Member States are also brought before the ECJ by the European Commission.

In this case the Commission argues that students' right to equal treatment according to nationality within the EU have been violated. The Commission argues that differentiation according to the place of permanent residence has an almost identical effect as a differentiation to nationality, since the overwhelming majority of European citizens live in the State of their nationality. Hypothetically, the ECJ has then had to decide whether the statutes are in accordance with the EC Treaty and also, like the GFCC combines them in one representative case, discussing the accordance of a representative *Higher Fees* statute with the EC Treaty.⁵⁰³

This case will also be analysed using the method developed under the *Van-Aaken*-approach.⁵⁰⁴ The economic analysis of the consequences of the *Higher Fees* statute is identical to the analysis in section 3.3. In that section, we found for Germany that differentiated tuition fees would not reduce overall demand of higher education as long as in-State fees remain moderate. However, demand will be shifted towards in-State universities as the overwhelming majority of students cannot afford to study outside their State of permanent residence any more. Incentives to invest

⁵⁰² See above section 3.2.

⁵⁰³ It is assumed that all procedural requirements are met.

⁵⁰⁴ See above section 1.4.2.

in higher education, on the other hand, will be increased as the free-riding incentive is removed. Human capital will also increase; however, this increase is mitigated by the loss in human capital through the reduction in student mobility. These effects arise equally on the European level, with a slightly larger negative effect due to the lost intercultural skills, which are especially increased by inter-European student mobility. Given the low level of student mobility, the magnitude of all effects will probably be smaller than on the German level. The overall effect on human capital is nevertheless considered to be positive.⁵⁰⁵

These findings will be taken as the starting point of the following analysis. In this chapter, the effects of the legislation will be normatively assessed against a normative benchmark of “constitutional principles” derived from the EC Treaty. However in contrast to the obvious applicability of the German Constitution, it is not immediately clear whether this case falls within the scope of the EC Treaty. Thus, before we turn to deriving the principles from the EC Treaty, first a short overview of the legal situation with regard to equal access to higher education in the EU will be given (4.1). On the basis of this overview, it will then be argued that the case almost certainly has to be considered to fall within the scope of the Treaty. Following this conclusion, in the next section, the constitutional principles which belong to the normative benchmark will be derived from the EC Treaty and the impact of the *Higher Fees* statute on the principles will be discussed (4.2). Then, these impacts are subsumed under concrete norms of the EC Treaty (4.3) followed by a discussion of the justification of the violation of the Treaty by the *Higher Fees* statute (4.4). Finally, conclusions with regard to the social desirability of the hypothetical case discussed here are drawn (4.5).

4.1 Equal access to higher education in EC law

The normative evaluation of the *Higher Fees* statute under the EC Treaty is only legally meaningful if tuition fee differentiation according to State of prior residence falls within the scope of the EC Treaty. Only in this case will EC law become applicable. In the area of higher education finance, the scope of the Treaty has been crucially determined by the ECJ in its case law. Due to the influence of case law on the legal development in this area, a short overview is given of the seminal decisions on equal treatment of migrant students within the EU. The impact of these decisions on secondary legislation is then also outlined. This overview of the seminal cases and most important secondary legislation will finally serve as the basis for hypothesising that the *Higher Fees* statute would fall under the scope of the Treaty.

⁵⁰⁵ See above section 3.3.2.

4.1.1. Legal situation before Maastricht

The relevant case law and secondary legislation on the higher education of migrant students goes back to the eighties, prior to the enactment of the Treaty of Maastricht. Before the Maastricht reforms, ECJ case law had step by step created a right to equal treatment for migrant students. The developments in the case law were later codified in Directive 93/96 on free movement of students. As will be discussed in detail below, this right to equal treatment was gradually expanded to finally cover tuition fees, student loans and grants covering tuition fees.⁵⁰⁶ Thus, as far back as 1988, the hypothetical *Higher Fees* statute would have almost certainly been considered, according to the ECJ case law, to fall within the scope of the Treaty.

4.1.1.1 EEC Treaty text limits Community competences in education

In the original EEC Treaty signed in 1957 in Rome⁵⁰⁷, general education was not explicitly mentioned among the Community competencies. According to Article 128 EEC, the sole Community competency in the area was to develop principles of a common vocational training policy. However, thirty years later in the seminal *Gravier* decision, the ECJ chose a broader interpretation of Article 128 EEC which included also higher education in the scope of the Treaty.⁵⁰⁸ This was despite the fact that a strict interpretation of the Treaty text did not imply any impact of the Treaty on the higher education policies of the Member States at all. However it did reflect the increased role the EC had taken on in all aspects of regulation over the thirty years regardless of what one might think about the increased assumption of power to the centralised level in the EU.⁵⁰⁹ Through the ECJ case law, which will be summarised in the next section, a very wide interpretation of the Treaty has become legal reality.

4.1.1.2 *Gravier, Lair/Brown and Blaizot*

As the foundational case in the area, from which the whole legal development originated, the *Gravier* case will be discussed in detail.⁵¹⁰ In 1985 *Françoise Gravier*, a student of French nationality enrolled in a four year course in strip cartoon art at the Académie Royale des Beaux-Arts in Liège, Belgium, protested against having to pay a course enrolment fee that students of Belgian nationality were not required to pay. Ms. *Gravier* brought her case before the Tribunal de Première Instance in Liège and sought exemption from the duty to pay this fee. The tribunal decided that the differentiation of tuition fees on the grounds of nationality was a question of interpretation of the EEC Treaty. Therefore the tribunal referred the case to the ECJ and stayed the proceedings until the ECJ had ruled upon this question.

⁵⁰⁶ For a good overview see *Tridimas* 2006 p. 123 ff.

⁵⁰⁷ Treaty establishing the European Economic Community.

⁵⁰⁸ Case 293/83 *Gravier v City of Liège* [1985] ECR 593 paragraph 21 ff.

⁵⁰⁹ See *Craig and de Búrca* 2007 p. 7-14.

⁵¹⁰ Case 293/83 *Gravier v City of Liège* [1985] ECR 593.

The European Court of Justice decided that such tuition fee discrimination fell within the scope of the EEC Treaty. The Court found that the enrolment fee was not a question of the organisation or financing of education, which were clearly Member States' competencies, but was properly regarded as a financial barrier to access to education for foreign students only.⁵¹¹ The Court then stated that access to and participation in courses of instruction and apprenticeship, in particular vocational training was "not unconnected with Community law" because the common vocational training policy referred to in Article 128 EC was gradually being established.⁵¹² In addition, the Court argued that tuition fee discrimination had a negative impact on the free movement of persons and workers, one of the primary objectives of the Community. The Court held therefore, that access to vocational training fell within the scope of the Treaty.⁵¹³

The Justices of the Court considered that if a higher enrolment fee was imposed on students who were nationals of other Member States, compared to students from the host country, it constituted a discrimination based on nationality according to Article 7 EEC (now Article 12 EC).⁵¹⁴ The prohibition of differentiated fees according to Article 7 EEC then only depended on the question whether higher education was subsumed within the category of vocational training. The Court held that the defining element of vocational training was that students were being prepared for their later profession. This was found to be the case in higher education, even if the course also contained an element of general education.⁵¹⁵ Therefore courses such as the strip cartoon art course in the *Gravier* case were also classified as vocational training as long as they prepared students for a profession.

In its defence, the Belgian government argued that neither foreign students nor their parents paid Belgian income taxes and thus did not contribute to the financing of public higher education. The government also stated that Belgium was a net importer of students and higher fees for foreign students were supposed to correct this imbalance.⁵¹⁶ However, in its decision, the ECJ did not show any concern at all about the financial consequences for Belgium.⁵¹⁷ The Court simply denied the existence of an impact of the decision on public finances stating that this problem of differentiated tuition fees did not fall into the area of education organisation or finance but

⁵¹¹ Ibid. paragraph 18.

⁵¹² Ibid. paragraph 19-21.

⁵¹³ Ibid. paragraph 20-26.

⁵¹⁴ Ibid. paragraph 14-15.

⁵¹⁵ Ibid. paragraph 30.

⁵¹⁶ Ibid. paragraph 12.

⁵¹⁷ *O'Leary* 1996b p. 188.

constituted a financial barrier to access.⁵¹⁸ Thus, the Court only took the financial consequences for students and their potential reactions into account, but not the financial consequences for governments.

The *Gravier* decision left many questions open. It was not at all clear from the Court's reasoning to what an extent a host country had to treat migrant EU students identically to home students. Over the decade the ECJ was confronted with several other cases along the same vein. These following cases were decided by the ECJ along similar lines, and gradually the open questions were answered. In *Blaižot*⁵¹⁹, foreign students at Belgian universities sued for repayment of their supplementary enrolment fees, which had been forbidden as a result of the *Gravier* case. In this case, the ECJ explicitly decided that higher education constitutes vocational training, even if the degree does not directly qualify one for a certain profession.⁵²⁰ Instead the Court felt that it is sufficient that the students acquire skills during their education at university that are useful for any future profession.⁵²¹ Only courses containing purely general education were excluded.⁵²² Discussing the potential retroactive effect of the decision, the Court at least finally acknowledged in *Blaižot* that the judgment might "throw financing of universities into confusion".⁵²³ Therefore, the Court decided against any retroactive application of the decision. However, in the main line of reasoning, the *Blaižot* decision once again contains no reference to any potentially negative financial consequences for Member States.

In the 1988 twin cases, *Lair* and *Brown*,⁵²⁴ it was disputed whether on the basis of the *Gravier* decision maintenance grants, loans and any other form of social benefits granted to domestic students were also encompassed within the conditions of access to vocational training. In *Lair* and *Brown*, the ECJ decided that under the State of Community Law at that time, the conditions of access falling within the scope of the Treaty only included grants and loans intended to cover registration or other fees. In particular, grants and loans intended to cover tuition fees were explicitly included.⁵²⁵ Maintenance grants and subsidised loans covering living costs were excluded. The exclusion of access to maintenance grants and loans from the right to equal

⁵¹⁸ Case 293/83 *Gravier v City of Liège* [1985] ECR 593 paragraph 18.

⁵¹⁹ Case 24/86 *Blaižot v University of Liège* [1988] ECR 379.

⁵²⁰ *Ibid.* paragraph 13.

⁵²¹ *Ibid.* paragraph 13-20.

⁵²² *Ibid.* paragraph 13-20.

⁵²³ *Ibid.* paragraph 34.

⁵²⁴ Case 39/86 *Lair v University of Hannover* [1988] ECR 3161, Case 197/86 *Brown v Secretary of State for Scotland* [1988] ECR 3205.

⁵²⁵ Case 39/86 *Lair v University of Hannover* [1988] ECR 3161, Case 197/86 *Brown v Secretary of State for Scotland* [1988] ECR 3205 paragraph 17.

treatment was again justified by reference to the competencies in the Treaty alone, without mentioning any financial consequences of this decision.⁵²⁶

4.1.1.3 Directive 93/96 on the free movement of students

The above described decisions revived political efforts to reach agreement on the regulation of free movement by students. From 1979 onwards, Member States had been engaged in negotiations about a Directive regulating free movement of non-economically active citizens. After ten years, the negotiations finally failed.⁵²⁷ One of the most important sticking blocks to this development was that Member States with relatively generous social assistance systems were afraid of welfare immigration.⁵²⁸ However, following the *Gravier* decision, the Community legislator reacted to the new legal situation by passing three separate Directives regulating the free movement of different groups of economically inactive citizens including students.⁵²⁹ Student mobility came within Directive 90/336.⁵³⁰ At the time of its enactment the Directive codified the most important aspects of the ECJ case law, described above, into statutory law.⁵³¹ The provisions of this Directive gave students a residence right to follow a course of vocational training under the same conditions as host State nationals. The residence right was made dependent upon the student having sufficient resources to cover daily expenses, sufficient health insurance, and excluded any right to claim maintenance grants or other forms of social assistance.⁵³²

4.1.2. Legal situation after Maastricht

However, just two years later, the Maastricht reforms fundamentally changed the nature of the European Community. In the context of this thesis, the most important changes were the introduction of limited Community competency for general higher education in Article 149 EC and the creation of Union citizenship in Articles 17-22 EC.⁵³³ In the Maastricht redraft of the EC Treaty, general education, as opposed to vocational training, was explicitly included in Article 149 EC as partly falling under European competency. Article 149 EC gave the Community limited power to implement measures in the area of higher education policy.⁵³⁴ To balance this expansion of Community power, the reformulated provision explicitly grants the Member States a guarantee of their autonomy in regard to higher education policy. Article 149 EC thereby strictly limits the Community's education policy competency to the international dimensions of higher education.

⁵²⁶ Case 197/86 *Brown v Secretary of State for Scotland* [1988] ECR 3205 paragraph 18.

⁵²⁷ *Hilf* in *Grabitz and Hilf* 2006, Article 18 EC, paragraph 2.

⁵²⁸ *Wollenschläger* 2007 p. 102 ff.

⁵²⁹ *Hilf* in *Grabitz and Hilf* 2006, Article 18 EC, paragraph 3.

⁵³⁰ Due to procedural mistakes later enacted again as identical Directive 93/96 EEC.

⁵³¹ *Shaw* 1999 p. 570.

⁵³² Article 1 and 3 Directive 93/96 EC.

⁵³³ Formerly Articles 8-8e EC.

⁵³⁴ *Ruffert* in *Calliess and Ruffert* 2007, Article 149 EC, paragraph 11.

Additionally, the complementary powers granted to the EU are ancillary to the Member States' education policies. Community education policy must not try to harmonise education systems according to Article 149 (1) EC. The framework for education policy outlined in the Maastricht treaty remains in force today, leaving the main competency with the Member States, and assigning only complementary competencies to the Community.

Even more important than the explicit mentioning of higher education competencies was the incorporation of the concept of Citizenship of the Union into the Treaty via Articles 17-22 EC. The debate surrounding the concept of Union citizenship first arose in the nineteen sixties. Politicians in favour of transforming the European Community from a purely economic union, into a more political one, strongly supported the idea. Union citizenship was supposed to bring Europe closer to the single citizen and thereby to increase the acceptance of European integration within the population.⁵³⁵ Equally strong resistance to the idea, on the other hand, arose from those politicians afraid of losing ever more national power to the European level. Granting freedom of movement to all citizens regardless of their economic status was especially controversial.⁵³⁶

The codification of Union citizenship in Articles 17-22 EC, the final result of more than 20 years of discussion, is therefore a compromise between all the extreme positions on the subject. The concept of Union citizenship in the EC Treaty is narrowly defined. Citizenship includes several different rights: the right to free movement within the European Union⁵³⁷; the right to vote and stand as candidate in the municipal elections and elections to the European Parliament in another European Member State⁵³⁸; the right to diplomatic and consular protection by authorities of any Member State in third countries where the Member State of which she is a national is not represented⁵³⁹ and the right to petition the European Parliament.⁵⁴⁰ The introduction of Union citizenship was to play an important role in the subsequent ECJ decisions based on the new version of the Treaty.

4.1.2.1 *Grzelczyk, Avello, Bidar and Commission v. Austria*

The earlier countervailing positions on the character of Union citizenship have also prevailed in the subsequent interpretation of Article 18 EC. Sceptical commentators have argued that Article 18 EC did not expand the right to freedom of movement, but merely restated in a more

⁵³⁵ See the Tindemans report *Tindemans* 1975, *Wollenschläger* 2007 p. 90 ff.

⁵³⁶ *Wollenschläger* 2007 p. 103, *Bode* 2005 p. 171.

⁵³⁷ Article 18 EC.

⁵³⁸ Article 19 EC.

⁵³⁹ Article 20 EC.

⁵⁴⁰ Article 21 EC.

prominent position in the Treaty, the existing legal situation that originated partly from ECJ case law, and partly from secondary legislation.⁵⁴¹ However, when the issue was once again brought in front of the ECJ, as we will see below, the Treaty was again given a very wide interpretation, and further integration on the basis of Article 18 EC promoted. In the wake of the expansive interpretation taken by the ECJ, the insertion of a complementary Union Citizenship, alongside national citizenship was, in hindsight, one of the more important changes made in the Maastricht redraft of the EC Treaty.⁵⁴²

Following on from the Maastricht revisions of the Treaty, the ECJ rulings have not seemed to follow a coherent doctrinal approach and are, in part, even contradictory.⁵⁴³ A complete discussion about the different possible interpretations and doctrinal problems that have been raised by these decisions would go beyond the scope of this thesis.⁵⁴⁴ Therefore here we will concentrate on the most important legal innovation pertaining to the further discussion, i.e., the interpretation of Union citizenship as the fundamental status of every citizen.

In a series of cases starting with *Grzelczyk*,⁵⁴⁵ *Avello*⁵⁴⁶ and *Bidar*⁵⁴⁷ the ECJ has ruled that the status of Union citizenship is the fundamental legal status of every citizen of a Union Member State. The *Grzelczyk* court stated: “Union citizenship is destined to be the fundamental status of nationals of the Member States, enabling those who find themselves in the same situation to enjoy the same treatment in law irrespective of their nationality, subject to such exceptions as are expressly provided for.”⁵⁴⁸ These rulings have filled the empty shell of Union citizenship with life. They have made it clear that Union citizenship is not of a declaratory nature, but is similar to civil or fundamental rights. As it is a right that carries direct effect and is enjoyed by every citizen in every situation, it is an objective value in itself.⁵⁴⁹

⁵⁴¹ *More* 1999 p. 539.

⁵⁴² Article 17 EC. *Wollenschläger* 2007 p. 4 ff.; *Haltern* 2005 p. 476 ff.

⁵⁴³ Case C-85/96 *Martinez Sala (Maria) v Freistaat Bayern* [1998] ECR I-2691; Case C-456/02 *Trojani v CPAS* [2004] ECR I-7573; Case C-184/99 *Rudy Grzelczyk v Centre public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193 ; Case C-148/02 *Carlos Garcia Avello v Etat Belge* [2003] ECR I-11613; Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119. Especially critical *Hailbronner* 2004.

⁵⁴⁴ For a detailed discussion see *Bode* 2005 § 5 and *Wollenschläger* 2007 p. 197 ff.

⁵⁴⁵ Case C-184/99 *Rudy Grzelczyk v Centre public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193.

⁵⁴⁶ Case C-148/02 *Carlos Garcia Avello v Etat Belge* [2003] ECR I-11613.

⁵⁴⁷ Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119.

⁵⁴⁸ Case C-184/99 *Rudy Grzelczyk v Centre public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193 paragraph 31. Very similar Case C-148/02 *Carlos Garcia Avello v Etat Belge* [2003] ECR I-11613 paragraph 22 and Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119 paragraph 31.

⁵⁴⁹ On the principle of direct effect see *Craig and de Búrca* 2007 p. 850-855; compare also *Hilf* in *Grabitz and Hilf* 2006, Article 18 EC, paragraph 1; *Magiera* in *Streinz* 2003, Article 18 EC, paragraph 9; *Kaufmann-Bühler* in *Lenz and Borchardt* 2006, Article 18 EC, paragraph 2; diverging opinion *Pechstein and Bunk* 1997 p. 547.

Explicitly revising its earlier *Lair/Brown* decisions in *Grzelczyk* and *Bidar*⁵⁵⁰, the ECJ widened the scope of the Treaty. It interpreted the scope of the Treaty to also include student loans and grants, and other forms of social assistance covering the cost of living. The requirements of sufficient means to cover the cost of living, and sickness insurance enumerated in Directive 93/96, were then interpreted by the Court as explicit exemptions from the right to equal treatment.⁵⁵¹ These exemptions have to be applied proportionally. Member States may restrict the applicability of the right to equal treatment in regard to student loans, grants and other forms of social assistance within the Treaty's scope, but they have to uphold the standards of Community Law. In the Court's view these standards have changed over the years to also include social solidarity to a certain extent between Members of the European Union.⁵⁵²

In *Grzelczyk*, once again, the financial consequences or negative investment incentives created by a decision do not appear to be seen as a problem, or a potential justification, for an exemption from the right to equal treatment. Financial considerations are only interpreted as providing a justification for placing a limit to the time of support for students.⁵⁵³ In *Bidar*, the Court for the first time mentions the possibility that extending student support to students from other Member States might affect the overall level of support.⁵⁵⁴ *Bidar* was a French national, who had lived with his grandmother and gone to school in London. In 2001, he applied for financial assistance, in the form of a subsidised loan, to study at University College. He was refused the loan on the grounds that he did not fulfil the residence criteria of at least three years of full time residency in the UK. According to the rules then in force, time spent in full-time education, to which *Bidar's* time in the UK had been dedicated, did not count towards the fulfilment of the residency requirement.⁵⁵⁵

Bidar appealed against this design of the residency requirements arguing that they were violating the EC Treaty and his case was decided by the ECJ. The ECJ considered that given the Union citizenship requirement, financial assistance to students falls into the scope of the Treaty.⁵⁵⁶ Therefore the non-discrimination principle had to be applied to the case. The ECJ held that the discriminatory effects of the British residency requirements could not be justified under the EC

⁵⁵⁰ Case C-184/99 *Rudy Grzelczyk v Centre public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193, Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119 paragraph 42.

⁵⁵¹ Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119 paragraph 43.

⁵⁵² *Barnard* 2007 p. 488 ff.

⁵⁵³ Case C-184/99 *Rudy Grzelczyk v Centre public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193 paragraph 44.

⁵⁵⁴ Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119 paragraph 56.

⁵⁵⁵ *Ibid.* paragraph 15.

⁵⁵⁶ *Ibid.* paragraph 42-48.

Treaty. The Court based this conclusion on the argument that foreign nationals had no chance to fulfil the residency requirements and therefore they led in fact to the same result as the openly forbidden criterion of discrimination according to nationality.⁵⁵⁷ However, the Court also held that Member States may require a certain degree of integration of the students applying for financial assistance into the society of that State.⁵⁵⁸ The integration into the society of that State may well be inferred from a certain time of residence in that State as long as it is not impossible for nationals of other EU Member States to fulfil the requirements.⁵⁵⁹ This line of ECJ case law thus seemed to imply that Article 18 EC has to be considered the primary norm for discussing whether a piece of legislation falls under the scope of the Treaty.

However, the status of Article 18 remains in flux. Recently, the ECJ referred back to its old line of argument in *Gravier* in the case *Commission v Republic of Austria* also dealing with equal access to higher education.⁵⁶⁰ This case was brought before the ECJ after the Austrian government had made access to its university system for foreign students dependent on the fact that those students had already been admitted to a university offering the same degree in their home country.⁵⁶¹ Here the Court considered that access to higher education fell under the scope of the Treaty primarily due to the Community's competencies in the area of education policy according to Articles 149 and 150 EC.⁵⁶² Thus, even among ECJ judges, there does not seem to be consensus on the basis of which Article the scope of the Treaty should be opened in cases dealing with issues related to equal access to higher education for migrant students within the EU. In the *Commission v Republic of Austria* case, the right to free movement for citizens within the Community is only mentioned as a supporting argument.⁵⁶³ In any case, the ECJ ruled that the legislation in question involved discrimination and thus was not justified. The just described change in the legal situation with regard to free movement of citizens within the EU was finally in 2004 also reflected in a change in secondary legislation by the introduction of Directive 2004/38 on residency rights of Union citizens.

4.1.2.2 Directive 2004/38 on residency rights of Union citizens

In 2004, the European legislator finally replaced the previous residency Directives, including Directive 93/96 regulating the free movement of students within the EU, with Directive 2004/38. The new Directive finally created an integrated legal framework articulating the free

⁵⁵⁷ Ibid. paragraph 61-63.

⁵⁵⁸ Ibid. paragraph 57.

⁵⁵⁹ Ibid. paragraph 60-31.

⁵⁶⁰ Case C-147/03 *Commission v Republic of Austria* Ibid.I-5969.

⁵⁶¹ Case 242/87 *Commission v Council (ERASMUS)* [1989] ECR 1425 paragraph 6.

⁵⁶² Ibid. paragraphs 31-35.

⁵⁶³ Case C-147/03 *Commission v Republic of Austria* [2005] ECR I-5969 paragraphs 44-46.

movement rights of all European citizens. Similar to its earlier cousins, Directive 2004/38 is again heavily based on codifying earlier case law.⁵⁶⁴ It incorporates the idea developed in *Bidar* that with the time migrant citizens have spent in the host country, their integration into the host society increases and thus also their citizens' rights should increase.⁵⁶⁵ The Directive makes the scope of the right to equal treatment dependent on the time of residence. According to Article 16 (1) Directive 2004/38 European citizens automatically acquire a right of permanent residence after five years of legal residence in another Member States. In addition, Article 24 Directive (1) 2004/38 grants all migrant EU citizens a general right to equal treatment subject to the exceptions specified in the Treaty and in secondary legislation. As one of the explicit exceptions, it is provided in Article 24 (2) Directive 2004/38 that prior to acquiring permanent residence in a State, pursuant to five years residence in the host State, students do not have a right to financial aid in the host State in the form of loans or grants.⁵⁶⁶ Article 7 (1) c Directive 2004/38 now explicitly mentions that a student studying in another Member State has to have health insurance and sufficient means to support himself as a condition for his right of residency to exceed three months. Provided these conditions are fulfilled, then the right of free movement is granted to students following any course of study.

4.1.2.3 Summary

In the *Grzelczyk* and *Bidar* judgments, in contrast to *Gravier*, the ECJ bases the right to equal treatment for migrant students within the EU on Articles 18 EC and 12 EC, rather than Articles 149 EC and 150 EC. This change in argumentation effectively extended the guarantee of free movement for every Citizen under Union citizenship. The Court widened the scope of the Treaty on grounds of Union citizenship to include access to student loans and grants intended to cover the cost of living. To preserve Member States' autonomy, exemptions from the right to equal treatment, such as the exemption of financial aid for students regulated in the Residency Directive 2004/38, are justifiable under Community law. Perhaps surprisingly, the Court revived the old *Gravier* interpretation of the scope of the Treaty in *Commission v Republic of Austria* by opening the scope of the Treaty with reference to Article 149 EC. Given this long line of ECJ case law, which has in turn influenced the secondary legislation, it is hypothesised here that the *Higher Fees* statute would fall under the scope of the Treaty. This conclusion is drawn as the *Higher Fees* statute would differentiate between EU citizens according to length of residence in an EU Member State, which is a criterion that comes very close in its effects to nationality. The statute would thereby affect free movement of students within the EU. EC law will be applicable

⁵⁶⁴ *Craig and de Búrca* 2007 p. 870.

⁵⁶⁵ See above section 4.1.2.1 on *Bidar*.

⁵⁶⁶ A right to permanent residence is granted according to Article 16 Directive 2004/38/EC to any citizen of the Union who has lived permanently for five years in another Member State.

with a very high probability. Thus, the following section turns to the derivation of constitutional principles from the EC Treaty against which to we will later normatively evaluate the statute.

4.2 Normative benchmark of constitutional principles

Deriving constitutional principles from the EC Treaty presupposes that the EC Treaty can be legitimately considered to be a Constitution. The question whether the EC Treaty is a Constitution or should be treated as a de facto Constitution has been intensely discussed in the literature.⁵⁶⁷ Scholars agree that there are a range of typical functions of modern constitutions. These functions have been identified as including: to constitute a political entity as a legal entity; to organise it; to limit political power; to offer political and moral guidelines; to justify governance; and, to contribute to integration.⁵⁶⁸ Whether a set of legal provisions should be called a “Constitution” is determined by the degree to which it fulfils these functions. The debate about the question whether the European Treaties fulfil all these functions and should thus be termed constitution will not be dealt with in detail here.⁵⁶⁹ Instead, the question will be discussed here whether the EC Treaty fulfils the functions of a Constitution which are prerequisites for the application of the *Van-Aaken*-approach.

The *Van-Aaken*-approach to constitutional analysis builds on both: a constitutional framework codifying constitutional principles, which offer political and moral guidelines; and the use of the proportionality principle as a procedure with which to deal with conflicts between constitutional norms and limit political power by judicial review.⁵⁷⁰ For a meaningful application of the *Van-Aaken*-approach to the legal evaluation of the *Higher Fees* statute under EC law, the legal framework applicable within the European Union should thus first fulfil these functions. Arguably, these two functions also belong to the most important functions of a constitution. Undeniably, these two functions are fulfilled by the European Community Treaty, because the EC Treaty enshrines general principles which guide the interpretation of the Treaty, e.g. the non-discrimination principle according to nationality⁵⁷¹, and legislative decisions can be reviewed by the ECJ under the proportionality principle.⁵⁷²

As the EC Treaty fulfils the two functions of a constitution, which are the prerequisites for the application of the *Van-Aaken*-approach, it will be treated here as a constitution, however only in a

⁵⁶⁷ For an overview of the discussion see *Weiler* 1997 and also *Bogdandy and Bast* 2006.

⁵⁶⁸ *Peters* 2006.

⁵⁶⁹ See *Weiler* 1997, *Peters* 2006, *Schmid-Lübberth and Schäfer* 2002, *Everling* 1997, *Chalmers, Hadjiemmanuil, Monti and Tomkins* 2006 p. 85 and *Craig and de Búrca* 2007 p. 36 for further references.

⁵⁷⁰ See above section 1.4.2.

⁵⁷¹ On general principles in EC law compare *Craig and de Búrca* 2007 chapter 11.3 and *Bogdandy* 2006.

⁵⁷² *Chalmers, Hadjiemmanuil, Monti and Tomkins* 2006 p. 448 ff.

limited sense. Given the different function of constitutions, different notions of the term ‘constitution’ exist.⁵⁷³ Thick notions comprise all functions of constitutions and thinner notions are limited to only some functions. In the following discussion, a semi-thick notion of the term is applied to the European Community Treaty, because the Treaty fulfils most of the typical constitutional functions, but not all.⁵⁷⁴ The most important function which is absent in the EC treaty is the lack of full democratic legitimisation of political power in the EU.⁵⁷⁵ Fortunately with regard to the application of the *Van-Aaken*-approach, this exception is not problematic. As the *Van-Aaken*-approach is a formal approach prescribing how to evaluate a statute under a given legal system, the exact origin of this legal system, whether it has been enacted democratically or in another way, is not decisive for the question whether the *Van-Aaken*-approach can be applied in an abstract way to analyse the given piece of legislation.

On the European level, governments, such as the German State government in the hypothetical discussed in this thesis, which aim to prevent other States from free-riding on their higher education investments, only have two real options to choose between: either, the introduction of differentiated tuition fees, or a stop to the admission of students from other Member States. No other option exists which a State can unilaterally implement. The following section derives the constitutional principles which are relevant to the normative evaluation of the hypothetical *Higher Fees* statute. These are the principles of free movement of Union citizens and non-discrimination. With respect to the expected positive impact the statute will have on higher education investment levels, the normative principle of higher education investment from the German Constitution will also be relevant.

4.2.1. Free movement of Union citizens

Differentiated fees according to place of prior residence increase the costs of studying in another Member State. Therefore, compared to the current situation without differentiated fees, student mobility to other Member States will probably be reduced. Due to this negative impact on students’ movements within the European Union, the first principle to be defined in this part is the principle of free movement of citizens [hereinafter free movement principle]. The concept of free movement of Union citizens was introduced into EC law by the inclusion of Article 18 EC. This Article grants every Union citizen the right to move freely within the European Member States independent from whether or not they are pursuing an economic activity. Free movement for business purposes was already protected under the right to free movement of persons according to Articles 39 ff. EC. Therefore the right to free movement of Citizens is primarily

⁵⁷³ Peters 2006 p. 584-585.

⁵⁷⁴ Wagener, Eger and Fritz 2006 p. 136.

⁵⁷⁵ Grimm 2002 p. 320.

relevant to individuals, who are not pursuing any business activity, especially students. The discussion in this part will be structured as follows. First, the position of the principle in the Treaty is discussed. Next, the principle will be formally defined. Finally, the impact of the statute on the realisation of the principle is analysed.

4.2.1.1 Free movement as an objective value under the EC Treaty

According to the prevailing legal opinion, the right to free movement of citizens is, at present, a directly effective right held by every citizen.⁵⁷⁶ Immediately following the coming into force of the Maastricht reforms, the right to free movement under Union citizenship was widely regarded as only an extension of the freedom of movement for workers to non-economically active citizens. It was widely considered to belong within the group of fundamental freedoms.⁵⁷⁷ By limiting Member States' protectionist policies and creating a Common Market, the four fundamental freedoms have the function of achieving an efficient allocation of factors of production and goods within Europe.⁵⁷⁸ They commit the Member States not to intervene into the working of the Common Market in favour of their citizens. Proponents of this view saw Article 18 EC as a declaratory norm that merely restated rights that already existed before, in a new position in the Treaty. In their view, Article 18 EC did not give rise to new rights in addition to the other four fundamental freedoms.⁵⁷⁹

In the more recently developed competing view, Article 18 EC is interpreted as constituting a new form of European integration. This view mainly builds on the ECJ case law summarised in section 4.1.2. For the first time, the EC Treaty is regarded as granting rights to all European citizens, independent of their economic status.⁵⁸⁰ Freedom of movement for citizens is no longer considered to be only a non-discrimination principle aimed at an efficient allocation of resources⁵⁸¹, but also seen as a value in and of itself. As a consequence, freedom of movement for Union citizens is regarded to effectively amount to a fundamental right.⁵⁸² This view is

⁵⁷⁶ *Craig and de Búrca* 2007 p. 850-855; *Hilf* in *Grabitz and Hilf* 2006, Article 18 EC, paragraph 1; *Magiera* in *Streinz* 2003, Article 18 EC, paragraph 9; *Kaufmann-Bühler* in *Lenz and Borchardt* 2006, Article 18 EC, paragraph 2; diverging opinion *Pechstein and Bunk* 1997 p. 547.

⁵⁷⁷ Free movement of goods: Articles 23-31 EC; free movement of workers: Articles 39-42 EC; free movement of services: Articles 49-54 EC; free movement of capital: Articles 56-60 EC. See *Kaufmann-Bühler* in *Lenz and Borchardt* 2006 paragraph 1.

⁵⁷⁸ *Barnard* 2007 17 ff., *Wollenschläger* 2007 p. 19 ff.

⁵⁷⁹ Among the many earlier commentaries see *O'Leary* 1995 p. 519 ff., *O'Leary* 1996a p. 92, *O'Keefe* 1994 p. 81, *Kostakopoulou* 2001 p. 66.

⁵⁸⁰ *Kluth* in *Calliess and Ruffert* 2007 paragraph 15.

⁵⁸¹ According to Article 98 EC.

⁵⁸² *Hilf* in *Grabitz and Hilf* 2006 paragraphs 1 and 6; *Magiera* in *Streinz* 2003 paragraph 10.

strengthened by the fact that Article 18 EC has been incorporated nearly unchanged in Article 45 of the Charter of Fundamental Rights of the European Union.⁵⁸³

Although the first of these perspectives had extensive support, particularly just following the adoption of the treaty, now the second perspective seems more convincing. European integration has by now clearly moved beyond the integration of markets. Increasing parts of the political sphere have now been included in the integration process, e.g. the Common Foreign and Security Policy and the Police and Judicial Cooperation in Criminal Matters.⁵⁸⁴ Also, environmental protection and the protection of social justices have been included amongst the objectives of the European Community Treaty.⁵⁸⁵ Even though it still features prominently among the list of aims, achieving an efficient allocation of resources on the goods and labour markets throughout the Union is no longer the only objective of European Integration.⁵⁸⁶ Directly effective rights granted by the introduction of European Citizenship were, from the very beginning meant to bring Europe closer to the citizens and increase acceptance of European Integration within the European population.⁵⁸⁷ Therefore the second reading of Articles 17 ff. currently seems to be more in line with the factual degree of European Integration. The free movement principle will be considered in this thesis as assuming a status similar to a fundamental right. It will also be considered to have assumed the status of a “Constitutional principle” under the EC Treaty.

4.2.1.2 Definition of the principle of free movement of Union citizens

After establishing, as we have just done, that free movement of Union citizens is in itself an objective value, and thus a constitutional principle under the EC Treaty, we must now turn to defining the concept of freedom of movement more precisely. This definition is undertaken with the goal of making the impact of different legislative measures on the realisation of the principle comparable. The definition of the principle of freedom of movement starts from the same outcome based concept of freedom, which section 3.4.1.2 introduced with respect to the definition of the free choice principle. This concept of freedom defines freedom as the existence of a set of mutually exclusive feasible outcome available to the individual.⁵⁸⁸ According to this definition of freedom, citizens’ freedom to move within the EU is the higher, the more mutually exclusive moves to different EU Member States are feasible and available to an individual citizen. Because citizens’ decision to move between Member States can potentially be influenced by

⁵⁸³ See *Magiera in Meyer* 2006 Article 45 paragraph 3 about the negotiations about Article 45 in the convent.

⁵⁸⁴ Common Foreign and Security Policy in Articles 11-28 EU; Police and Judicial Cooperation in Articles 29-42 EU.

⁵⁸⁵ Article 2 EC; See also *v. Bogdandy in Grabitz and Hilf* 2006, Article 2 EC, paragraphs 55 ff.

⁵⁸⁶ *Bogdandy, v.* in *Ibid.* Article 2 EC.

⁵⁸⁷ See the *Tindemans* report. *Tindemans* 1975.

⁵⁸⁸ *Pattanaik and Xu* 2007 p. 8.

almost any kind of regulation, the scope of the free movement principle becomes very wide under this concept. E.g. the feasibility of immigration into another EU Member State depends on the question whether the rules made by the potential host State allow immigration at all, whether they impose conditions on immigrants from other EU Member States and if yes, what kind of conditions. Also the conditions of the welfare and tax system for potential immigrants influence the migration decision.

The right to free movement of Union citizens is especially relevant to the movement of students. Before Maastricht, students only had the right derived from the Residency Directive 93/96, which belonged to the secondary legislation. Now however, this right can be directly based on the text of the Treaty.⁵⁸⁹ For students, who consider moving to another Member State, among the welfare and tax regulations, the conditions of study offered by universities in other Member States are particularly relevant. As those conditions affect free choice of university as well, everything that impacts on free choice of university can thus be considered also to impact on the free movement principle. Thus, according to the above definition of free movement of citizens, the greater the choice a student has between mutually exclusive universities in different Member States, the greater her freedom of movement within the EU.

The three kinds of public measures, which have been discussed to have a negative impact on the realisation of the free choice principle defined in chapter three⁵⁹⁰, are defined here to also have a negative impact on the realisation of the free movement principle. This is the case because free choice of place of training includes free choice of university, which has been found to be a prerequisite for free movement within the EU. These measures consist of (1) decreasing the maximal choice set of universities for any individual by decreasing investment in higher education to the extent that places, degrees or even whole existing universities have to be terminated; (2) increasing the price of higher education by charging/increasing tuition fees, which restricts the choice of students to those universities affordable to them; (3) creating regulation which restricts free competition between applicants for places at universities according to academic merit restricting the choice to universities which the applicants are qualified for.⁵⁹¹

4.2.1.3 Impact on the free movement principle

The *Higher Fees* statute will have a negative impact on the realisation of the free movement principle. The introduction of full cost tuition fees for migrant students decreases the set of

⁵⁸⁹ See above section 4.1.2.

⁵⁹⁰ See above section 3.4.1.

⁵⁹¹ See above section 3.4.1.

affordable universities amongst which to make a choice for the overwhelming majority of potential migrant students from within the European Union. Full cost tuition fees for migrant students do not prevent students from physically travelling to other EU Member States or from living in the host State for a limited amount of time, however they make this decision much more unlikely because studying in Germany for EU nationals would become much more expensive.

4.2.2. Non-discrimination under European law

The second important principle, which may be affected by the statute under discussion, is the non-discrimination principle according to nationality. The discussion in this part is structured as follows. First, the legal background to the principle and its status within EC law are briefly outlined. Then, the characteristics of the principle are defined. Finally, the impact of the statute on the principle is discussed

4.2.2.1 Non-discrimination with regard to nationality as an objective value

Non-discrimination according to nationality is a prerequisite for the working of the Common Market and as such is one of the cornerstones of the EC Treaty.⁵⁹² Non-discrimination according to nationality in regard to economic activity is specified amongst the four fundamental freedoms enumerated in the EC Treaty. In addition, within the EC Treaty's scope of application, Article 12 EC prohibits general discrimination according to nationality between Union citizens. Thus, for all issues falling within the scope of the Treaty, Union citizens have a right to equal treatment by the Government of any Member State with the nationals of that Member State. The scope of the Treaty, as has already been argued above, has been significantly widened since the introduction of the Union citizenship.⁵⁹³ Now, the right to free movement for all Union citizens covers potentially all areas of life which may be relevant to the free movement of citizens within the EU. Furthermore, the concept of discrimination according to nationality not only includes open discriminations according to nationality but also indirect discriminations. Indirect discriminations are those which do not use the criterion of nationality directly, but are measures which have an equivalent impact on foreigners from other EU Member States as discrimination according to nationality would.⁵⁹⁴

The prohibition against discrimination according to nationality is one of the dominant legal principles of European Community law. In the earlier days of the Community, it had been introduced with the main functional aim of furthering market integration. However since the introduction of the Union citizenship, the right to non-discrimination covers not only economic

⁵⁹² *Bogdandy in Grabitz and Hilf* 2006, Article 12 EC, paragraph 1.

⁵⁹³ See above section 4.1.2.

⁵⁹⁴ *Haratsch, Koenig and Pechstein* 2006 paragraph 637, Case C-209/03 R (*on the application of Bidar*) v *Ealing LBC* [2005] ECR I-2119 paragraph 51.

activity, but also non-economic activities and regulations of the State. Additionally the right to equal treatment according to nationality has become a personal right which can be enforced by individual legal actions.⁵⁹⁵ These legal developments have increased the importance of the general right to equal treatment significantly. Therefore, it seems plausible to infer that the European Community Treaty assigns an objective value to non-discrimination per se. Following this line of argument non-discrimination may also be considered to be a constitutional principle under the European Community Treaty.

4.2.2.2 Definition of the principle of non-discrimination

To define the non-discrimination principle in EC law is much easier than to define it in German Constitutional law. Whereas in German law, non-discrimination is required with respect to all potential criteria, in EC law only one potential criterion of discrimination, nationality, is prohibited. This sounds rather simple and straight forward. However, the single criterion of EC law, nationality, is often interpreted broadly. This creates the problem of delimiting and defining which criteria have a similar impact as nationality on the outcome, and thus are also prohibited. As already mentioned above⁵⁹⁶, in *Bidar*, the ECJ decided that an in-State residence requirement, which excluded time spent on full-time education, before the beginning of higher education must not be a requirement for a maintenance grant while going to university.⁵⁹⁷ This requirement was forbidden by the ECJ on the basis of the argument that it was almost impossible for any EU Member State citizens to reside in a State before entering higher education without spending time on secondary education. However, the Court also argued that the State may require from EU nationals applying for financial support a certain degree of integration into the host State's society. The Court held that the criterion of a certain amount of residence in a State may be a justified discrimination criterion.⁵⁹⁸

Article 12 EC protects non-discrimination only within the scope of the application of the EC Treaty. Therefore, Article 12 EC on its own does not have any legal impact. It only has an impact if the discrimination at the same time intersects with the scope of the Treaty. Cases of discrimination in regard to foreign students usually fall under the scope of the Treaty because the right to free movement between EU Member States is also influenced by all kinds of discriminations according to nationality. Thus, usually discrimination according to nationality is

⁵⁹⁵ *Haratsch, Koenig and Pechstein* 2006 paragraph 583.

⁵⁹⁶ See above section 4.1.2.1.

⁵⁹⁷ Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119 paragraph 51.

⁵⁹⁸ *Ibid.* paragraphs 49-63.

found by the ECJ to violate Article 18 EC and thus to fall under the scope of the EC Treaty.⁵⁹⁹ This will also be the argument according to which the *Higher Fees* statute will be found to fall under the scope of the Treaty in this analysis.

4.2.2.3 Impact on the principle of non-discrimination

The *Higher Fees* statute discriminates according to place of residence prior to applying to university. This discrimination is likely to have a strong impact on Germans, who intend to study in another German Federal State. However, it will have an even stronger impact on nationals of other EU Member States, for whom it is almost certain that they will not be long-term residents within the State in question. If we remember the ECJ decision in *Bidar*, where the ECJ argued that the requirement of a long-term residence before applying for financial assistance was considered to fall under the scope of the Treaty and as a discrimination according to nationality, the *Higher Fees* statute almost certainly has a negative impact on the realisation of the non-discrimination principle according to nationality. Thus, for the purpose of the following analysis, the statute will be considered to impact negatively on the non-discrimination principle according to nationality.

4.2.3. Impact on the higher education principle derived from the German constitution

Even though the ECJ tends to interpret the Community competences widely, there is still a clear division of labour between the Member States and the Community with regard to higher education. As argued in section 4.1.2, general higher education policy does not fall under the European Community Treaty. Article 149 EC, which regulates the Community competency with regard to higher education, only confers competencies with regard to the international dimensions of higher education upon the Community, e.g. to enhance the learning of languages and student exchanges. Therefore the German legislator retains autonomy to decide about higher education policy. The European Community may only interfere with this autonomy as far as necessary to fulfil the aims of the EC Treaty.

Since all that is required under the Article 2 EC to fulfil its limited objectives is the installation of the European Community, and nothing else, the Treaty represents a partial normative order, even more restricted than the German Constitution. In order to realise its objectives, the Treaty imposes legal restrictions on the Member States. The most important of these are: the requirements of the four fundamental freedoms; the right to Union citizenship; and the non-discrimination principle. With regard to all areas of policy, which do not fall within the objectives

⁵⁹⁹ E.g. Case C-184/99 *Rudy Grzelczyk v Centre public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193; Case C-148/02 *Carlos Garcia Avello v Etat Belge* [2003] ECR I-11613; Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119.

of the European Community, the national legislators retain full legislative competency.⁶⁰⁰ However, to implement the objectives of the Community efficiently, all pieces of national legislation can potentially violate Community law.⁶⁰¹ In such cases of violation, the promotion of the national interest has to be balanced against European objectives. Thus, when evaluating national legislation, the normative principles derived from the national legal framework, in the case of this thesis German law, become part of the normative benchmark, alongside the principles derived from European Union law. Therefore the German principle of State investment in higher education, defined in section 2.3.2, will be applied to evaluate the positive impacts of the *Higher Fees* statute.

In the European context, as in the German context, the *Higher Fees* statute has a positive impact on the higher education principle. As was argued in section 3.1 of this thesis, under the current legal regime, which allows equal access to higher education, a free-riding problem also exists between the European Union Member States. This free-riding problem would disappear should each Member State introduce differentiated tuition fees according to students' place of prior residence. Following the introduction of differentiated tuition fees the incentives of the German State, or any other Member State, to invest in higher education will increase.

4.2.4. Summary

On the basis of the discussion of the *Higher Fees* statute's impact on the Constitutional principles derived from the European Community Treaty, it seems very likely that the *Higher Fees* statute would infringe the right of Union citizens to move freely within the EU according to Article 18 EC and thus fall under the Scope of the Treaty. This question, whether the discriminatory effects of the *Higher Fees* statute fall from a legal perspective under the Scope of the Treaty principle will in the following section finally be discussed. This will be followed by a discussion of the proportionality principle as a potential standard of justifications for any infringements found.

4.3 Higher Fees statute under the EC Treaty

This section discusses whether the *Higher Fees* statute violates European Community law, and if yes, under which standard the violation could be justified. The statute will be assessed under the regime provided by the current EC Treaty, EU secondary legislation, and the relevant ECJ case law. Not surprisingly, the discussion will find the *Higher Fees* statute to fall within the scope of the Treaty. The possible legal arguments supporting this conclusion will be discussed in detail. In the next part, the legal question will be answered whether the categorisations made in the *Higher Fees*

⁶⁰⁰ On the principle of conferred powers according to Article 5 EC see *Chalmers, Hadjiemmanuil, Monti and Tomkins* 2006 p. 211 ff.

⁶⁰¹ On sovereignty of EU Member States see *Ibid.* p. 183 ff.

statute equates to discrimination according to nationality. Finally, the proportionality principle as standard of justification is derived.

4.3.1. Differentiated fees fall under the scope of the Treaty

Article 12 EC prohibits States from exercising any discrimination according to nationality 'within the scope of application of this Treaty'. Therefore, only if access to higher education falls within the scope of the Treaty, does a right to equal treatment for migrant students exist. Altogether, there are three alternative arguments which may be evoked to support the conclusion that the *Higher Fees* statute falls within the scope of the EC Treaty. Two arguments are provided by the ECJ case law. In the *Gravier/Commission v. Austria* line of ECJ case law, tuition fees fall under the competences of the EU on the basis of Article 149 EC. Whereas in a second group of cases based on *Grzelczyk* and *Bidar* the ECJ refers to Union citizenship in Article 18 EC to justify higher education falling under the scope of the Treaty. A third argument is that Article 49, freedom to provide services, could also be relevant. This is the argument that will be addressed first below.

4.3.1.1 Freedom to provide services, Art 49 EC, not violated

The view of some commentators that the freedom to provide services in Articles 49 ff. EC is violated by differentiated tuition fees is not particularly convincing.⁶⁰² Given that Articles 49 ff. EC protect the freedom of customers to change Member States in order to receive a service, higher education would have to be considered as a service to fall under these norms.⁶⁰³ Article 50 EC defines services within the meaning of the Treaty as being provided for remuneration. The ECJ has ruled that the defining element of a 'service' is that the remuneration paid in return for the service constitutes a fair consideration.⁶⁰⁴ The Court has stated that higher education services financed by tax revenues cannot be regarded as services in the sense of Article 49 EC because tax payments are not earmarked as consideration for a specific public service, but are only contributions to the general budget.⁶⁰⁵ This view held by the ECJ is also the prevailing opinion found in the literature.⁶⁰⁶ As long as tuition fees only cover parts of the cost of higher education they cannot be considered as constituting adequate consideration.⁶⁰⁷ In addition, citizens who move to another Member State may only be granted a right to equal treatment on the grounds that they are receiving services for a limited amount of time.⁶⁰⁸ Since the time spent studying is

⁶⁰² E.g. *von Wilmsowsky* 1990 p. 262 ff.

⁶⁰³ *Schulze and Zuleeg* 2006 § 10 paragraph 137. *Bode* 2005 p. 156 FN 753 with references to the relevant ECJ case law.

⁶⁰⁴ Case 263/86 *Belgium v Humbel* [1988] ECR 5365 paragraph 17.

⁶⁰⁵ *Ibid.* paragraph 18.

⁶⁰⁶ *Oppermann* 1985 p. 47 ff.; *Bode* 2005 p. 157 FN 760 with further references.

⁶⁰⁷ Case 263/86 *Belgium v Humbel* [1988] ECR 5365 paragraph 19.

⁶⁰⁸ Case C-70/95 *Sodemare SA and other v Regione Lombardia* [1997] ECR I-3395.

often protracted, students would likely not be protected for the whole time of their studies in the other Member State by the freedom to provide and receive services. Therefore, Articles 49 ff. EC are not found to be violated here and will not be used as the basis for arguing that differentiated tuition fees fall under the scope of the European Community Treaty.

4.3.1.2 Community competences in Article 149 EC do not cover tuition fees

We will now turn to a discussion of the two grounds which have been relied upon by the ECJ to bring higher education policy within the scope of the EC Treaty, Art 149/150 and Art 12/18. The discussion here will focus on Art 149/150. The next part will turn to discuss Art 12/18. The ECJ considered in both *Gravier* and *Commission v Austria* that access to higher education falls within the scope of the Treaty on the grounds of the EC competences in the area of vocational training/education policy, regulated in Articles 149 and 150 EC. This interpretation of the scope of the EC Treaty is considered too wide here. In the *Gravier* decision, where it considered higher education ‘not entirely unrelated’ to the Treaty⁶⁰⁹, the ECJ clearly went beyond the text of the Treaty.⁶¹⁰ This view was unconvincing then, and since rewording of the Treaty in the Maastricht reforms, it has even become less convincing. Education policy has always belonged primarily within the Member States’ competences. In the original Treaty, the Community was assigned the task of helping Member States cooperate in the area of vocational training policy and implementing a common vocational training policy under Article 128 EEC.⁶¹¹ Over time, the Community has developed a number of policy measures in the area of vocational training and education.⁶¹² However these were mostly additional measures designed to complement the Member States educational policies in order to support international cooperation. These supporting policy measures were the basis of the position of the Court in *Gravier* that vocational training policy fell under the scope of the Treaty. However, only after the *Gravier* decision, was the first higher education programme on a larger scale, the Erasmus Programme, developed by the Community.⁶¹³ The Erasmus Programme was and still is only an exchange programme designed to encourage temporary academic exchange. Therefore, it required quite a stretching of the text by the ECJ to use this basis to derive that access to higher education falls within the scope of the Treaty. The Courts clearly transgressed the boundaries of the Treaty and included a new area of policy under its jurisdiction.

⁶⁰⁹ Case 293/83 *Gravier v City of Liège* [1985] ECR 593 paragraphs 19-21.

⁶¹⁰ See also *O’Leary* 1996b p. 188-189.

⁶¹¹ *Shaw* 1999 p. 559.

⁶¹² *Ibid.* p. 561.

⁶¹³ The Erasmus Programme was enacted by resolution 87/327/EEC, of 15.06.1987, of the European Council [1987] OJ L 166/20.

As already mentioned above, during the Maastricht negotiations, the competencies for vocational training and education policies were revised.⁶¹⁴ On the one hand, the Member States decided to include general education amongst the policy competencies of the Union. On the other hand, they also decided to include an explicit prohibition against any harmonisation of educational policies by the Community.⁶¹⁵ Under these new preconditions where there is an explicit allocation of competencies to the Member States, it seems even less convincing to argue that many questions of higher education fall under the scope of the Treaty. The ECJ conclusion that a right to equal treatment of migrant students within the EU can be based on Articles 149/150 EC contradicts the text of the EC Treaty. Following parts of the literature, the view is rejected in this thesis.⁶¹⁶

4.3.1.3 Differentiated fees fall under the scope of Articles 18 and 12 EC

Since *Grzelczyk* and *Bidar*, Article 18 EC in combination with Article 12 EC has become the most important legal norm in EC law in cases of unequal treatment of Union citizens.⁶¹⁷ At the time the decision in *Grzelczyk* was handed down, the broad interpretation of the right to free movement adopted by the ECJ lead to a considerable extension of the scope of the Treaty and marked a turning point in EC law. Originally, only workers and entrepreneurs moving to another Member State seeking employment or starting a business were granted the right of free movement under Article 48 EEC.⁶¹⁸ In these earlier times, the scope of the Treaty, and as a consequence the right to equal treatment, was interpreted much more narrowly. Then, the ECJ interpreted the freedom of movement for workers to entail access to the host State's system of public benefits including education for workers and their families.⁶¹⁹ The right of free movement was supposed to support the realisation of the Common Market. The right to equal treatment in the host society was granted in exchange for the worker's contribution to national economic performance.⁶²⁰ With the introduction of Union citizenship, this legal situation has changed.⁶²¹ To what extent is still debated. There are two main debates in regard to Article 18 EC. The first debate discusses the nature of Article 18 EC, which is important for its direct legal consequences. The second debate focuses on the breadth of the scope of Article 18 EC.

⁶¹⁴ See above section 4.1.2.

⁶¹⁵ Up to the present day, European higher education policy cooperation, especially the Bologna Process, takes place as a voluntary cooperation process governed by the method of open cooperation. This process is not governed by Community law. *Bode* 2005 p. 138 ff.

⁶¹⁶ *Ibid.* p. 35, p. 77 ff. *Ruffert* in *Calliess and Ruffert* 2007, Article 149 EC, paragraph 6.

⁶¹⁷ Case C-184/99 *Rudy Grzelczyk v Centre public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193 paragraphs 1-3; Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119 paragraphs 1-2.

⁶¹⁸ *Schulze and Zuleeg* 2006 paragraph 32.

⁶¹⁹ *Shaw* 1999 p. 559, *Dougan* 2005 p. 945 cites the relevant case law in FN 9 and 10.

⁶²⁰ *Dougan* 2005 p. 945.

⁶²¹ Case C-184/99 *Rudy Grzelczyk v Centre public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193, Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119.

The nature of Article 18 EC is greatly debated. There are two contradictory views: a broad interpretation as an individual liberty and a general right to non-discrimination; and a more narrow interpretation only as a civil liberty with regard to free movement. These will be discussed in turn. Parts of the literature interpret Article 18 EC not only as a right of individual liberty, which it clearly is, but also as a general non-discrimination principle.⁶²² In this view, Article 18 EC would as a legal consequence directly include a right to equal treatment for migrant European citizens in all areas of law.⁶²³ Although some of the recent ECJ decisions seem to take steps in this direction,⁶²⁴ it can also be considered to contradict the underlying logic of the Treaty. An all-encompassing right to equal treatment would be the equivalent to a complete integration of the migrant students into the host State's society. This legal status for the time being is still a privilege enjoyed by only economically active migrant workers and their family members.

The competing interpretation defines the nature of Article 18 EC more narrowly. It argues that on the basis of its vague text, Article 18 EC can only be interpreted as an individual liberty but not as a general non-discrimination principle. In order to rule out a discrimination according to nationality under the Treaty, Article 12 EC has to be cited in addition to Article 18 EC.⁶²⁵ This second interpretation seems to be more convincing than the one described above and is the prevailing opinion in the literature. Under this view, Article 18 EC is argued to directly rule out only measures which impede the physical movement between, and residence in, other Member States by non-economically-active citizens independent from the question whether these measures are discriminatory or not.⁶²⁶ Consequently, Article 18 EC is argued to only imply a right to equal treatment in regard to the physical acts of departure from the home country, entry into the host country and right of residence in the host country.⁶²⁷

Within this more narrow interpretation, a right to equal treatment with regard to measures, which only indirectly affect the movement between Member States, e.g. access to higher education, cannot be based on Article 18 EC alone. Such a right to equal treatment would need to be derived from Article 12 EC.⁶²⁸ However, Article 18 EC is still important to derive such a right to

⁶²² E.g. *Hilf* in *Grabitz and Hilf* 2006, Article 18 EC, paragraph 7; *Pechstein and Bunk* 1997 p. 547 ff; *Borchardt* 2000 p. 2059.

⁶²³ *Pechstein and Bunk* 1997 S. 547 ff.

⁶²⁴ Case C-85/96 *Martinez Sala (Maria) v Freistaat Bayern* [1998] ECR I-2691; Case C-456/02 *Trojani v CPAS* [2004] ECR I-7573.

⁶²⁵ E.g. *Kluth* in *Calliess and Ruffert* 2007 paragraphs 4-6 and *Hailbronner* 2004.

⁶²⁶ E.g. *Bode* 2005 p. 218 ff.

⁶²⁷ *Ibid.* p. 218 ff.

⁶²⁸ *Ibid.* p. 221.

equal access to higher education, because if a piece of legislation falls into its broader scope, it also falls into the scope of the EC Treaty. For legislation falling under the scope of the EC Treaty, then Article 12 EC becomes applicable. Therefore, to determine the applicability of the right to equal treatment in regard to migrant students, we will now turn to discussing the scope of Article 18 EC, which is the more interesting debate for the question discussed in this thesis.

With regard to the scope of Article 18 EC, the debate started from the wide interpretation of the ECJ. In *Grzelczyk*, the ECJ held that migrant citizens enjoy a right to equal treatment in regard to all situations influencing the decision on moving between Member States.⁶²⁹ Although creating this rule, the ECJ judgments do not define exactly which statutes should be considered to influence the decision to move and which do not. Thereby, the ECJ has created space for doctrinal debates. Supporters of a restrictive interpretation of Article 18 EC try to develop criteria, which limit the applicability of the right to equal treatment.⁶³⁰ As a necessary condition for a right to equal treatment, they consider that the rule should properly be read to require that the right or benefit in question has a strong impact on the decision of moving between Member States.⁶³¹ They hold that only areas of policy closely connected with the actual migration decision should be subject to the right to equal treatment. For example under this view, migrant students are suggested to be eligible for income support but not for low-cost council housing.⁶³² As the dividing line, which separates issues connected to the migration decision from issues considered to be unconnected, seems to be drawn arbitrarily, this view is considered not to be very convincing here.⁶³³

Those scholars following the wide interpretation of the rule developed by the ECJ argue that potentially all aspects of life may or may not influence a migration decision.⁶³⁴ They state that it is not possible to limit the applicability of the right to equal treatment. Therefore in this view, potentially all national statutes could fall within the sphere of the right to equal treatment.⁶³⁵ This position avoids arbitrarily drawn boundaries between those statutes affecting the right to free movement and those who don't. Also, it is more in line with the text of Article 18 EC and the spirit of the Treaty, which frames the right to free movement as a fundamental right for all citizens. Therefore this position is more convincing than the first one and will be adopted here.

⁶²⁹ Case C-184/99 *Rudy Grzelczyk v Centre public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193 paragraph 1.

⁶³⁰ Especially *Bode* 2005 p. 244 ff.

⁶³¹ *Epiney* 2004b and also *Epiney* 2004a

⁶³² *Bode* 2005 p. 260 ff.

⁶³³ *Bode* admits herself that it is hard to find general criteria to limit the scope of Article 18 EC. *Ibid.* p. 244.

⁶³⁴ *Wollenschläger* 2007 p. 231 ff.

⁶³⁵ *Ibid.* p. 231 ff.

Furthermore, Member States' autonomy in regard to social policy and other areas that are not explicitly included in the scope of the Treaty need not be destroyed by such a wide interpretation of the scope of Article 18 EC and thus the scope of the Treaty. The broad interpretation of the Treaty's scope does however have to be complemented by a correspondingly broad definition of the justifications of exemptions from the non-discrimination principle.⁶³⁶ The main disadvantage of this approach is that, taken to the extreme, all national statutes may have to be justified against the standard of EU law. To establish the exemption from the non-discrimination principle, national governments would have to prove that their statutes are proportionate with regard to a legitimate aim. Such an extensive application of EU law, on the other hand, is currently arguably justified by the actual degree of integration within the European Union. The introduction of Union citizenship has transformed the European Community from a purely economic community to a community of citizens. According to Articles 18 and 12 EC, the scope of the Treaty potentially covers all areas of social policy. To avoid centralisation of competencies through the backdoor, however, it follows from this view, that many exemptions from this right to equal treatment should be justifiable under the EC Treaty.⁶³⁷

To conclude, on the basis of Article 18 EC the hypothetical *Higher Fees* statute can easily be considered to fall with the scope of the Treaty since the amount of tuition fees charged to migrant students definitely will influence the decision of students when deciding whether or not to move between Member States in order to study. In the broad interpretation of the applicability of Article 18 EC in conjunction with Article 12 EC, this influence on the decision to move constitutes the basis for a potential right to equal treatment. Before, this conclusion can be drawn, the next section discusses whether the "Higher-fees" statute also constitutes a discrimination which has to be justified under European law.

4.3.2. Differentiated fees discriminate according to nationality

According to the text of Article 12 EC, the discriminatory treatment in regard to tuition fees found in the *Higher Fees* statute might be considered a discrimination on grounds of nationality. The ECJ divides discriminations on grounds of nationality into the categories of direct and indirect discriminations.⁶³⁸ Direct discriminations are openly based on nationality. Indirect discriminations, on the other hand, are based on any other criterion that in reality affects

⁶³⁶ Ibid. p. 237.

⁶³⁷ Ibid. p. 238, *Kubicki* 2006 p. 303, *von Wilmsky* 1990 p. 248.

⁶³⁸ *Haratsch, Koenig and Pechstein* 2006 give a good overview over the delimitation between direct and indirect discrimination according to nationality.

predominantly nationals of other EU Member States.⁶³⁹ In the *Higher Fees* statute the criterion of discrimination being used is the place of prior long-term residence.

To avoid Member States attempting to circumvent the prohibition on non-discrimination according to nationality, the ECJ has decided that discrimination criteria which have a similar impact on the citizens to nationality's impact are also prohibited.⁶⁴⁰ The criterion of long-term residence is such a criterion.⁶⁴¹ This is because the overwhelming majority of students from one EU Member State have no long-term residence in another EU Member State. By introducing differentiated tuition fees according to place of long-term prior residence, the German State in question would de facto exclude students from other EU Member States from its higher education institutions. Therefore the *Higher Fees* statute would likely be considered by the court to constitute a case of indirect discrimination.

4.3.3. Proportionality principle standard of justification

One of the most difficult tasks faced by the ECJ has always been how to strike a balance between market integration and national interests. Parallel to the expansion of the scope of the right to equal treatment, the ECJ has allowed an increasing number of national interest exemptions from the non-discrimination principle.⁶⁴² These derogations must be applied proportionally.⁶⁴³ Once again the ECJ makes a distinction between open discrimination according to nationality, and indirect discrimination. Open, direct discriminations according to nationality may only be justified by the Member States by one of the express derogations enumerated in Article 27 (1) Directive 2004/38.⁶⁴⁴ Indirect discrimination, on the other hand, may be justified by a much longer list of objectives furthering the public interest.⁶⁴⁵ The Court has stated that discrimination can be justified “only if it is based on objective considerations independent of the nationality of the persons concerned and is proportionate to the legitimate aim of the national provisions.”⁶⁴⁶ Therefore according to the ECJ case law, the *Higher Fees* statute must first be justified under the

⁶³⁹ Ibid. paragraph 637.

⁶⁴⁰ Ibid. paragraph 637.

⁶⁴¹ Also in Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119.

⁶⁴² See *Chalmers, Hadjiemmanuil, Monti and Tomkins* 2006 p. 830 ff.

⁶⁴³ Case C-100/01 *Ministre de l'Intérieur v Olazabal* [2002] ECR I-10981 paragraph 43, Case C-288/89 *Stichting Collectieve Antennevoorziening Gouda v Commissariaat voor de Media* [1991] ECR I-4007 paragraph 15.

⁶⁴⁴ Case C-17/92 *Federación de Distribuidores Cinematográficos v Estado Espanol et Unión de Productores de Cine y Televisión* [1993] ECR I-2239 paragraph 20, Case C-388/01 *Comission v Italy* [2003] ECR I-721 paragraph 20.

⁶⁴⁵ See *Barnard* 2007 p. 491 ff. and *Chalmers, Hadjiemmanuil, Monti and Tomkins* 2006 p. 830 ff. for an overview over the possible justifications of indirect discriminatory or non-discriminatory restriction on free movement.

⁶⁴⁶ Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119 paragraph 54. In earlier cases compare Case C-274/96 *Bickel and Franz* [1998] ECR I-7637 paragraph 27, Case C-148/02 *Carlos Garcia Avello v Etat Belge* [2003] ECR I-11613 para 31.

proportionality principle before it can be upheld. Therefore in the next part our hypothetical statute's legitimacy of aim will be evaluated using the proportionality principle.

4.4 Interference can be justified by the proportionality test

As just mentioned, discrimination can only be justified under EC law, "if it is based on objective considerations independent of the nationality of the persons concerned and is proportionate to the legitimate aim of the national provisions".⁶⁴⁷ Therefore the first question to be discussed is whether the introduction of the *Higher Fees* statute is based on objective considerations. These objective considerations are the stated aims of the legitimate aim of the national provision. Following the discussion of the aim of the national provision, the accordance of the provision with the EC Treaty will be discussed using the proportionality test. This will involve the use of the classic three further tests of the proportionality principle follow: the suitability, necessity and proportionality in a narrow sense tests.

4.4.1. Aim of statute legitimate

In our hypothetical example it has been assumed that a German State has planned to increase the quality of its higher education system but feared that this increase in quality would not be experienced by its own citizens.⁶⁴⁸ An increase in the quality of higher education provided by one State would disproportionately increase the demand for the higher quality education from migrant students. This is because neighbouring European Member States would most likely not increase their higher education investment at the same time. Thus, to cover the increased cost generated by the expected increase in migrant students, our hypothetical State government argued that it was also necessary to differentiate tuition fees according to place of prior residence within the EU.

These reasons can be considered as objective considerations independent from the nationality of students. By providing higher education to its citizens and thus qualifying its population to a higher level, the German State provides a public good. The public good is composed of all positive externalities which are created by higher education graduates working and living. As has been argued in section 2.2.2, the positive externalities generated by higher education have a very important impact on the economic and social development of a State. Most of the positive externalities generated by a graduate's higher education arise in the graduate's State of residence.⁶⁴⁹ Thus, it is in the interest of a State to qualify its permanent inhabitants to the highest level possible. The provision of public goods is one of the main tasks of national/state legislators.

⁶⁴⁷ Case C-209/03 *R (on the application of Bidar) v Ealing LBC* [2005] ECR I-2119 paragraph 54.

⁶⁴⁸ See above section 3.2 on the hypothetical case of differentiated tuition fees.

⁶⁴⁹ See above section 2.2.2.3.

Thus, it is a legitimate aim under European law, for a German State legislator to aim to increase its State's investment in higher education in order to increase the positive external effects that ensue from raising the qualification level of its population.

4.4.2. Statute suitable

The next question asked when conducting an analysis under the proportionality principle is, whether the *Higher Fees* statute is suitable to achieve its aim. As has already been argued in section 3.1, the free-riding problem between European Member States with regard to the financing of higher education could be removed by several different means, one of which is the introduction of differentiated tuition fees. Differentiated tuition fees would decrease the demand of students from other European Member States. Therefore, the legislator anticipates that all of his investment in higher education will benefit in-State students, which are very likely to stay in the State afterwards and benefit the community. Consequently, the statute will increase his incentive to invest in higher education. As the other States lose the option to externalise their cost of higher education to the State introducing differentiated tuition fees, their incentives to invest in higher education also go up. Thus, the "Higher-fees" statute is suitable to reach its aim of increasing investment in higher education.

4.4.3. Statute necessary

The third step of the proportionality principle - the necessity test - asks, whether the statute under review is the least restrictive means available to reach the aim of increasing investment in higher education within Europe. To answer this question, alternative legislative measures have to be identified, which have an identical impact on the aim of the legislation. The only alternative identified in this thesis, capable of influencing the free-riding incentives, which is available to the States unilaterally, is to completely exclude migrant students from other European Member States from its universities. This alternative will be referred to, as in the discussion of the free-riding problem on the German level, as *No Admission* statute. First, it has to be established that the *No Admission* statute would have an identical positive effect on the legislation's aim, investment in higher education. In the second step, the impact of the two hypothetical statutes on the principles of free movement of Union citizens and non-discrimination will now be established. Comparing these impacts, which are the "constitutional cost" of the legislation, then allows establishing which statute is the least restrictive means to reach the aim of the legislation.

4.4.3.1 Impact on the higher education principle moderate

As has been argued above, in the European context, as in the German context, the *Higher Fees* statute has a positive impact on the higher education principle. As was shown in section 3.1 of this thesis, under the current legal regime which allows equal access to higher education a free-riding problem also exists between the European Union Member States. This free-riding problem

would disappear should each State introduce differentiated tuition fees according to the student's place of prior residence. Following the introduction of differentiated tuition fees the incentives of the German State, or any other Member State, to invest in higher education will increase. As can be seen from the table on student mobility in section 3.1.1, student mobility within Europe is still relatively moderate. If student mobility within Europe were to stay at the current levels, then the impact of differentiated tuition fees on higher education investment incentives would probably be quite small. However given the fact that the ongoing Bologna process is dramatically decreasing the cost of student mobility within Europe, by harmonising degree structures and making quality of universities more comparable, an increase in student mobility is very likely to occur in the next years.⁶⁵⁰

The probability that a migrant student within Europe will immediately return to her home Member State following graduation is currently around fifty percent.⁶⁵¹ The probability of return in the long run has been assumed to be even higher, around 70%.⁶⁵² Taking these return probabilities into account, the future free-riding potential within the European Union is considerable. There are already signs of significant imbalances in student mobility between some neighbouring Member States, such as Germany and Austria, and Belgium and France, or the Netherlands, which make the general free-riding problem obvious for some especially popular, but expensive subjects, such as medicine. This means that the problem is already much more intense for some countries than the overall data seem to imply.

In section 3.6.3.1, a number of broad factors have been identified which may assist in determining into which category of the higher education principle a measure belongs. Assuming that politicians are vote maximisers⁶⁵³ and like to increase their budgets to win voters over, a legislative measure's impact on the investment incentives of State politicians increases

- The more it increases the number of voters who care about higher education in that State or
- The more it positively impacts on the financial capacity of politicians by enlarging the budget, which can be spend by the politician.

⁶⁵⁰ See above section 3.1.1.

⁶⁵¹ *Jahr, Schomburg and Teichler* 2002 p. 36.

⁶⁵² See above section 3.1.1.

⁶⁵³ This assumption goes back to *Downs* 1957.

According to these criteria, the category of *light* impact on investment in higher education was defined to contain measures which either increase the number of voters affected by higher education a little bit or increase politicians' budgets also in a limited fashion. The category of *moderate* increases of higher education incentives was defined to include measures which increase the number of voters caring about higher education in that State by more than 10% or the budget in a significant way. Finally, the category *severe* increases in higher education incentives includes measures which increase the number of voters caring about in-State higher education or the budget of the politicians to a large extent.⁶⁵⁴

Current mobility levels in Europe are quite low and therefore the overall impact of the system of tuition fee differentiation on higher education investment will probably be low as well. Given that the mobility levels within the EU have increased by 50% over the last years and are bound to increase in the future and that politicians will anticipate this increase, the number of students affected by the Higher Fees statute will probably approach 10%. Thus, the intensity of the *Higher Fees* statute's positive impact on the realisation of the higher education principle will be considered to be *moderate*. The *No Admission* statute would have an identical effect on the higher education principle. As the differentiated fees have been assumed to cover full-cost of higher education, they will have a very strong impact on students' choices. Therefore, exclusion of the all students via the *No Admission* statute will not have a much stronger impact than full cost tuition fees and will also be considered as *moderate*.

4.4.3.2 Impact on the free movement principle light

The first principle derived from the EC Treaty, which is negatively affected by the *Higher Fees* statute, is the free movement principle. According to the definition of freedom of movement introduced in section 4.2.1, citizens' freedom of movement within the EU is the greater, the higher the number of EU States to which a move is feasible and available, which means affordable. The decision to move to another Member State is potentially influenced by all kinds of different regulations. Thus, the categories of impacts on the free movement principle will have to be defined very broad in order to be able to be applied to all kinds of different cases. The intensities of a statute's impact on the realisation of the free movement principle will be classified according to the following three categories:

- The first category, which is called *light*, comprises of all financial disincentives against moving. Especially, these may arise from differences in the provision of welfare benefits

⁶⁵⁴ See above section 3.6.3.1.

or taxes for migrant Union citizens, who have not yet resided long-term in their host Member State of current residence.

- The second category contains *moderately* intense impacts on the free movement principle. This category is comprised of all measures influencing the decision to move because the right to move to or reside in the host Member State is made dependent on meeting these conditions. An example would be the condition that citizens have to take an exam of their host countries language before they are granted a right to residence.
- The third category is comprised of the most *severe* impacts on free movement. This category covers objective restrictions preventing movement to a certain country or staying in a certain country. An example would be a prohibition against immigration or of residence by certain groups of individuals.

The *Higher Fees* statute will have a negative impact on the realisation of the free movement principle. The introduction of full cost tuition fees for migrant students decreases the set of affordable universities amongst which to make a choice, not only for migrant students within Germany, but also for the overwhelming majority of potential migrant students from within the European Union. Full cost tuition fees for migrant students do not prevent students from physically travelling to other EU Member States or from living in the host State for a limited amount of time, therefore they do not constitute a *severe* impact. They also do not make the right to residence dependent on a condition, therefore they cannot be considered to have a *moderate* impact. Since we have seen that the *Higher Fees* statute does not fall into the categories of *severe* or *moderate* impacts on the realisation of the free movement principle, the question arises whether it has a *light* impact. Public provision of higher education can be considered to belong to the welfare system of a State. Since the statute changes the costs to study in another Member State and withholds the welfare benefits of higher education from the foreign students, it thereby disincentivises student mobility. Thus, it most properly can be thought to fall into the category of *light* impacts on the free movement principle.

The alternative to the *Higher Fees* statute, the *No Admission* statute, would also impact negatively on the free movement principle within Europe. A stop on admission of students from other EU Member States by a German State would slightly more decrease the options available for nationals of other EU Member State to study in another Member State than the *Higher Fees* statute would. Like the *Higher Fees* statute, the intensity of the *No Admission* statute's impact on the realisation of the freedom of movement can therefore be best classified as *light*. This is because as it is currently proposed under this statute, students could still travel to and live in

other EU Member States under the conditions of EC and EU law. Therefore its impact could not be considered *severe*. In addition, it would also not be considered to have a *moderate* impact because the statutes also impose no conditions on the right to residence in the other Member States. Therefore we have seen that both the *Higher Fees* and *No Admission* statutes can broadly be considered to have a *light* impact.

However it is intuitively clear that the impact of both statutes will not be identical. It is possible to break the lowest category of the free movement principle within the EU into three further categories. As the choice between universities is restricted by the statutes, these categories could be thought of as the three categories introduced in the free choice principle in section 3.6.3.2. Analogously to the definition in this section, the first category, which is called *light-light*, is comprised of impacts on the conditions of studying e.g., a light increase in tuition fees or levels of investment in higher education. The second category of *light-moderate* impacts is comprised of measures somewhat influencing the conditions of access to universities faced by an individual. An example of a measure falling within this category would be restricted access for European students in some subjects in some universities. The third category of most *light-severe* impacts covers objective restrictions to gaining access to a university, which result in certain universities being completely excluded from the choice set of individual students. These would include general restrictions on access to a subject in all European States, or the charging of prohibitively high tuition fees.

Given these subcategories of impact on the right to free choice of place of training to the category of *light* impacts on the realisation of the free movement principle, the *No Admission* statute is clearly classified as having a stronger negative impact on the free movement principle than differentiated tuition fees. The impact of the *Higher Fees* statute will be considered as *light-moderate*, whereas the impact of the *No Admission* statute will be considered as *light-severe*. Compared to the impact of the *Higher Fees* statute, the *No Admission* statute would decrease the opportunity for students to exercise their right to free movement even further. This is because under the *No Admission* statute not even those students who can find a way of financing the full cost tuition fees could get access to full-time university courses in other EU Member States.

4.4.3.3 Impact on the non-discrimination principle light

The non-discrimination principle according to nationality according to Article 12 EC is primarily a formal principle. On the basis of the text of Article 12 EC, it is only possible to discuss whether a statute has discriminatory effects or not. However, it is not possible to discuss how intense discrimination according to nationality is without referring to other external criteria. Therefore,

the intensity of an impact on the non-discrimination principle cannot be determined without referring to at least one external criterion. In the case of the *Higher Fees* statute discussed here, this outside criterion will be the intensity of the statute's impact on the free movement principle. As the legal power of Article 12 EC has been derived in the case discussed here from the impact that the statute has on Article 18 EC, it seems especially appropriate to derive the intensity of the impact of the statute on the non-discrimination principle from the intensity of the statute's impact on the free movement principle. Thus, the intensity of impact felt by the two different measures discussed here, on the principle of discrimination, will be classified according to whether they have a *light*, *moderate* or *severe* impact on the free movement principle.⁶⁵⁵

Analogous to the principle of free movement, the intensity of the impact of the *Higher Fees* statute on the realisation of the non-discrimination principle according to nationality, can thus be classified as *light*. This is because, as we showed in the previous part, the statute has a *light* impact on the free movement principle. The *No Admission* statute would also impact negatively on the realisation of the non-discrimination principle. The exclusion of students, who have not been long-term residents in the State financing the university, would also have a stronger impact than differentiated tuition fees on the free movement principle. Therefore, the *No Admission* statute's impact on the realisation of the non-discrimination principle according to nationality would also be classified as *light*, but more severe than the *Higher Fees* statute's impact.

4.4.3.4 Statute least restrictive means

To discuss whether the *Higher Fees* statute is the least restrictive means to reach its aim, this section compared the impact of the *Higher Fees* statute and the *No Admission* statute on the constitutional principles affected by the legislation. The two principles of the EC Treaty, whose realisation has been identified here as likely to be negatively affected, are the free movement principle, and the non-discrimination principle according to nationality. Since in our hypothetical example, it is a German statute, which is being evaluated under EU law, the positive aim of the statute has been derived from German Constitutional law. Thus, the positive impact the Statute may have on the pursuit of the German constitutional principle: investment in higher education, enters the normative benchmark together with the two European principles: free movement of Union citizens, and non-discrimination. The following table summarises the discussion in this chapter of the impact of the two hypothetical statutes on the constitutional principles according to the EC Treaty.

⁶⁵⁵ See above 4.4.3.2.

Table 6: EC law necessity test of the *Higher Fees* statute

Normative benchmark / Legislative alternatives	Investment in higher education	Free movement of Union citizens	Non-discrimination according to nationality
Differentiated tuition fees	1, moderate positive impact	1, light-moderate negative impact	1, light-moderate negative impact
Exclusion of out-of-State students	1, moderate positive impact	2, light-severe negative impact	2, light-severe negative impact

1: better alternative from a normative perspective (Stronger positive impact and less negative impact),
2: worse alternative from a normative perspective.

The analysis in the preceding chapter of the impact of the two alternative statutes has shown that this alternative legislative measure, the *No Admission* statute which would not allow any out of State students at all, would have a even stronger negative impact on the realisation of the principles of free movement of Union citizens and non-discrimination than would the introduction of full tuition fees. Thus, the *Higher Fees* statute is the least restrictive means, and thus not only suitable but from this perspective also necessary to reach its aim.

4.4.4. Statute proportionate in a narrow sense

After establishing that the *Higher Fees* statute is both suitable and necessary to reach its aim, and thus fulfils the first three requirements of the proportionality principle, the next question is whether the Statute is also proportionate in a narrow sense. This step involves balancing the positive impact of the Statute on the higher education principle at the national level, against the infringement of Articles 12 EC and 18 EC on the European level. This balancing will take place according to the weight formula developed *Alexy* which was described earlier in section 3.6.4.1.⁶⁵⁶ To apply the weight formula, a number of different variables must be defined for the case in question: first, the intensity of the statute's impact on the principle, and the resultant infringement of the right; second, the reliability of the empirical assumptions underlying the predictions; and third the abstract weight of the rights under the EC Treaty.

4.4.4.1 Classification of the variables

In the context of the necessity test above, the intensity of the hypothetical Statute's impact on the Constitutional principles has been analysed. In this previous section it was determined that the Statute's impact on both the realisation of the principles of free movement of Union citizens and non-discrimination can be classified as *light* because the *Higher Fees* statute does not impede any Union citizen from physically moving within the EU or makes the residence dependent on a new

⁶⁵⁶ See above p. 3.6.4.1. *Alexy's* theory of constitutional rights has been developed within the context of German constitutional law, but as a general theory which can be transferred to other legal orders. *Alexy* 2002b p. 5.

criterion. Instead, the *Higher Fees* statute sets financial disincentives for moving to another Member State. Financial disincentives have been defined as *light* interference with the free movement principle.⁶⁵⁷

The intensity of the impact on the non-discrimination principle has been defined as following from the impact on the free movement principle because the formal non-discrimination principle only becomes applicable if a statute falls under the scope of Article 18 EC. This definition of the intensity of impacts on the constitutional principles of free movement and non-discrimination will also be applied here as definition of the intensity of infringement of Article 18 EC in combination with Article 12 EC because the constitutional principles have been derived from these Articles. The intensity of the Statute's positive impact on the realisation of the higher education principle has been defined as *moderate*.⁶⁵⁸ This is because the mobility of students is bound to increase in the future due to better comparability of higher education degrees and therefore governments anticipate the increased possibilities to free-ride.⁶⁵⁹

In analogy to the discussion of the hypothetical case in the context of German law, the empirical assumptions underlying the making of these predictions are classified as *reliable* in the case of the infringement of the right to free movement and the non-discrimination principle. However, as argued above, they are only classified as *probable* in the case of the higher education principle. This is because if the *Higher Fees* statute was enacted, the negative impacts on free movement would be realised nearly with certainty, whereas the positive impacts on investment in higher education would still depend on politicians reacting to the incentives. This reaction could only occur in the future or could be changed by the ideological party position on matters of higher education.⁶⁶⁰

The abstract weight of the right to free movement in combination with the non-discrimination principle is classified here as *high*. This is because free movement is a fundamental right enjoyed by every citizen and has a predominant position in the EC Treaty, which stresses its fundamental importance for the interpretation of the Treaty.⁶⁶¹ The abstract weight of investment in higher education is also classified as *high*, because the positive impact of higher education on rates of economic development will increase in the future. This is due to four underlying global trends: technological change, globalisation, migration and demographic change. Because of the importance of these four trends, and the impact the classification of the abstract weight for

⁶⁵⁷ See above section 4.4.3.2.

⁶⁵⁸ See above section 4.4.3.1.

⁶⁵⁹ See above section 4.4.3.1.

⁶⁶⁰ See above section 3.6.4.2.

⁶⁶¹ See above section 4.2.1.1.

higher education as high has on the results of our analysis here, these factors will be discussed in some detail in the following five paragraphs.

Over the last decades, technological progress has increased productivity enormously. At the same time, it has catalysed a world-wide revolution in the labour market for low-skilled and for high skilled workers. Worldwide, the demand for high skilled labour has strongly risen as high skilled employees are capable of using the new technologies at work. Simultaneously, the demand for low skilled labour has decreased. In addition increasing automation has replaced many of the previously available manual jobs which required no special qualification. As a consequence, the relative wages commanded by high skilled labour have increased dramatically.⁶⁶² In addition, the speed of technological progress seems to be ever increasing. Therefore, acquired skills loose value very quickly and have to be replaced by new skills also at an ever increasing rate. Technological progress drives industry demand for graduates of higher education institutions, because graduates are usually able to adapt to a changing environment and acquire new skills much quicker than their less educated counterparts. The implications of technological change are supported by empirical evidence.⁶⁶³

In addition to technological progress, demand for higher education graduates is further increased by globalisation. The increase of world-trade, international mergers and acquisitions and foreign direct investment have increased competition in nearly all markets. To cope with this ever more complex environment, employees need to be well qualified. Language and intercultural competences are required. Employees from all over the world now compete for the same jobs. Through the introduction of international outsourcing the wages paid to low skilled workers have been even further decreased. Given the ongoing development of new communication technologies, there is no guarantee that international division of labour will not also endanger high skilled jobs in industrialised countries.

The third factor increasing the importance of higher education is migration. In expectation of higher wages and better working conditions, both very low-, and high- skilled workers are ready

⁶⁶² Relative wages of high skilled to low skilled labour see *OECD* 2006 Table 9.2a.

⁶⁶³ On „Skill-biased technological change“ see *Machin* 2004. The correlation between technological change and higher wages for high skilled employees is alternatively explained by the hypothesis that a high supply of higher education graduates drives technological change. Companies only invest in research and development if the supply of human capital is sufficiently high to market the innovations successfully. In the long run, a high supply of higher education graduates creates an even higher demand for higher education graduates. *Machin* 2004 p. 207. Both explanations are not mutually exclusive but apply to different time horizons. Technological change drives wages in the short-to medium term whereas supply of human capital influences technological progress in the long run.

to leave their home countries to work abroad. The migration of low skilled workers to high wage countries further exacerbates the effects of technological progress which are already having a negative impact on the wages of low skilled worker. On the other hand, migration of university graduates with research oriented human capital is directed towards locations of fundamental research, where it can be optimally employed. Through this “brain-drain”, areas which are already lagging behind in growth and technological development lose further potential for innovation and growth.

The fourth important factor, which increases the importance of investment in higher education, is demographic change. For the upcoming decades, it will be exogenous. In most industrialised and post-industrialised countries demographic change will cause a decrease in the available labour force, a trend which is only reversible in the medium to long-term. To hold overall output constant, the decline in the labour force will have to be counteracted by increasing individual productivity. Thus, to the extent that productivity depends on human capital, investment in higher education is necessary to off-set the negative effects of demographic change. These global trends have dramatically altered the context of higher education policy. In the future, higher education rates will have an even more important impact on the economic development of the European Union, its Member States and also the rest of the world than it does already today. Thus, the abstract weight of investment in higher education as a national policy goal, even given the restrictions of the European Community Treaty, can clearly be classified as *high*.

In summary, in regard to the right to free movement of Union citizens, the intensity of the infringement has been identified as *light*, the reliability of the empirical assumptions as *reliable* and the abstract weight as *high*. In regard to the higher education principle we have identified the intensity of the impact as *moderate*, the reliability of the empirical assumptions as *probable* and the abstract weight as *high*.

4.4.4.2 Balancing

Since we have assigned the different categories of impacts to the countervailing principles we can now assign numbers to the variables. Following *Alexy*, as in section 3.6.4.1, the geometric sequence is assigned to the scale measuring the intensity of impact on the principles and the abstract weight, which implies the following values for *light*= 2^0 , *moderate*= 2^1 , *severe*= 2^2 . In addition, the reliability of the empirical assumptions are defined as *reliable*= 2^0 , *probable*= 2^{-1} , *not evidently false*= 2^{-2} .

Table 7: EC law proportionality in a narrow sense test of the *Higher Fees* statute

	Intensity	Abstract weight	Reliability of empirical assumptions
Right to free movement in combination with non-discrimination principle	light, l=1	high, s=4	reliable, r=1
Investment in higher education	moderate, m=2	high, s=4	probable, p=1/2

Balancing the *Higher Fees* statute's interference with the right of Union citizens to free movement in combination with the non-discrimination principle against the statute's positive impact on the realisation of the higher education principle leads to the following concrete weight assigned to the fundamental right of free movement under the concrete facts of the case:

$$W_{i,j} = \frac{I_i * W_i * R_i}{I_j * W_j * R_j} = \frac{1 * 4 * 1}{2 * 4 * \frac{1}{2}} = 1$$

The value of the concrete weight $W_{i,j}$ of the right to free movement under the circumstances of the *Higher Fees* statute is one. If the concrete weight of a principle balanced against a competing principle is one, there is a stalemate between the two principles. A stalemate implies that taking into account the facts of the case to be decided and the text of the Constitution under which the case is evaluated the normative importance of the two principles is equal. Thus, on the grounds of the variables which have been included by *Alexy* in his balancing formula, and their quite crude classification, it cannot be decided which principle should prevail. *Alexy's* position in this case, which will be adopted here, is that all measures which cannot be unambiguously argued to be unconstitutional should properly be considered as falling within the discretion of the legislator.⁶⁶⁴ He interprets the Constitution as a boundary constraining the legislator but leaving the burden of proof for unconstitutionality with the Constitutional Court. As in this case, unconstitutionality cannot be clearly established, the *Higher Fees* statute is found here to be constitutional. Following this reasoning, then it would be open for an ECJ bench, using economic principles to guide their analysis, to hold that the *Higher Fees* statute is in accordance with the European Community Treaty.

⁶⁶⁴ *Alexy* 2002c p. 21 ff.

With respect to a conflict between a fundamental right codified in the EC Treaty and national interests with regard to provision of welfare benefits, this delimitation of competences between the national legislator and the ECJ is especially convincing. This is so because the Member States have only transferred limited amounts of national autonomy to the supra-national entity EU. According to the principle of conferred powers, the European Community Treaty authorises the European Community only to act in certain, quite clearly defined policy areas. By handing over some powers in order to integrate the national markets to one large internal market, the Member States of the European Community have realised large efficiency gains. Nevertheless, the Member States have retained their power with regard to the provision of welfare systems. In contrast to markets, welfare systems are still organised nationally. Incentives for politicians to provide welfare systems are provided via the political process. Politicians competing for power react to citizens preferences with regard to welfare provision. Integrating welfare system by opening them up to migrants would undermine these investment incentives. Thus, integrating welfare systems would not necessarily make them more efficient. Therefore, the non-discrimination provision in the EC Treaty should be interpreted restrictively with respect to equal access to public services such as higher education in other Member States. If fundamental rights codified in the EC Treaty do not clearly have priority over national interests with regard to welfare provision, the national provisions should prevail. Thus, the *Higher Fees* statute can be considered proportionate in a narrow sense and thereby in accordance with the EC Treaty.

4.5 Conclusion: Differentiated fees socially desirable in the EU

This fourth chapter of the thesis has evaluated the social desirability of differentiated tuition fees according to place of prior long-term residence with the European Union by discussing whether the hypothetical *Higher Fees* status can be considered as in accordance with the EC Treaty. Section 4.1 summarised the legal background for the evaluation of the *Higher Fees* statute. Given the established case law and secondary legislation on free movement of students, it could be easily concluded that the *Higher Fees* statute was most likely to fall under the scope of the Treaty. As it was hypothesized to be applicable to the case in question, the European Community Treaty was then interpreted as a “Constitution” in the sense necessary to apply the *Van-Aaken*-approach. In section 4.2, a normative benchmark of constitutional principles was therefore derived from the EC Treaty. In this context, the *Higher Fees* statute was found to impact negatively on the free movement principle based on Article 18 EC, and on the non-discrimination principle enshrined in Article 12 EC. Since the European Community Treaty is only a partial normative order, which complements national constitutions, the German legislator retains autonomy with regard to higher education policy. Thus, the European normative benchmark used to evaluate the statute

also includes the higher education principle derived from the German Constitution, which is positively affected by the statute.

The analysis of the economic impacts of the *Higher Fees* statute conducted in section 3.3 was also relevant in the conducting of this second legal evaluation at the European level. We have assumed in our economic analysis, that although several factors influence the decision to study abroad, ultimately it is the price of higher education in relation to quality which is decisive for making the decision to study in another Member State. This being the case, the introduction of differentiated tuition fees would have a negative impact on the exercise of the right to free movement for students. Thus, the statute likely falls within the scope of the EC Treaty. The negative impact the hypothetical statute has on the principles of free movement and non-discrimination was found to translate into an infringement of Article 18 EC, the right of free movement of Union citizens, in combination with Article 12 EC. Similar to German Constitutional law, an infringement of the general right to equal treatment according to nationality for migrant Union citizens can be justified, if it is based on objective considerations, and the measure is proportionate according to its aim.

When we again applied the proportionality principle in the context of European law, the statute passed the first three steps. It was found to further a legitimate aim under the EC Treaty, and to be both suitable and necessary to reach its aim. The most interesting part of the test was again the fourth step of the test: proportionality in a narrow sense. The infringement of the right to free movement was classified as *light* and the reliability of the empirical assumptions underlying this classification in the highest category as *reliable*. The impact on the higher education principle, on the other hand, was considered as *moderate* and its empirical assumptions again *probable*. Both principles were considered to have the abstract weight *high*. Under these classifications, the weight formula implies that the infringed right and the positively affected principle are of equal normative importance. As a result of the definition of the variables, balancing leads to a stalemate between the two normative objectives. *Alexy* argues that in case of a stalemate, the legislative measure should be considered to be constitutional. That is, if there is a stalemate, then the Constitution does not definitely prohibit this measure. Everything which is not explicitly prohibited is considered by *Alexy* to fall into the discretion of the legislator. Following this argument, it has been posited here that under EU law, differentiated tuition fees according to the place of prior residence fall within the discretion of the national legislator and furthermore are proportionate. Thus, the violation of the right to free movement is considered to be justified, and subsequently the statute in accordance with the European Community Treaty.

Within the context of access to welfare systems within the European Community, the interpretation of a balancing stalemate as increasing the discretion of the national legislator has been argued here to be very much in line with the prevailing economic analysis of the free-riding problem. The ECJ has a general tendency to apply the principle of market integration through non-discrimination also to welfare systems. Unfortunately the ECJ does not appear to explicitly take into account that, thereby, the incentives to provide these welfare systems are undermined. The State provides all kinds of subsidies to citizens via its welfare system. These subsidies include subsidies to attend higher education institutions, and also student loans and maintenance grants. The free-riding problem exists with regard to general investment in higher education but also with regard to investment in income-contingent loans which are designed to promote equality of opportunity, and maintenance grants.

Overall, the analysis in this work using the *Van-Aaken*-approach has demonstrated that the hypothetical *Higher Fees* statute would not be considered constitutional under German law, but should correctly be interpreted as in accordance with the European Community Treaty. Therefore, it would not be socially desirable to solve the free-riding problem within Germany in regard to higher education finance by introducing differentiated tuition fees. However, differentiated tuition fees would likely provide a socially desirable solution within Europe. The difference in the evaluation arises from the fact that within Germany the fundamental right to free choice of occupation includes a right to free choice of place of training. Student choice between higher education institutions is thus directly protected as a fundamental right in the German Constitution. Within the EU, on the other hand, no fundamental right of free choice of profession exists. Free choice of university is only indirectly protected by the fundamental right to free movement within the European Union. The scope of the fundamental right to free movement includes all kinds of discriminations and especially in access to higher education. However as the intensity of the infringement on the right to free movement is lower, the infringement can be justified and thus the tuition fee differentiation has been found to be in accordance with the EC Treaty.

5. Conclusion and Outlook

The recent reintroduction of general tuition fees backed up by income-contingent loans in Germany was a major change in German higher education funding, which previously had been almost entirely public. It stands in the context of persistently low investment in higher education, low participation rates in higher education and an increasingly competitive economic situation which, more than ever creates demand for a highly qualified population. Tuition fees backed by income-contingent loans are supposed to increase investment in higher education in order to improve quality of higher education without lowering the participation rate. This thesis has started from the discussion as to whether the recent design of tuition fees, backed up by income-contingent loans is socially desirable.

It has then analysed whether it would constitute an improvement to the current design to follow the US model of tuition fee design and introduce tuition fee differentiation according to the place of students' prior long-term residence. These research questions were evaluated from the normative reference points of the German Constitution and the EC Treaty. Based on a thorough economic impact assessment of the legislation, conclusions on the social desirability of a legislative measure have been derived from the constitutionality of the measure, or its accordance with the EC Treaty. This methodological approach, developed by *Anne van Aaken*, was applied for the first time in this thesis, to evaluate specific legislation.

5.1 The current German tuition fee and student loan legislation

The analysis of the current design of tuition fees and income-contingent loans has concluded that the legislation cannot be considered constitutional, and thus is also not socially desirable. This conclusion was mainly based on the analysis of the predicted cost of the income-contingent loan systems. These costs could be significantly reduced by changing the details of the design and organisation of the system, without losing its positive impact on participation in higher education by removing credit constraints. The German tuition fee and income-contingent loan system had not previously been systematically analysed in the light of the discussion about optimal design of income-contingent loans according to *Barr and Chapman*. Also, the potential cost of introducing income-contingent loans had not been integrated in the discussion about constitutionality of tuition fees in Germany. In the near future, the constitutionality of the current design of tuition fees may become the centre of public and academic attention again. This might happen if the GFCC admits the proceedings, brought about by a group of students from Hesse. These students dispute the constitutionality of the already abolished tuition fee legislation in Hesse, and are suing

the government of Hesse for reimbursement of the fees they have already paid.⁶⁶⁵ The outcome of this case would have implications for all other State legislation on tuition fees.

However, one aspect, which has been left out in the discussion about the details of the income-contingent loan design which may also affect the cost of providing income-contingent loans, is the centralisation of income-contingent loans on the federal level. By centralising the six different systems of income-contingent loans on the Federal level, the cost of income-contingent loans could be significantly reduced. By centralisation, economies of scale in providing the loans could be realised probably without losing a large amount of the loans' impact on access. Four States, Bavaria, Hamburg, North Rhine-Westphalia and the Saarland, already cooperate with the federally owned KfW-Förderbank to administer the loan system. Normatively evaluating the option of centralising the German income-contingent loan systems on the Federal level from a law and economics perspective, possibly under the *Van-Aaken*-approach, could be a promising avenue of future work with high policy relevance.

A second question, which has also not been discussed in this thesis and should be addressed in the future, is the question what would happen, especially to demand for higher education, if the amount of tuition fees were increased above the current level of € 500 per semester. Above a certain level of tuition fees, the increase in higher education costs may decrease overall demand for higher education and negatively influence the number of higher education graduates and the socio-economic composition of the student body. In the coming years, also the effects of tuition fees on investment in higher education and the real cost of providing income-contingent loans will become known. This will allow for the analysis to be improved by basing it on actual data.

5.2 Tuition fee differentiation according to place of prior residence in Germany and the EU

Chapters three and four of the thesis have discussed whether the introduction of US-style tuition fee differentiation according to place of prior long-term residence would be socially desirable within Germany and the European Union. This question has been analysed using the *Van-Aaken*-approach. The *Van-Aaken*-approach considers that a country's Constitution represents the normative benchmark against which to evaluate legislative measures passed by that country's parliaments. Under this approach, the constitutionality of a legislative measure by definition also implies its social desirability. This assumption has had two implications for the analysis: first, it implies that the normative benchmark operating with respect to constitutionality under German and European Law differs; and secondly, that the best way to explore the issues raised by the

⁶⁶⁵ *Leffers* 2008.

questions was to reformulate them as hypothetical concrete cases. These cases were based on the assumption that a German State legislator passed a hypothetical statute, the *Higher Fees* statute, which introduced full cost tuition fees for all students without a long-term place of residence in its State before applying to university. First all the other German States and later the EU Member States were assumed to follow the first States example. The GFCC and the ECJ were then assumed to review the constitutionality/accordance with the EC Treaty of the hypothetical statutes following its appeal by both the German Federal Government and the EU Commission, respectively. Based on the results of the legal discussion, the questions of social desirability were also answered.

The discussion of the suitability of the US model of differentiated tuition fees according to place of prior long-term residence and without income-contingent loans or grants refinancing the higher fees has led to a split answer with respect to migrant students within Germany and migrant students within Europe. In regard to migrant students within Germany, the analysis here has indicated that a system of differentiated tuition fees according to place of long-term residence would not be constitutional and thus also not socially desirable. Even though such tuition fee differentiation would solve the free-riding problem and thereby increase overall higher education investment incentives, still the desired increase in higher education investment would not follow with certainty, and would probably be rather limited. On the other hand, tuition fee differentiation with regard to place of prior residence would decrease free choice of university and infringe the fundamental rights of free choice of occupation, non-discrimination and equal chances of access to higher education with both certainty and a high intensity. Balancing these countervailing normative effects, it has been concluded that the positive effects on investment in higher education cannot justify these infringements of fundamental rights. Therefore, the US model of differentiated tuition fees does not seem to be a suitable model under the German Constitution.

On the European level, the legal protection of individual rights is weaker than on the German level and this has led to the opposite conclusion being drawn. In the European context, the positive impact on the higher education investment incentives has to be balanced against a negative impact on the principle of free-movement of citizens within the EU. However, compared to the strong constitutional protection of equal access to higher education in Germany as a direct fundamental right, the protection under the EC Treaty is much weaker. The protection of equal access to higher education is weaker because it does not belong to the core of the right to free-movement within the EU, but is only covered by a very wide interpretation of this right.

Thus, under EC law, the balancing of higher investment incentives against the infringement of the right to free movement and non-discrimination is tilted in favour of the higher investment incentives and thus in favour of allowing tuition fee differentiation. With regard to migrant students within the EU, tuition fee differentiation can thus be concluded to be socially desirable.

This discussion of tuition fee differentiation with regard to place of prior long-term residence has contributed to the economic and legal literature in a number of ways. The account of the free-riding problem in higher education finance given in this thesis systematically focuses on the legal causes of the free-riding problem. Together, the constitutional allocation of a policy competency to a level of political decision making and the constitutional boundaries of the exercise of this competence in the form of individual rights define a property right with regard to political decisions. To derive solutions, the thesis frames the free-riding problem as a problem of misspecification of political property rights. In contrast to the fiscal federalism literature which sees the problem as only one of the incorrect allocation of competencies, this thesis stresses the fact that the free-riding problem in higher education finance is equally caused by the allocation of higher education policy to the decentralised level and students' right to equal access to higher education.

If a political property right is designed so that political decisions cause externalities, then the incentives of politicians to exercise their political property right are distorted. In the case of higher education finance, the investment incentives are distorted because students have equal access to higher education in all German States but the social returns to higher education will occur in the State of residence after graduation, which in the case of mobile students is different from the State financing the university. To realign incentives, political property rights have to be designed according to the concept of institutional congruence. Institutional congruence ensures that political decisions have no externalities.

Possible solutions to the problem according to institutional congruence theory are centralisation, a system of transfer payments, or exclusion of migrant students from home universities. These solutions were classified first according to the part of the political property right, which would have to be changed to implement the political property right, and secondly according to the political actors, who have to consent in order to solve the problem. These classifications were necessary to find out which solutions to the free-riding problem would be alternative means to tuition fee differentiation. The classifications have shown that the only alternative for German States to solving the free-riding problem by differentiating tuition fees would be the exclusion of

all migrant students from State financed universities. The other solutions, centralisation and transfer payments could not be implemented by a State alone but would require the consent either of the Federal Government, in the case of centralisation, or the other State governments, in the case of transfer payments.

Discussing both, the constitutionality of differentiated tuition fees under the German Constitution and their accordance with the EC Treaty, was then based on the results from the preceding law and economics discussion of the causes and possible solutions to the free-riding problem. The positive effects of tuition fee differentiation on the incentives on higher education investment had not previously been considered in the German constitutional law discussion. Also, in the *Gravier* judgment which created the right to equal access and the subsequent case law the ECJ fails to take them into account. The legal discussion of these judgments mentions the negative effects on investment incentives, but also does not concentrate on these effects. Thereby in both, the German constitutional law literature and the EC law literature about equal access to higher education, a formerly neglected aspect has been added to the discussion through this work.

In the context of EC law, this neglected part of the story at least questions the right to equal access to higher education, which has become an accepted legal position 20 years after its creation in *Gravier*. However, the analysis here differs in one respect from *Gravier* and also other equal access cases, which the ECJ had to decide. I have assumed that all European Member States have introduced differentiated tuition fees in statutes, which were at the same time brought before the ECJ. Therefore, when discussing the effects of the representative *Higher Fees* statute, the analysis was based on the overall effects of a system of differentiated tuition fees in all Member States, which solved the free-riding problem. In *Gravier*, however, the ECJ only faced the problem of one State charging differentiated fees. The potential positive effects of the introduction of differentiated fees by one State only are quite low because one State's differentiation can only slightly mitigate the problem of free-riding. The more States join in, the greater the positive effect becomes. If only deciding based on an analysis of the direct effect of this one case of tuition fee differentiation, the ECJ *Gravier* judgement seems to be reasonable. However, by its general application, this judgement made the free-riding problem persistent. Thus, when deciding about single cases like this, which have large policy impacts, the ECJ creates law, which impacts on all European citizens. It seems desirable that therefore also the overall consequences of its decision should be taken into account by the Court.

The analysis of the negative effects of the right to equal access on politicians' higher education investment incentives at least cautions against creating further integration of social systems within Europe by giving citizens a right to equal access. Whereas markets become more efficient by integration, this result does not necessarily hold true for the provision of public goods. The ECJ does not seem to take these indirect effects explicitly into account, when it decides on issues related to the treatment of EU Member State citizens in other EU Member States.

However, the analysis of the free-riding problem depends on the assumption that the majority of migrant students return, at least in medium term, to their home State after graduation. This assumption has been made in accordance with the observation that the European population in general is not very mobile and tends to stay in their home region. This low overall mobility seems to point to a general preference to stay in the area of origin, probably due to familiarity with the circumstances of life, language considerations and an existing social network. Due to data limitations, these assumptions cannot yet be tested reliably. If the assumption does not hold and the number of students returning home after graduation is lower than assumed here, the conclusions drawn above may need modification. Then, interesting enough, it would be the host State, which would be free-riding on investment in primary and secondary education of the migrant student's home State. As Europe becomes more integrated in the future, many students may become less likely to return home than today.

Another important assumption, which drives parts of the analysis, is the assumption that there are no income-contingent loans or grants available for migrant students helping them to cover the high out-of-State tuition fees. Having access to finance for out-of-State students paying full cost fees would mitigate the negative effects of differentiated tuition fees. However, the assumption that there are no such loans or grants was made because it was assumed that the very purpose of tuition fee differentiation for the States introducing them was to target their higher education spending on in-State students. By admitting out-of-State students to the income-contingent loan systems, this purpose could not be fulfilled. Another possibility could be that instead the home State of a migrant student offered loans or grants to its students to support them when they study elsewhere. Such a system would come very close to a system of transfer payments because the cost of studying for migrant students would be born by the State benefiting in the long run from this student's human capital. This option also presents a potential avenue for further work on the topic.

Further empirical studies of the impact that the free-riding incentive has on investment levels would also be helpful to fine-tune the analysis and could lead to new insights in the future. From the four identified solutions to the free-riding problem, only two, differentiated tuition fees and exclusion of migrant students from State-financed universities, have been discussed in this thesis. However, all four different solutions including also a system of transfer payments or centralisation of higher education policy would solve the problem but at different constitutional costs. Further work could also be done to develop an overall normative analysis of all four solutions to the problem.

5.3 Final remarks

Overall, the introduction of tuition fees will only to a very limited extent contribute to the solution of the problem of low total investment in German higher education. By opening up additional sources of financing, tuition fees may increase overall investment in higher education, as it has in the last years. However, fulfilling the constitutional demand of guaranteeing equal access to higher education via income-contingent loans will likely require a lot of resources in the future. This will reduce the proportion of the tuition fee revenue available to increasing the quality of higher education. The true cost of the system will only become known in the long run. This cost could be reduced by changing the design of the income-contingent loan system. The poor design of the system is the reason why the current legislation has been concluded not to be socially desirable in this thesis. However, while these changes might serve to correct the current constitutional problem, discussed here, these corrections will only mitigate the cost to a certain extent. In the end, the extent of insurance against low income offered to students will determine the cost of the system. Also, as private contributions increase, politicians might reduce public spending on higher education and thereby reduce the positive impact of tuition fees.

The institutional structure of higher education finance within Germany and Europe is another reason singled out in this thesis for low investment in higher education. The problem of the free-riding incentives could be solved by differentiated tuition fees. Within Germany, under the current constitutional framework, differentiated tuition fees have been argued in this thesis not to be constitutional and it seems quite likely, looking at the legal discussion, that this opinion is shared by the majority of legal scholars and more importantly, judges. Therefore, tuition fee differentiation within Germany is no realistic solution to the problem. Within Europe, this thesis has come to the opposite conclusion that differentiated tuition fees should be allowed. However, as this conclusion contradicts the ECJ case law going back to 1988, which determines political reality, it is also highly unlikely that the ECJ would actually change its case law if a new case of tuition fee differentiation came before the Court in the next years.

Therefore, politicians will have to develop alternatives to change the framework for higher education investment. However, the alternatives of centralisation and transfer payments also will not be easy to implement. My analysis has shown that the current framework combining decentralised higher education policy competencies with a right to equal access to higher education prevents governments from striking a deal with regards to solving the problem by transfer payments. As long as student mobility is highly unbalanced between States, net students exporting countries have no interest in entering such an agreement as it would increase their costs. No common surplus exists between governments, which could be split in a political bargain. The only way to solve this problem could be to include other policy measures within such a deal. Considering the political economy of the alternative solutions, centralisation and transfer payments, it is very likely that the free-riding problem will persist to deflate German investment in higher education. On the European level, the outlook is not very much different and it is highly likely that the free-riding problem will become more important as student mobility increases. However, as the saying goes, one man's meat is another man's poison, therefore from a personal point of view, students might still prefer the current situation of low undifferentiated fees and a lot of choice between different universities to a situation of differentiated fees, less personal choice but a higher quality of universities in some respects. Unfortunately, the social cost of a persistently decreased quality of higher education will have to be born not just by the students but by everyone.

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