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Faculty of Economics
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Master Thesis

The Financing of Tertiary Education in the Czech Republic and
the Federal Republic of Germany

Financování vysokého školství v České republice a Spolkové
republice Německo

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KOUCKÝ, Jan, BARTUŠEK, Aleš a ZELENKA, Martin. Účast na vzdělávání, financování škol a uplatnění absolventů. 1. vyd. V Praze: Vydavatelství Pedagogické fakulty, Univerzita Karlova, 2008. 83 s. ISBN 978-80-7290-370-2.

OCHRANA, František a kol. Veřejný sektor a veřejné finance: financování nepodnikatelských a podnikatelských aktivit. 1. vyd. Praha: Grada, 2010. 261 s. Expert. ISBN 978-80-247-3228-2.


PEKOVÁ, Jitka. Veřejné finance: teorie a praxe v ČR. Vyd. 1. Praha: Wolters Kluwer Česká republika, 2011. 642 s. ISBN 978-80-7357-698-1.

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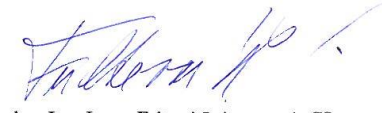
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1 INTRODUCTION

Despite the fact that the Federal Republic of Germany (further referred to as Germany) and the Czech Republic are neighbouring countries and both are members of European Union, each has a different educational system and different system of university financing. The educational system in every developed country contains a sector referred as higher education. It is now fairly standard to use the term ‘tertiary education’, unlike primary (basic) and secondary (high school). However the forms and contents of the tertiary education sector are very different across the two countries (Urbánek, 2007).

The aim of this work is to determine the main differences in financing of education in the Czech Republic and Federal Republic of Germany with a focus on tertiary education and also to propose a suggestion that would lead to the improvement of the tertiary education financing system of the Czech Republic.

The beginning is focused on general system of education, characteristics of higher education and International Standard Classification of Education made by UNESCO. It has helped to classify education worldwide. Next part is about the systems of education in the Czech Republic and in the Federal Republic of Germany. The main part of this Work are Chapters 4 and 5 which deal with financing of tertiary education in each country and contain described methods of university financing. The penultimate part relates to the aim of this Work and describes main differences in financing of education in the Czech Republic and Germany. The last part also contains some reference to the aim of this Work along with a proposal of three suggestions that would lead to the improvement of the tertiary education financing system in the Czech Republic. Annexes contain diagrams of educational system structures in the Czech Republic and Germany. The balance of resources for allocation in the Czech Republic in 2012 can also be found there.

2 GENERAL SYSTEM OF EDUCATION

2.1 CHARACTERISTICS OF HIGHER EDUCATION

According to Kaiser, Florax, Koelman and Vught (1992) we can define higher education as:

1. Higher education institutions providing education at a particular level (this excludes various research institutes that do not provide education).
2. Higher education is in some way accredited or diplomas are validated and recognized by the state.
3. Military and police schools whose nature is fundamentally different are being arbitrarily excluded from the statistics of higher education.
4. In many developed countries there are differences between university and non-university sector, both together referred to as tertiary education sector. It should be using points 1 and 2 of this definition accurately to determine the boundaries of the university system in the non-university sector.

The higher education is the highest range of education in education systems, followed by no other formal educational structure (Urbánek, 2007).

The definition of higher education according to EURYDICE: Higher education is defined as all post-secondary education, which requires at least a certificate of completion of upper secondary education or its equivalent, which leads to the attainment of higher education. It consists of circles classified at levels 5 and 6 (ISCED-97) (Klepetářová, 2001).

2.2 INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION (ISCED)

As international education systems vary in terms of structure and curricular content, it can be difficult to benchmark performance across countries over time or monitor progress towards national and international aims. In order to understand and properly interpret the inputs, processes and outcomes of education systems from a global perspective, it is vital to ensure that data are comparable (UNESCO, Institute for Statistics, 2012). In 1976 the first International Standard Classification of Education (ISCED) was developed by the United

Nations Educational, Scientific and Cultural Organization (UNESCO) to facilitate comparisons of education statistics and indicators across countries on the basis of uniform and internationally agreed definitions. This classification was updated in 1997. In 2011, a revision to ISCED was formally adopted by UNESCO Member States. The product of extensive international and regional discussions among education and statistical experts -ISCED 2011 takes into account significant changes in education systems worldwide since the last ISCED revision in 1997. UNESCO Institute for Statistics (UIS) is working closely with Member States and partner organizations (such as OECD and Eurostat) to map education systems to the new classification (UNESCO, 2012). ISCED 97 is based on the content of education. It means that ‘the educational system is structured by the content of training programmes rather than by educational institutions (Koucký, Bartušek, Zelenka, 2008).

Informative overview of codes for the level of education according to ISCED 1997

| Code | education level |
|----------|--|
| 0 | pre-primary education (without education) |
| 1 | primary education |
| 2 | lower secondary education |
| | 2A - the level from which it is possible to go to higher education |
| | 2B - preparatory to the labour market |
| | 2C - direct to the labour market |
| 3 | (upper) secondary education |
| | 3A - the level from which it is possible to go to higher education |
| | 3B - preparatory to the labour market |
| | 3C - direct to the labour market |
| 4 | post-secondary not-tertiary education |
| | 4A - the level from which it is possible to go to higher education |
| | 4B - practically oriented study |
| 5 | first stage of tertiary education |
| | 5A - the level from which it is possible to go to higher education |
| | 5B - practically oriented study |
| 6 | second stage of tertiary education |

Source: Mezinárodní standardní klasifikace vzdělávání-ISCED, 2008

Table 1: Correspondence between the education levels of ISCED 1997 and proposed ISCED 2011

| ISCED 1997 | Proposed ISCED 2011 |
|---|--|
| | 0 Early childhood education* Early childhood educational development* (designed for children aged under 3 years) |
| 0 Pre-primary (designed for children aged 3 years and above) | Pre-primary (designed for children aged 3 years and above) |
| 1 Primary (or 1st stage of basic education)** | 1 Primary |
| 2 Lower secondary (or second stage of basic education)** | 2 Lower secondary |
| 3 Upper secondary | 3 Upper secondary |
| 4 Post-secondary non-tertiary | 4 Post-secondary non-tertiary |
| 5 First stage of tertiary | 5 Short-cycle tertiary* 6 Bachelor or equivalent* 7 Master or equivalent* |
| 6 Second stage of tertiary | 8 Doctoral or equivalent* |

* New in proposed ISCED 2011.

** ISCED 2011 no longer uses the term 'basic education' in the definition of level.

Source: United Nation Statistics, 2011

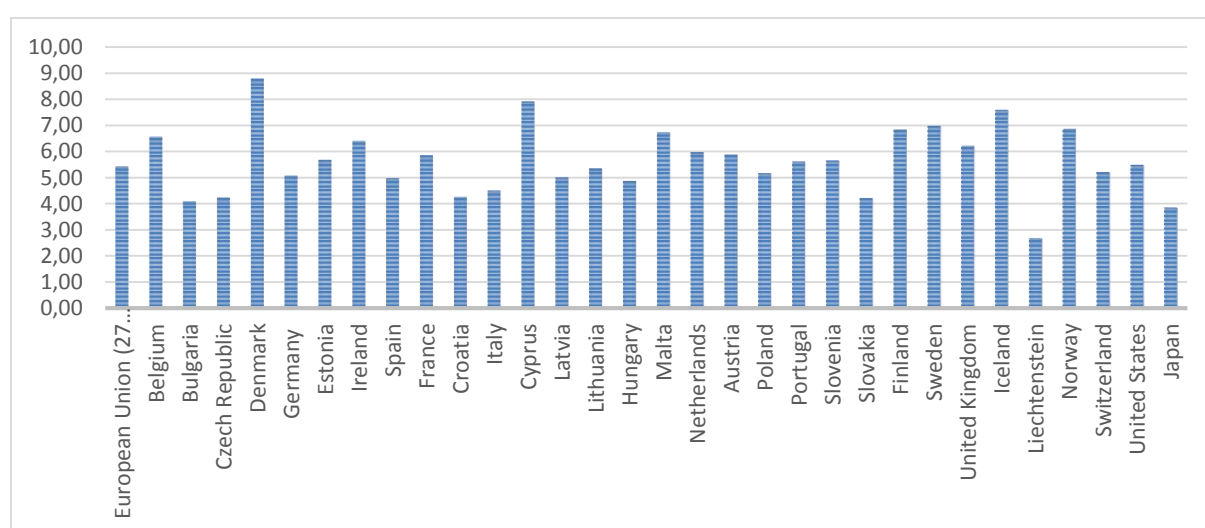
2.3 FINANCING OF EDUCATION

It is generally recognised that education systems play a fundamental role in our societies and economies. They provide populations with access to knowledge and the opportunity to develop competences and skills. These are important for the well-being of individuals, the good functioning of societies and economic growth (Reis, 2008). The importance of human capital and its positive externalities are evident in growth theories. Globalisation and the changing nature of technology have further brought to light the importance of higher education especially for developing countries. However, a major problem that faces the provision of higher education is its funding. Increasing fiscal pressure combined with increased demand for higher education and the significant private benefits that it accrues to an individual has shifted focus to alternative ways of funding higher education. Central to these alternative policies is the concept of cost sharing. The main angles of financing higher education are access, equality, quality and sustainability. Generally any policy to be implemented should have the ability to increase access, usually in the form of increasing participation rates, to higher education and cater to the increasing demand for higher

education. Whilst increasing access, it should not discriminate against certain groups of students such as students from poor backgrounds. Furthermore, it should be able to cater to increasing demand without diminishing the quality of education provided. Finally, such a policy should be sustainable in the long run and have an in-built system of cost recovery. Hence for any financing strategy to be deemed effective it should address these four broad areas with relative success. No one policy option can be adopted in financing higher education but rather a carefully designed set of options (Sam, 2014)

Most of the education expenditure in the EU comes from public funds, amounting to 5% of GDP. However, students and their families together with other private entities provided 12% of the funds of education institutions in 2005. However, education systems require resources in order to function and it is important to measure how much they cost and who funds them. Although differing in weight from country to country, governments bear the large majority of the funding of education. Thus, one main indicator used to assess the financial effort of a country in supporting its education system is the percentage of its public expenditure on education in relation to Gross Domestic Product. GDP measures the production of an economy during a certain reference period, for example one year. At aggregated level, and in general terms, the value of the production of an economy is also the income generated in that economy. For this reason the public (i.e. government) expenditure on education as a percentage of GDP represents the portion of the available income generated in the economy directed to education (Reis, 2008).

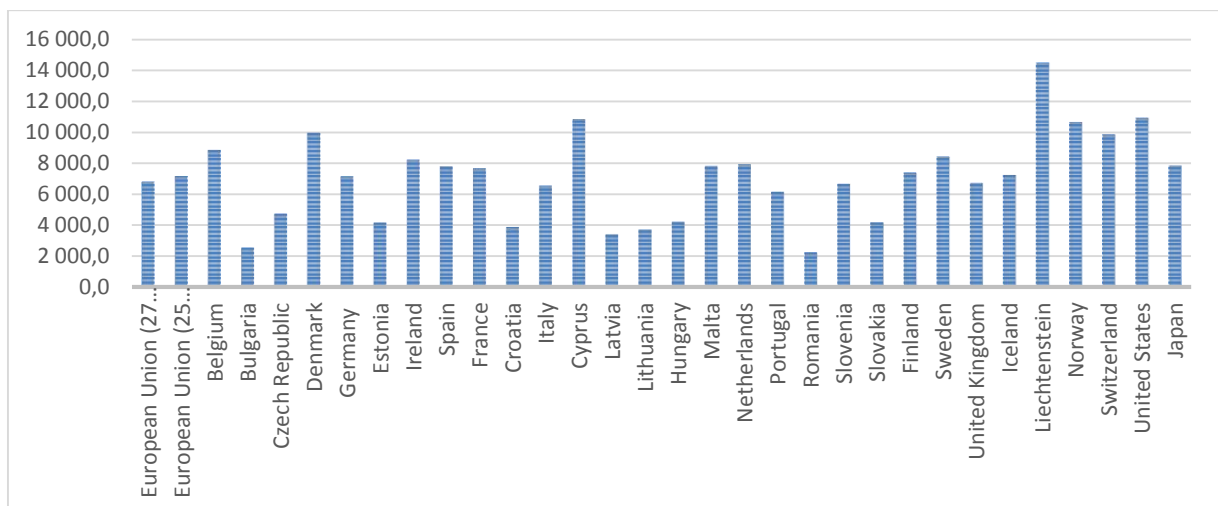
Graph 1: Expenditure on education as % of GDP in 2010



Source: Eurostat, 2014

When considering the performance of the education systems and its relation with the financial resources made available to them, it is necessary to look at the expenditure per pupil or student. When measuring the financial resources made available per pupil/student, it is usual to take the direct expenditure on educational institutions, funded either by public or private funds. Expenditure on educational institutions is more directly connected to the provision of educational programmes and therefore to the quality of education provision (Reis, 2008). For the whole year of 2010, the expenditure in EU educational institutions, from primary to tertiary education, was 6,827 PPS (Purchasing Power Standards) per pupil/student. It ranged from 2,242 PPS in Romania to 14,497 PPS in Lichtenstein. Purchasing Power Standards take into account the general price levels in each country and are the most appropriate unit when comparing expenditure figures between countries (Eurostat, 2014).

Graph 2: Expenditure on education per pupil/student in PPS in 2010



Source: Eurostat, 2014

However, although PPS take into account the price level of goods and services, they do not consider specifically the different levels of the salaries of the personnel of educational institutions between countries. In general, the expenditure per pupil/student increases with the education level (Reis, 2008).

3 THE SYSTEM OF EDUCATION IN THE CZECH REPUBLIC AND THE FEDERAL REPUBLIC OF GERMANY

3.1 THE SYSTEM OF EDUCATION IN THE CZECH REPUBLIC

1.1.1 DISTRIBUTION OF RESPONSIBILITIES

In the Czech Republic the “Ministry of Education, Youth and Sports (further referred to as MEYS) is primarily responsible for the conception, state and development of the education system; determines the content of education: approves framework educational programmes which are the base for the development of school educational programmes; accredits educational programmes for tertiary professional schools and for higher education institutions. MEYS is responsible for the state financing policy in education – drawing up of the budget and the principles of its allocation. MEYS is in charge of the school register which has a constitutional meaning: only a registered institution has a right to provide recognized education and to receive public resources. MEYS is an organising body of institutions for in-service training of teachers and facilities for institutional care and also of some schools and schools facilities (MEYS, 2011). As a government body comprising of educational institutions, MEYS is also responsible for organising in-service training of teachers, facilities for institutional care and some schools facilities.

MEYS creates the National Education Program, discusses it with selected experts from science and practice backgrounds, with the central trade union authorities, relevant organizations of employers’ nationwide competence, and regions and submit it to the Government according to The Education Act. Government presents the National Education Programme to the Chamber of Deputies and the Senate for approval. The National Education Program develops education goals provided by The Education Act and identifies the main areas of education, training content and resources which are essential to achieve these goals” (Školský zákon. In: 561/2004 Sb., 2008.).

Territorial autonomy is executed by municipalities and regions. The municipalities are responsible for ensuring conditions for the compulsory school attendance, thus they establish and administer basic schools. The municipality is obliged to provide conditions for implementation of the compulsory education to children with permanent residence ~~on~~ in its territory, and to children placed in its territory in educational facilities for institutional or

protective custody. For this purpose, the municipality sets up and closes down primary schools and ensures compliance with the compulsory school attendance in primary schools by another municipality or group of municipalities.

Regions are given a high degree of autonomy. They are responsible for education ~~on~~ in their territory. Regional authorities formulate long-term policy objectives for their territory every four years in compliance with national objectives (MEYS, 2011). The region is required to provide the conditions for secondary and higher vocational education, education of children, pupils and students with disabilities and handicaps, as well as linguistic, artistic and basic formal education and conditions for institutional care. For this purpose, the regions set up and close down secondary schools, higher vocational schools, kindergartens, primary schools and educational facilities for children and students with disabilities; special primary schools, schools with medical facilities, educational training and accommodation facilities. The regions also provide equipment for school meals for children, pupils and students ~~of~~ in schools already established. They set up secondary schools with instruction in minority language, language schools authorized to organize state language examinations, basic art schools, school-formal education and children's homes (Školský zákon. In: 561/2004 Sb., 2008.).

Public higher educational institutions (HEIs) could be established only in accordance with The Higher Education Act. The internal regulations of public higher educational institutions are subject to registration by the MEYS. The application for registration is submitted to the MEYS by the rector (Úplně znění zákona o vysokých školách a o změně a doplnění dalších zákonů. In: č. 111/1998 Sb., 2010). HEIs provide tertiary education to ISCED 5A and 6 levels by organising accredited study programmes, which are prepared by individual institutions/faculties and approved by the MEYS after a positive feedback from the Accreditation Commission. In addition to that, all higher education institutions carry out other activities such as research, development, artistic work and possibly other creative activities, as well as organising lifelong learning programmes (MEYS, 2011).

1.1.2 LEGISLATION

§ Education Act on Pre-primary, Basic, Secondary and Tertiary Professional Education (No. 561/2004) sets out the principles and aims of education and the education system - comprised of (1) schools, which organise education according to framework of educational programmes, and (2) school facilities, which provide education and services complementing and/or

supporting education at schools. The Act also regulates administration: the legal status of schools, their registration, financing, status and responsibilities of different levels of administration, e.g. municipalities, regions, and the Ministry of Education, Youth and Sports, or other relevant ministries.

§ The Act on Educational Staff and on the Amendments of Several Acts (No. 563/2004) regulates requirements for the performance of educational staff's duties, their in-service training and career progression.

§ The Act on Providing Subsidies to Private Schools and Pre-school and School Establishments (No. 306/1999).

§ The Act on Institutional Education or Protective Education in School Provisions and on Preventive Educational Care (No. 109/2002) stipulates the requirements for the education of children and adolescents lacking proper family support or those with behavioural problems.

§ The Higher Education Act (No. 111/1998), amended several times, extended the non-university and private sectors of higher education. The majority of these are no longer state institutions (with the exception of military and police higher education institutions which are entirely state-funded) but public institutions (state-subsidised) that manage their own property and have wide-ranging autonomy. New Higher Education Act is being prepared.

§ The Act on Verification and Recognition of Further Education Outcomes (No. 179/2006) opened up a new pathway for adults to obtain a certificate for a qualification attained in practice without formal education (MEYS, 2011).

1.1.3 THE STRUCTURE OF THE CZECH EDUCATIONAL SYSTEM

According to annex 1 (Koucký, Bartušek, Zelenka, 2008):

MEYS use ISCED 1997. The Czech Educational System has a nine-year compulsory school attendance from 6 to 15 years of children's age. Compulsory school attendance is divided into two parts: Basic schools including schools for pupils with special educational needs: 1st stage (ISCED 1) – from 6 to 11 years of children's age and 2nd stage (ISCED 2A) – from 11 – to 15 years children's age. There are special basic schools (ISCED 1, 2C) for pupils with a severe mental disability, multiple disabilities or autism, with a ten-year compulsory school attendance (6 – 16).

The options following a completion of a basic school include conservatories, secondary education with school-leaving exam, secondary education apprenticeship certificate and secondary education.

There are two types of conservatories: an eight-year conservatory in which the first four years can replace the 2nd stage on basic school (ISCED 3B) following ISCED 5B (11 – 19 years of children's age); and a six-year conservatory starting after the full completion of the compulsory school attendance (ISCED 3B, 5B), (15 – 21 years of children's age). Graduates receive the title Dis.

Secondary education with school-leaving exam (ISCED 3A) are eight-year, six-year or four-year Gymnasiums with general fields of study. Eight-year and six-year have in place systems similar to the one of eight-year conservatories. Other fields of study include four-year secondary schools with school-leaving exam.

Secondary education apprenticeship certificate and secondary education are three-year, two-year (ISCED 3C, 3C/2C) or one-year (ISCED 2C) of study. One-year apprenticeship can only follow special basic schools.

After a completion of a Gymnasium a student becomes a Gymnasium absolvent with a very general education. Should he/she want to continue to with tertiary education, it is often better to make shortened courses with school-leaving exams (ISCED 4A) where he/she can focus on a special field of study. Such courses can take one or two years depending on a field of study. Same option arises for absolvents of secondary education with school-leaving exam ~~with~~ in other fields of study. Studying shortened courses with apprenticeship certificate (ISCED 4C) can help students deepen their knowledge in their field of choice and give them an advantage on the job market once they graduate. It takes 1 or 1.5 years. When students with only secondary education apprenticeship certificate want to follow to tertiary education, they must make a school-leaving exam. It is possible to make after follow-up courses which take 2 years (ISCED 4A) (Koucký, Bartušek, Zelenka, 2008).

The school-leaving examination (maturitní zkouška) certificate is the minimum entrance qualification for all tertiary education. Each institution decides on the number of enrolled students and determines its own admission criteria and the content of the entrance examination if required. Tertiary education includes tertiary professional schools (ISCED 5B) and higher education institutions (ISCED 5A). Tertiary professional schools provide students with practically oriented qualifications. Their aim is to fill the gap in qualification needs

between secondary and tertiary education. These schools have mostly been attached to secondary technical schools and together they still form a single legal entity. Only one fifth of them are independent entities. These schools can charge fees of which the maximum level is regulated (together with other issues) by the Decree on Tertiary Professional Education (Koucký, Bartušek, Zelenka, 2008).

Tertiary professional schools are for 3 or 3.5 years. Students complete this institution by submitting a Graduate thesis. These schools do not have the status of higher education. Graduates receive a title Dis.

Higher education institutions include Bachelor study programmes with 3 or 4 years of study and the possibility to follow up with a Master study programme for further 1, 2 or 3 years. Absolvents complete Bachelor programmes by undertaking a school-leaving exam and submitting a Bachelor thesis. They receive a title Bc. Another option of Higher education institutions are four-year, five-year or six-year Master study programmes. All students who finish Master study programmes or follow up Master study programmes have to take a school-leaving exam and submit a Master thesis. They receive a title Mgr., Ing. or similar depending on their field of study.

Second stage of tertiary education is a Doctoral study programme (ISCED 6) which takes 3 or 4 years (to complete). Graduates receive a title Ph.D. or Th.D. (MEYS, 2011). Programmes for Bachelor, Master or Doctoral studies may be full-time, distance or a combination of both. The classification of fields of study corresponds essentially with the traditional classification of academic fields (Koucký, Bartušek, Zelenka, 2008)

Table 2: Number of schools and students in the Czech Republic (30/9/2012)

| <i>Type of school</i> | <i>Number of schools</i> | <i>Number of students</i> |
|--|--------------------------|---------------------------|
| Basic schools (ISCED 1,2) | 4,095 | 807,950 |
| Secondary schools (ISCED 3) | 1,337 | 470,754 |
| Conservatories (ISCED 5B) | 18 | 3,395 |
| Post-secondary colleges (ISCED 4) | 309 | 14,357 |
| Tertiary professional schools (ISCED 5B) | 178 | 28,980 |

| | | |
|---------------------------------|----|---------|
| Public universities (ISCED 5A) | 26 | 333,618 |
| Private universities (ISCED 5A) | 46 | 48,404 |

Source: ČSÚ, 2013

| | | |
|-------------------------------|---|-------|
| State universities (ISCED 5A) | 2 | 2,617 |
|-------------------------------|---|-------|

Source: Výroční zpráva Policejní Akademie ČR (2013), Výroční zpráva Univerzity obrany (2013)

Table 3: Number of students of universities in the Czech Republic

| | |
|--|---------|
| Full-time – Bachelor study program | 176,452 |
| Full-time – follow-up Master study program | 64,342 |
| Full-time – Master study program | 32,702 |
| Full-time – Doctoral study program | 12,787 |
| Combined study | 103,693 |

Source: ČSÚ, 2013

3.2 THE SYSTEM OF EDUCATION IN THE FEDERAL REPUBLIC OF GERMANY

1.1.4 DISTRIBUTION OF RESPONSIBILITIES

In the Federal Republic of Germany (further referred to as Germany) the responsibility for the education system is determined by the federal structure of the state. Unless the Basic Law (Grundgesetz) awards legislative powers to the Federation, the Länder (each of the sixteen Germany's federal states) have the right to legislate. Within the education system, this applies to the school sector, the higher education sector, adult education and continuing education. Administration of the education system in these areas is almost exclusively a matter for the Länder. Detailed regulations are laid down in the constitutions of the Länder and in separate laws of the Länder on early childhood education, on the school system, on higher education, on adult education and on continuing education. Responsibility for the remuneration and pensions of civil servants (e.g. teachers, professors and junior professors) also lies with the Länder (Lohmar, Eckhardt, 2013).

1.1.5 LEGISLATION

The constitution of the Federal Republic of Germany is known as the Grundgesetz (Basic Law). The Basic Law states that the Germany is a democratic and social federal state (Art. 20). The exercise of governmental powers and the discharge of governmental functions are divided by the Basic Law (Grundgesetz, 2012, Art. 30) between the Federation and the Länder. As mentioned above Germany consists of sixteen federal states (Länder)-(Göbbels-Dreyling, 2003). At federal level, legislative functions are discharged by the German Bundestag (House of Representatives) and executive functions are executed by the Federal Government. At the level of the Länder they are discharged by the Land parliaments and the Land governments respectively.

The main functions of the Bundestag are to adopt legislation, elect the Federal Chancellor and monitor and control the activities of the Federal Government. The Bundestag has formed committees for specific subject areas. Education and research are dealt with by the Committee of Education, Research and Technology Assessment. Most of the bills submitted to parliament for its consideration come from the Federal Government, while a smaller number

are introduced from the floor of the Bundestag itself or by the Bundesrat - the representative body of members of the Länder governments.

The Bundesrat is composed of members of governments in the 16 Länder. Each of the Länder has between three and six votes depending on their population, although the votes of one Land cannot be split. Of the Bundesrat's 16 committees, the Cultural Affairs Committee, the Internal Affairs Committee and the Committee for European Union Issues are the main committees responsible for science and education. The rights and obligations of the Länder to participate are provided by Law and are exercised through the Bundesrat. The nature and scope of such rights and duties are based on the internal assignment of responsibilities between the Federation and the Länder. When legislative powers exclusive to the Länder in school education, culture or broadcasting are primarily affected, the exercise of the rights belonging to Germany as a member state of the European Union is delegated to a representative of the Länder designated by the Bundesrat (Lohmar, Eckhardt, 2013).

The Federal Government is comprised of the Federal Chancellor and the Federal Ministers. The Federal Chancellor enjoys an autonomous, eminent position within the Federal Government and with regard to the Federal Ministers. He makes proposals to the Federal President on the appointment and removal of ministers (Grundgesetz, 2012, Art. 64) and directs the affairs of the Federal Government. The strong position of the Federal Chancellor is based first and foremost on his power to determine general policy guidelines.

The Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung – BMBF) is responsible for policy, coordination and legislation regarding out-of-school vocational training and continuing education, financial assistance for pupils and students, as well as for the admission to higher education institutions and the degrees they confer. Furthermore, the Federal Ministry of Education and Research exercises the responsibilities of the Federation as part of the joint tasks of the Federation and the Länder (Grundgesetz, 2012, Art. 91b).

The principle of federalism (Föderalismus) in the Federal Republic of Germany may be understood against the background of Germany's constitutional and state tradition (Lohmar, Eckhardt, 2013). One of the fundamental elements of the Basic Law besides the principles of democracy and the rule of law is the principle of federalism (Grundgesetz, 2012, Art. 20, Paragraph 1).

A major characteristic of the federal state is that both the Federation and its constituent states, known as Länder, have the status of a state. One core element of this status is, according to the constitutional order laid down in the Basic Law, the so-called cultural sovereignty (Kulturhoheit), i.e. the predominant responsibility of the Länder for education, science and culture. This element is at the heart of their sovereignty (Lohmar, Eckhardt, 2013). This means in principle that each Land bears responsibility for its educational and cultural policy, with the proviso that, in accordance with the federalist principle. On the other hand, the constituent states of the federal state bear joint responsibility for the entire state. This overall responsibility both entitles and obliges them to cooperate with one another and to work together with the Federal Government. Unless otherwise specified or permitted by the Basic Law, governmental powers and functions are exercised by the Länder (Grundgesetz, 2012, Art. 30). Each Land has its own constitution – according ~~with~~ to the principles of a republican, democratic and social state governed by the rule of law within the meaning of the Basic Law (Grundgesetz, 2012, Art. 28). The distribution of legislative competence between the Federation and the Länder is defined ~~in~~ by the Basic Law, in that the Länder shall have the right to legislate insofar as this (Grundgesetz, 2012, Art. 70), does not confer legislative power on the Federation. Educational and cultural legislation is therefore primarily the responsibility of the Länder. The administration of these matters is almost entirely the responsibility of the Länder. Alongside education, science and culture there are other major fields in which the Länder enjoy exclusive powers; these include internal security/ police, local government and regional structural policy. With a view to coordinating cooperation in the areas of education and training, higher education and research, as well as cultural matters, the Länder established the Standing Conference of the Ministers of Education and Cultural Affairs (Ständige Konferenz der Kultusminister der Länder). Similarly, the Länder have set up conferences of the relevant ministers for the other areas of responsibility, such as the Conference of Ministers of the Interior and the Conference of Ministers of Economics.

Local self-government is an expression of civil freedom. The local authorities are likewise responsible for adult education and youth welfare and help promote and support cultural activities by providing the majority of public expenditure in this area. In order to meet these responsibilities, local authorities are entitled to levy their own taxes and charges (property and trade tax, consumer and expenditure taxes). The local authorities also receive a proportion of wage and income taxes, as well as of turnover tax (Lohmar, Eckhardt, 2013).

1.1.6 THE STRUCTURE OF THE GERMAN EDUCATIONAL SYSTEM

Laws concerning the duration of compulsory full-time schooling differ across federal states: some require students to complete 10 grades (e.g. Berlin and North-Rhine Westphalia), whereas others require only 9 years of general basic education. In approximately half of the federal states, there are additional part-time schooling requirements up to the age of 18, when students have to attend at least a part-time vocational school.

According to annex 2 (Schneider, 2007):

The first type of school children attend is primary school (ISCED 1), nowadays called *Grundschule* in Germany, which lasts four years (age 6–10; Berlin and Brandenburg: six years, age 6–12). It is the only truly comprehensive school type in Germany, where children from all social and ethnic backgrounds learn together. Primary schools generally have specific catchment areas, but in North-Rhine Westphalia, parents have been free to choose a primary school for their children since 2008.

Secondary education is divided into two cycles in Germany: Secondary level I (Sekundarstufe I) and secondary level II (Sekundarstufe II). The former starts at the end of primary school up to the end of compulsory schooling (unless part of a twelve-year *Gymnasium*).

After primary education, students are selected into one of the four secondary school tracks (ISCED 2A): *Hauptschule*, *Realschule*, *Gymnasium* and *Gesamtschule* (comprehensive school) (Schneider, 2007). The last one is a new non-traditional, not very common type of integrated schools. This not a very common type of secondary school (about 6% of pupils) as it consolidates all three previous types and is internally differentiated with various outcomes for students. The occurrence of this type of school is significantly different in the every *Länder* (Berlin is attracting a quarter of the total number of pupils, while in Bavaria and Baden-Württemberg, only 0.5% of students) (Walterová, 2006). The selection procedures and criteria differ markedly across federal states, and they allow for different degrees of parental influence. In some federal states (e.g. Baden-Württemberg and Bavaria), students can only enter *Realschule* or *Gymnasium* after receiving a teachers' recommendation or, alternatively, after passing an entrance examination. In other federal states (e.g. Hamburg and Hesse), the teachers' recommendation is only a guideline for parents (which is usually followed though). Irrespective of school type, the first two years at secondary school “represent a phase of particular promotion, supervision and orientation with regard to the pupil's future educational

path and its particular direction” (European Commission, 2007: 28). This so-called orientation stage (Orientierungsstufe) has been implemented to allow for a prolonged orientation time before the students are finally selected into their course. It allows for an early correction of suboptimal initial placements. If they fulfil certain requirements, students can switch to a different school type.

Main school (Hauptschule) is the lowest tier of lower secondary education and is open to everybody upon completion of primary school. It can last five or six years (Schneider, 2007). The Hauptschule provides general education and access to vocational training and further education, one of the less common school types. This type of school is considered a school for the less gifted. It is also called a "residual School" (Restschule). In some localities these schools are mainly or exclusively attended by children of immigrants whose mother tongue is not German (Walterová, 2006). Teaching is mainly focused on a basic general education and a practical preparation for life and work. Students who successfully complete (i.e. with sufficient marks) Hauptschule at age 15 attain the leaving certificate (Hauptschulabschluss) which gives them an access to vocational training in the dual system.

The intermediate track is Realschule. It is supposed to prepare mainly practically and theoretically oriented students for vocational training in trade, technical and administrative professions. The intermediate general qualification (Mittlerer Schulabschluss, including Mittlere Reife, Realschulabschluss or Fachoberschulreife, depending on state and awarding institution) is usually obtained after six years (or four in federal states with six years of primary education) of Realschule. Students with this qualification and sufficient marks are permitted to continue to with general upper secondary education (ISCED 3A) at Fachoberschule, Fachgymnasium, Gymnasium or Gesamtschule. The certificate awarded at the end of polytechnische Oberschule in Germany is acknowledged as an equivalent qualification.

At the Gymnasium, students are prepared for the Abitur, which opens access to higher education institutions and is the highest general education certificate in Germany. Depending on the educational laws of the federal states, this track can comprise of either 8 or 9 years of schooling after primary school, divided into Sekundarstufe I (lower secondary) and Sekundarstufe II/gymnasiale Oberstufe. Therefore, by the time of graduation, Gymnasium students are typically 18 or 19 years old. Pupils can choose to leave the Gymnasium one year before the Abitur. They acquire the certificate of Fachhochschulreife, which gives them an access to universities of applied science/polytechnics, but not traditional universities.

There are specific adult education institutions for acquiring Abitur or Fachhochschulreife in second-chance education: Abendgymnasium (evening Gymnasium), which offers lessons for employed people, and Kollegs, which are full-time Gymnasias for adults. Courses take 2 (for the Fachhochschulreife) to 3 (for Abitur) years.

In comprehensive school (Gesamtschule), all three school tracks and all certificates are offered in one institution. They are still in place in most federal states. Sometimes internal differentiation takes place based on subjects (integrative Gesamtschule), sometimes based on tracks (kooperative Gesamtschule). As Gesamtschulen compete for pupils with the other three school types, their socially integrative impact has been very restricted so far, and their level of achievement is much lower than that at Gymnasium. A special type of comprehensive school is the private Waldorfschule (Rudolf Steiner schools). It prepares for the Waldorfschulabschluss in 12 years, which is considered to be equivalent to Realschulabschluss (but not formally recognised), and Fachhochschulreife and Abitur in 13 years. Teaching and school life at Waldorfschule put a particular emphasis on artistic, practical and social skills.

With respect to permeability between school types, there are two ways of changing tracks - the “downgrade” from Gymnasium to Realschule or from Realschule to Hauptschule which is the more common one (Schneider, 2007).

The second system of vocational training requires part-time classroom instruction at a part-time vocational school (Berufsschule) (ISCED 3B) in combination with practical work experience. This arrangement is known as the dual system of vocational training, and entails a close collaboration between state and industry in the development of workers with specialized skills. The organizational form of the Berufsschule depends on the economic structure and the density of the population in the area served (Hainmüller, 2003). This system is relatively unique and largely restricted to German-speaking countries. This is often simply referred to as Ausbildung or Lehre. Vocational training of this kind typically takes three years. The Chamber of Crafts or the Chamber of Industry and Commerce, employers and the publicly run vocational schools co-operate closely, which makes the transition from school to work comparably smooth in Germany. There are also some skilled occupations (e.g. in the health and social sector as well as technical and commercial/trade assistants) for which training exclusively takes place in full-time vocational schools (Berufsfachschulen and Berufskollegs). These vocational schools also offer programmes for occupations that are usually covered in the dual system, which youth who did not get a place in the dual system

enrol in. This is much less popular than apprenticeships though. At Berufsfachschulen and Berufskollegs, students can achieve vocational skills and knowledge and at the same time acquire general education certificates. While one or two year courses impart basic vocational knowledge (Berufliche Grundbildung), some two and all three-year programmes provide full vocational qualifications and are considered equivalent to vocational training in the dual system (Schneider, 2007).

A major strength of the dual system is the high degree of engagement and ownership on the part of employers and other social partners. But the system is also characterised by an intricate web of checks and balances at the national, state, municipal, and company levels that ensures that the short-term needs of employers do not distort broader educational and economic goals. Career guidance seems highly variable across the Länder, with no single agency responsible for assuring delivery of quality information and guidance services to all students (Directorate for Education OECD, 2010).

There are moreover some vocational schools that, despite their belonging to the vocational education sector, confer general education certificates only. For theoretically oriented students who did not opt for or were not admitted to tracks that lead to higher education at the earlier stages of their educational careers, Fachoberschulen (FOS) and Berufsoberschulen (BOS) have been implemented to prepare for examinations for the necessary entrance certificates in two or three-year courses. The precondition for enrolment in the Fachoberschule is the possession of an intermediate general qualification (Mittlerer Schulabschluss); for the Berufsoberschule the additional condition is a completion of an apprenticeship or a vocational training programme at a vocational school. Both prepare students for the Fachhochschulreife. Teaching involves different vocational subject areas (technology, design, administration...) in addition to other general subjects. They prepare for the Abitur and can be accessed with an intermediated general qualification. The vocational and general qualifications can sometimes be combined.

Advanced vocational training is offered at technical colleges (ISCED 5B) (Fachschulen) and vocational academies (Berufsakademien). These institutions award the highest vocational qualifications available in Germany and are internationally considered as tertiary. The former are usually only open to those who have completed an apprenticeship or hold a certificate of a Berufsfachschule and have several years of work experience. Students can extend and refine their vocational skills attending fulltime or part-time classes. Successful Fachschul-graduates e.g. receive the title “state-approved technician” (staatlich geprüfter Techniker) or the master

craftsman's diploma, known as Meisterbrief. The latter can also be obtained on the basis of several years of work experience (without attending Fachschule) after passing detailed examinations supervised by the respective Chamber. It ensures that its holder is able to lead his/her own company and to instruct trainees on an adequate level (Schneider, 2007). Vocational academies (Berufsakademien) are a tertiary sector institution in some Länder offering academic training at a Studienakademie (study institution) combined with practical in-company professional training in keeping with the principle of the dual system. They only exist in a few federal states (Lohman, Eckhardt, 2013). Enrolment in a Berufsakademie however requires Fachhochschulreife or Abitur, depending on the federal state. All Berufsakademien confer the title Bachelor. However the possibility of subsequent master and doctoral studies is currently only provided in Baden-Württemberg – elsewhere the university applied to will decide on admission of graduates of the Berufsakademie.

The German higher education sector is two-tiered, consisting of traditional research-oriented universities and more practically oriented polytechnics or universities of applied science (Fachhochschulen), (ISCED 5A) (Schneider, 2007). Universities (Universität) offer the whole range of academic disciplines. In the German tradition, universities in particular focus on basic research so that advanced stages of study have mainly theoretical orientation and research-oriented component (Higher Education in Germany, 2012). While university programmes are basically and essentially theoretical and academic, programmes at Fachhochschule are more vocationally oriented towards the application of knowledge in professional life. Art colleges and conservatoires belong to the university tier. The minimum entrance requirement for the Universität (ISCED 5A) is the Allgemeine Hochschulreife or the fachgebundene Hochschulreife; for the Fachhochschule it is the Fachhochschulreife. Studies at Fachhochschule usually take four years. Studies at the university formally take four and a half years (nine semesters) in most subjects, but graduation actually takes place much later in many cases: the average time to graduation can go up to 16 semesters, i.e. eight years, in some subjects at some universities. A specific type of polytechnics are the colleges of public administration (Fachhochschulen für öffentliche Verwaltung), which are run by the federal states and the Federation. They prepare civil servants for the medium-level non-technical career in the judiciary, customs, tax offices, police, penal system, local administration etc. (but not teachers and social workers).

All types of university diplomas give access to PhD studies. With the Bologna reforms, Bachelor (3–4 years) and Master (1–2 years) degrees are currently being implemented at universities and Fachhochschulen throughout Germany. Both types of degrees are no longer

distinguished according to the type of institution attended and graduates from Fachhochschule should be able to proceed to a Masters or even doctorate at a university. The Master degree opens up the opportunity to continue with doctoral studies. Under exceptional circumstances, Bachelor graduates can be directly admitted to PhD studies at certain universities in some federal states (Schneider, 2007).

Table 4: Number of schools and students in the Germany (2012)

| <i>Type of school</i> | <i>Number of students</i> |
|--|---------------------------|
| Primary education (ISCED 1) | 2,936,751 |
| Lower secondary education (ISCED 2) | 4,768,983 |
| Upper secondary education (ISCED 3) | 2,645,504 |
| Post-secondary non-tertiary education (ISCED 4) | 548,099 |
| First and second stage of tertiary education (ISCED 5,6) | 2,939,463 |

Source: Eurostat, 2014

4 METHODOLOGY AND THE AIM OF THE WORK

4.1 THE AIM OF THE WORK

The definition of the main differences the financing of education in the Czech Republic and Federal Republic of Germany with a focus on tertiary education.

4.2 PROCEDURE METHODOLOGY OF THE WORK

Chapter 2: General system of education

In this chapter was described a definition of high education according to academic literature, as well as International Standard Classification of Education (ISCED).

Chapter 3: The system of education in the Czech Republic and the Federal Republic of Germany

Analysed academic literature and official (governmental) documents were used to describe Czech and German system of education. This chapter also contain statistics of number of schools, universities and students in the Czech Republic and Germany for year 2012 according to ISCED. Annex 1) and 2) belong to this chapter.

Chapter 4: Financing of high education in the Czech Republic

In this chapter mainly governmental documents were used to describe financing of high education in the Czech Republic. Annex 3) belongs to this chapter.

Chapter 5: Financing of high education in Germany

To describe financing of high education in Germany were used available resources in English or Czech language.

Chapter 7: Definition of the main differences in the funding of tertiary education of the Czech Republic and Germany

Based on existing information were defined the main differences in the funding of tertiary education of the Czech Republic and Germany.

Chapter 8: The proposals that would lead to the improvement of the system of financing tertiary education in the Czech Republic

Based on existing information were proposed suggestions that would lead to the improvement of the system of financing tertiary education in the Czech Republic.

5 FINANCING OF HIGH EDUCATION IN THE CZECH REPUBLIC

5.1 THE PRINCIPLES AND RULES FOR FINANCING OF PUBLIC UNIVERSITIES

In the Czech Republic public universities receive funds from the state budget towards their running and capital costs. Higher education institutions receive a financial contribution based on the number of students and graduates, the economic costliness of the relevant study programme and certain quality and performance indicators. The MEYS is also used to finance public universities through project grants. Part of the budget is allocated to schools on the basis of qualitative criteria (MEYS, 2011).

Contributions and grants distributed to public universities are divided into four basic areas of within the budget. These areas are further divided into a number of indicators, listed below. Percentages of budget headings are indicative and based on the structure of the budget in 2011.

1. The budget area I, the normative part of the budget (about 80%): indicators A, K
2. The budget area II, the social affairs of students (about 10%): indicators C, J, S, U
3. The budget area III, the development of universities (about 8%): indicators G, I
4. The budget area IV, the international cooperation and others (about 2%): indicators D, F, M.

1.1.7 THE BUDGET AREA I, A NORMATIVE PART OF THE BUDGET

The normative part of the budget is based on 1) the count of studies (studied in the standard period of study plus one year) modified by quality indicators and performance multiplied by a coefficient of economic cost (80% of the normative part of the budget - indicator A). And based on 2) quality and performance indicators (20% of the normative part of the budget – indicator K).

Indicator A – limits of the number of studies

To set indicator A limits of the number of studies is influenced by the quality and performance indicators. They focus on the area of scientific output of universities, the quality of study programs and graduates and international mobility and internationalisation. By limit

the ministry sets a maximum number of studies (counted for funding), which enter into the calculation of the contribution to the educational activities of the various public universities. MEYS provides a total of five limits - based on the principles and rules for financing of public universities for 2012:

1. Number of studies in the first year of Bachelor's degree programs (B1L2012)
2. Number of studies in the first year long Master's degree programs (M1L2012)
3. Number of studies in the first year Master's degree programs (N1L2012)
4. Number of studies in the first year of Doctoral study programs (P1L2012)
5. Aggregate number of studies in all other years of study (SP2 +).

Ad 1.

a) To determine / calculate B1L2012 there are three important input data: firstly, the limit of the number of studies in the category B1, which entered into the calculation of the contribution for 2011 (B1L2011), second, the actual number of full-time equivalent studies listed in the category B1 on 31/10/2010 (B1S2011) and third, corrected number of studies in the category B1 calculated from the actual development of studies in B1 to individual schools for the years 2005-2010 (B1K2012). The calculation is based on negative slope of the regression curve for the last 6 years. To calculate B1L2012 also apply: if $B1S2011 \leq B1L2011$, than $B1L2012 = B1L2011 * 0,65 + B1K2012 * 0,35$. If $B1S2011 > B1L2011$, than $B1L2012 = (B1L2011 + B1S2011)/2 * 0,65 + B1K2012 * 0,35$.

b) Total number of limited studies in the B1 category for the year 2012 (B1L2012) for each public high school will be the sum of three elements: The first entry will constitute 95% of the number of studies in the B1 set for each public high school under the previous point. Another 5% of the number of studies in B1 will be among public universities divided according to their share of quality indicators and performance Bachelor's degree programs. Schools in which there is a reduction in a limited number of studies in M1, N1 and P1 due to the use of quality and performance indicators can increase category B1 up to this decline.

Ad 2.

a) In the first step, proceed quite similarly as in the determination of B1L2012.

b) Total number of limited studies in category M1 for the year 2012 (M1L2012) will be for each public high school the sum of three elements: The first figure will constitute 90% of the number of studies in M1 set for each public high school according to the previous point.

Another 10% of the studies in the M1 between public universities divided according to their share of quality indicators and performance master's degree programs.

Ad 3.

a) The input data for the limit N1L2012 is the estimated number of graduates from the previous year in the period from 1/11/2010 to 31/10/2011 (BA2011) and average permeability coefficient of categories of graduates from BA first-year Master's degree programs N1 (kBA to N1), so $N1L2012 = BA2011 * kBA \text{ to } N1$. The figures are calculated for each college separately.

b) Surface reduced by 10%.

c) The limited number of studies in category N1 2012 (N1L2012) will be for each public high school the sum of three elements: The first entry will constitute 90% of the number of studies in category N1 set for each public high school in accordance with the preceding paragraphs a) and b). Another 10% of the studies in N1 are divided between public universities according to their share of quality and performance indicators of master's degree programs. $BA2011 = B3 * KB3 + 2010 + \text{to } BA$, where $B3 + 2010$... the actual number of students in the third year and senior years of study in bachelor's degree programs at the college;

$KB3 + \text{in } BA$... average weighted coefficient successful completion (basically permeability of $B3 + \text{to } BA$).

Ad 4.

a) The starting figure for 2012 is the limit of the number of studies of individual universities in category P1 set for 2011. This figure is denoted as P1L2011.

b) Total number of limited studies P1L2012 for each public high school is the sum of three elements: The first entry will constitute 80% limit of the number of studies in the P1 set for each public high school in 2011. Another 20% of the studies in P1 will be among public universities divided according to their share of quality indicators and performance doctoral programs. For those schools where the sum of the two items exceeds limit of the number of students for the year 2011 (P1L2011), this will increase the number of students included in the limit.

Ad 5.

The aggregate number of studies in other years of study includes two types of data. The first figure is the number of studies in the second year of study. The second figure is the number of studies in other years of study, based on actual number of studies.

Indicator K - Quality and Performance

The indicator is not associated or affiliated with the number of students neither the number of graduates. It focuses exclusively on bonus universities according to the quality and performance. The high school therefore beyond the funds rose by students (under indicator A) has the opportunity to compete for funds "for the quality and performance". For funding under the indicator K is defined 20% of the operative part of the budget.

The indicator K consists of eight other indicators of the quality and performance. These other indicators consist of quantified results of each university and expressed as a proportion of the total result of all schools in the indicator K.

Each indicator is set to weight in the calculation; the sum of the weights of indicators is 100%. The results of schools within each indicator is therefore measured by the weight indicator and then summed. The amount of funds that belong to each school is the product of the percentage of income and the amount that is allocated in a given year in the indicator K. Unlike calculating A, there is no calculation for the Bachelor's, Master's or Doctoral type of study performed separately.

Indicators of quality and performance for calculating limits (A indicator)

There are 11 indicators of quality and performance. The indicators are categorized into three areas - scientific output of universities, the quality of study programs and graduates, international mobility. The calculation of the weighted average is used indicators for the last three years, the last year (t) with available data has a weight of 50% the previous year (t-1) and 30% the oldest year (t-2) 20%.

Table 4: Indicator A

| Indicator A: Quality and performance indicators | Bachelor study programmes | | Master study programmes | | Doctoral study programmes | |
|---|------------------------------|-------|----------------------------|--------|------------------------------|--------|
| in sum | 100% | 5,00% | 100% | 10,00% | 100% | 20,00% |
| Indicator of scientific performance | 15,00% | 0,75% | 30,00% | 3,00% | 55,00% | 11,00% |
| research and development (absolute) | 3% | 0,15% | 7% | 0,70% | 16% | 3,20% |
| research and development (by branches) | 3% | 0,15% | 7% | 0,70% | 16% | 3,20% |
| normalized number of citations (ONI) | 3% | 0,15% | 5% | 0,50% | 7% | 1,40% |
| targeted non-investment funds for research | 3% | 0,15% | 6% | 0,60% | 9% | 1,80% |
| own income | 3% | 0,15% | 5% | 0,70% | 7% | 1,40% |
| The quality of study programs and graduates applying | 65,00% | 3,25% | 45,00% | 4,50% | 20,00% | 4,00% |
| number of professors and associate professors | 3% | 0,15% | 5,00% | 0,50% | 8% | 1,60% |
| employment of graduates (absolute) | 31% | 1,55% | 20,00% | 2,00% | 6% | 1,20% |
| employment of graduates (standardized) | 31% | 1,55% | 20,00% | 2,00% | 6% | 1,20% |
| International mobility | 20,00% | 1,00% | 25,00% | 2,50% | 25,00% | 5,00% |
| scientific results (SCImago) | 2% | 0,10% | 3% | 0,30% | 5% | 1,00% |
| foreign citizenship | 3% | 0,15% | 3% | 0,30% | 5% | 1,00% |
| "self-paying" | 1% | 0,05% | 5% | 0,50% | 1% | 0,20% |
| mobility programmes (travelling abroad) | 7% | 0,35% | 7% | 0,70% | 7% | 1,40% |
| mobility programmes (comming) | 7% | 0,35% | 7% | 0,70% | 7% | 1,40% |

Source: MŠMT, 2011

Indicator of scientific (artistic) performance of high school

This is the most important indicator. The scientific performance of universities is determined by three indicators and one indicator of performance art. The first indicator of scientific output of universities is the number of points for a school in the area of research and development, counted according to the methodology adopted by the Council for Research, Development and Innovation. It is always the sum of points obtained in the last 5 years prior to the assessment. The artistic high schools are assigned a percentage weight that corresponds with the number of their normative students. Another indicator of scientific output of universities is based on an extensive research SCImago Group, focused on the analysis of the results of science and research. The second indicator of scientific output of universities is an ONI - a multiple indicator O (Output) and NI (Normalized Impact). It expresses the field-normalized number of citations to all publications of the institution, connecting quantitative range of outputs with their citation / quality. The last indicator of scientific (artistic) high school performance is the volume of targeted non-investment funds (including foreign) for research and development (weighted average for the last three years). It is a subsidy. The sum

of the income comes between quality indicators and performance as an indicator of other relevant activities of universities, which is a collaboration of universities with external entities on a commercial basis and therefore the ability to generate funds from sources other than government.

The quality of study programs and graduates applying

First indicator is the number of professors and associate professors recount and weighted for the last three years (the weight of a professor's set at 2.5, a weight of a lecturer at 1.5). Next indicators are the employment of graduates – standardized and absolute.

International mobility and internationalization

First is the indicator of international cooperation in scientific results (SCImago). Another is the number of students with foreign citizenship, third is a number of students with foreign citizenship who have fully paid for their studies with their own means (self-funded). Fourth indicator is a weighted average stay of students travelling abroad from schools within the mobility programs and the last one is the indicator of weighted average stays of foreign students coming to school within mobility programs.

Indicators of quality and performance for calculating qualitative bonus (K indicator)

Table 5: Indicator K

| Indicator K: Quality and performance indicators | Total value in % |
|---|---------------------|
| in sum | 100% |
| Indicator of scientific performance | 39,0% |
| 1 research and development (absolute) | 29,3% |
| research and development (by branches) | 1,7% |
| 2 targeted non-investment funds for research | 5,0% |
| 3 own income from applied research | 3,0% |
| The quality of study programs and graduates applying | 34,0% |
| 4 number of professors and associate professors | 2,0% |
| 5 employment of graduates | 32,0% |
| International mobility | 27,0% |
| 6 foreign citizenship | 2,0% |
| 7 "self-paying" | 3,0% |
| 8 mobility programmes (travelling abroad) | 11,0% |
| mobility programmes (comming) | 11,0% |

Source: MŠMT, 2011

First indicator is a number of points for the results of university research and development. It is always the sum of points obtained in the last 5 years prior to the assessment. Second and third indicator are targeted non-investment funds for research and own revenues (the same definition as in the indicator A). Next indicators are weighted number of professors and associate professors (the same definition as in the indicator A) and employment of graduates. In the last part there are these indicators: number of students with foreign citizenship, number of students with foreign citizenship who have fully paid their studies from their own resources, “self-funding” weighted average stay of students travelling abroad from schools within the mobility programs. In these indicators is the definition similar to the indicators A, with the only difference that the data of individual universities are summed combined for all programs.

1.1.8 THE BUDGET AREA II, THE SOCIAL AFFAIRS OF STUDENTS

Indicator C - scholarships for students of accredited doctoral study programs;

Indicator J - subsidies for student accommodation and meals;

Indicator S - social grants;

Indicator U - accommodation scholarships.

1.1.9 THE BUDGET AREA III, THE DEVELOPMENT OF UNIVERSITIES

Indicator G - educational development projects of the Higher Education Development Fund

Indicator I - development programs

1.1.10 THE BUDGET AREA IV, THE INTERNATIONAL COOPERATION AND OTHERS

Indicator D - foreign students accepted in the context of international development assistance, international cooperation;

Indicator M - extraordinary tasks and activities:

1. The draft principles of financing the University of the Third Age

The amount granted from the state budget for one “studentohodina”, the number of hours of active learning courses, multiplied by the number of participants U3A to a level of about 50% of that average is based on a calculation of studentohodina for normal student. Funding U3A will be based on the appropriate application of PU contribution of indicators F. The total budgeted amount allocated to U3V individual schools will be based on studentohodina. The calculation will be applied to two factors: the type of teaching coefficient (K1) and the coefficient of the size of teaching groups (K2). The values of the coefficients are proposed as follows : K1 value is 0.8 for lectures, 1.0 for IT teaching in computer classrooms and 1.2 for laboratory instruction in specialized rooms; K2 value is 0.95 for groups with more than 80 participants , 1.0 for groups of 30-80 students and 1.05 for groups of less than 30 participants.

2. Funding increased education costs of students with special needs arising from a disability.

Institutional funding studies of people with special needs will consist of two parts: First the normative study * coefficient of the cost, second presents financial support, taking into account the individual needs of specific students study due to the type of disability and the chosen area of study (MŠMT, 2011).

The balance of resources for allocation of contributions and grants for high schools for 2013 is in annex number 10.3.

Financing of universities by using different algorithms allows to check and improve efficiency in the use of public resources in the tertiary education sector. It also allows to respond to claims of educational policy and labour market demands, as well as to control the quality of education and provide funding for a variety of educational and research activities in various fields. Main characteristics of properly constructed normative system are openness and transparency, predictability, flexibility, equity and efficiency (Urbánek, 2007).

1.2 FINANCING OF PRIVATE UNIVERSITIES

Private colleges are forced to obtain financing from its own activities, because these institutions are almost entirely dependent on tuition fees paid by their students. The highest level of tuition fees is not particularly limited by law. The level of tuition fees varies at each school. It can be said that the level reflects the demand for the type of education that a given school offers, also quality of education, financial demands of individual study programs, and other factors. Students of private universities receive accommodation and social scholarships as well as students of public universities. It is paid by funds from the public budget.

Private universities usually have a statute of joint stock companies, public benefit corporation (non-profit) or limited liability company. Each year they must submit an annual activity report to the MEYS. If they receive a state subsidy, they must also submit an annual report on the economy. Private high schools are also entitled to subsidies from the state budget, but must satisfy two conditions. 1) They must operate as a public benefit corporation and 2) they must provide an accredited program in the public interest. (The public interest is the implementation of such an accredited program that does not realize other public high school, or is this program for students at a public university with difficult access.) (Urbánek, 2007). The funding of private schools is based on the same per capita principle as for public schools. Basic subsidies (50-80% of the amount granted to similar public institutions, according to the type) can be raised to 80-100% if the school meets a set of criteria. Denominational schools receive the same funding as public schools directly from the MEYS (MEYS, 2011).

6 FINANCING OF TERTIARY EDUCATION IN THE FEDERAL REPUBLIC OF GERMANY

6.1 THE PRINCIPLES AND RULES FOR FINANCING OF PUBLIC UNIVERSITIES

6.1.1 FINANCING OF TERTIARY EDUCATION INSTITUTIONS BY THE FEDERATION AND THE LÄNDER

The financing of education from the public purse is currently based on the fact that most educational institutions receive the greater part of their funds from public budgets; certain groups undergoing training receive financial assistance from the state to provide them with the money they need to live and study; the public financing arrangements for the education system are the result of decision making processes in the political and administrative system in which the various forms of public spending on education are apportioned between Federation, Länder and Kommunen (local authorities) and according to education policy and objective requirements.

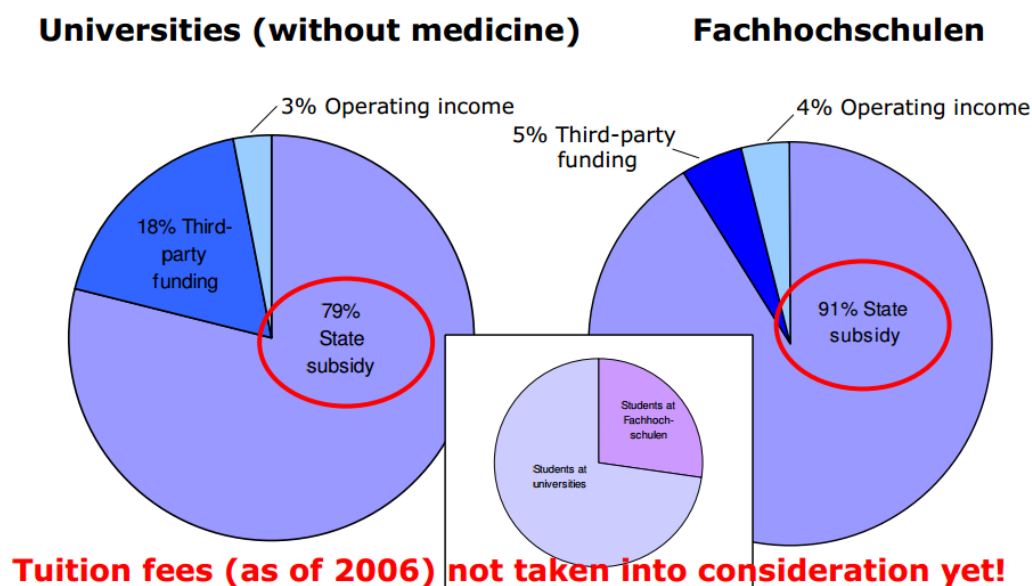
The political and administrative hierarchy in the Federal Republic of Germany is made up of three levels: 1) Federation; 2) Länder; and 3) local authorities (Kommunen), i.e. districts, municipalities, with the status of a district and municipalities forming part of districts. Decisions on the financing of education are taken at all three levels, but over 90% of public expenditure is provided by the Länder and the local authorities (Lohmar, Eckhardt, 2013).

According to Grundgesetz (2012), Art. 91b, Paragraph 1 (the Basic Law) in cases of supraregional importance, the Federation and the Länder may cooperate in the promotion of: scientific research institutions and projects outside of institutions of higher education; scientific and research projects at institutions of higher education (agreements require the consent of all Länder); research buildings at institutions of higher education, including major equipment. As part of the Excellence Initiative of the Federation and the Länder for the Promotion of Science and Research in German Higher Education Institutions (Exzellenzinitiative des Bundes und der Länder zur Förderung von Wissenschaft und Forschung an deutschen Hochschulen) adopted in 2005, the Federation and the Länder support scientific activities of universities and their cooperation partners in the higher education sector, in non-university research as well as in the economy.

Public higher education institutions are maintained by the Länder, and therefore receive the majority of their financial backing from the Land concerned, which essentially also decides the allocation of resources. The Länder supply these institutions with the funds they need to carry out their work from the budget of the Ministry of Education and Cultural Affairs or the Ministry of Science and Research. The financing procedure comprises several stages. First the higher education institution notifies the Land authorities of its finance requirement in the form of an estimate to be included in the budget of the Land ministry responsible for higher education. The entire budget is then compiled by the competent minister in agreement with the other responsible ministries and finally included in the budget proposals the government presents to parliament for its approval. The funds are made available once the parliament has discussed the budget and approved it. Financing is generally oriented in accordance with the responsibilities of and services provided by the institutions of higher education in the field of research and teaching, in the promotion of up-and-coming academics and the equality of opportunity for women in science. The Land distributes and spends the funds according to requirements within the institution, a process which is again supervised by the Land. By contrast, it is not the Senator (i.e. Minister) responsible who establishes the budgetary plans of the universities in Berlin but the board of trustees, made up of members of the Land government and the higher education institution. The funds provided by the Länder from their budgets cover personnel and material costs as well as investments, in other words expenditure on property, buildings as well as for and major equipment. The Länder now have full legislative authority over the construction of higher education institutions. As a compensatory measure, the Länder will be receiving, in principle, annual financial assistance from the federal budget up to 2019. These compensation payments have been fixed at Euro 695.3 million to the end of 2013 (Lohmar, Eckhardt, 2013).

1.2.1 FUNDING

Picture 1: State subsidy



Source: Schwarzenberger, 2007

Higher education policy is an aggregate of sixteen potentially different policies for higher education. German higher education is overwhelmingly publicly funded, and institutions have to follow the budgeting and accounting legislation of German public administration. These laws, although set by the individual states, are more or less similar across the country.

The state government (not Federal) has traditionally had a strong role in higher education, as can be observed by the emphasis on supervision rights held by government and the public funding mechanisms. The notion of academic freedom is considered of paramount importance, however the strong emphasis on the research function of the universities means that academic scientists determine teaching and research, and play a major role in administering the internal affairs of higher education institutions. In the majority of states, the budgets of higher educational institutions are still heavily based on historical considerations. However, in recent years some states have started to take into account more objective factors such as enrolments or performance.

In the case of the former, the state subsidies for the individual institutions are included in the state law. The institutional budget is subdivided into expenditure categories (line items) and positions (for personnel, described in the so-called Stellenplan). The budget is an integrated budget for education and research. Teaching and research are not funded separately. Usually the budget is already subdivided according to the institutional structure, and the positions are

already assigned to the departments and institutes. The budget thus predetermines the total expenditure process for the fiscal year.

Recently in most German states formula funding has been introduced for increasing parts of the available budget, but until now it still relates to a small part of the budget (1-7%). On top of that, Länder- governments have given institutions increasingly more flexibility with regard to the (internal) allocation of funds according to their own discretion, and with fewer limitations fixed in advance. In many Länder, experiments have been carried out with block grant (lump sum) funding (Globalhaushalt) as a replacement for the traditional and rather inflexible allocation mechanisms.

Currently 14 of the 16 Länder apply performance-based formulae to determine some part of the state grant which institutions receive (see table 6). In the other Länder, the remaining 80% of the state grant is still appropriated on the basis of discretionary-incremental decisions.

Historically an institution's budget in Germany was determined by simply rolling-on the previous year's budget with possible modifications due to inflation. The assumptions behind this practice were that a university's cost structure was relatively fixed and that there was a status quo in the higher education sector. Although the amount of funding a university received was not founded on fixed criteria, the cost structure of a university was transparent in the sense that it was presented in a detailed form in the budget documentation. However, any changes in higher education policy or in the strategy of a higher education institution (e.g. to increase the size of its library) would clearly require negotiations to determine an appropriate increase to the budget. That is why this type of budget allocation is called in Germany discretionary-incrementalist funding.

Table 7: The share of the state grant allocated using formula (situation in 2006)

| state | % |
|------------------------|--------------|
| Baden-Württemberg | 20 |
| Bayern | 1.5 |
| Berlin | 20 |
| Brandenburg | 95 |
| Bremen | 10 |
| Hamburg | 85 |
| Hessen | Under review |
| Mecklenburg-Vorpommern | 4 |
| Niedersachsen | 3 |
| Nordrhein-Westfalen | 20 |
| Rheinland-Pfalz | 95 |
| Sachsen | 1 |
| Schleswig-Holstein | 5 |
| Thüringen | 15 |

Source: Jongbloed, 2009

There is significant variation in German higher education. Indicator-based funding is felt to have its limitations as an instrument for implementing public policy. This may account for the increasing use of target agreements (*Zielvereinbahrungen*), which provide another instrument for the facilitation of performance-based funding, although they have a limited competitive dimension.

Formula-based funding can provide a procedure for allocating funds based on objective criteria, which are transparent and where the results are predictable: institutions with the same indicator values will, in general, receive the same funding. However, the criteria of predictability and transparency do incur disadvantages for flexibility. If a formula-based procedure is to offer predictability and transparency, the formula should be fixed in the mid-term and communicated to all the institutions which will be affected by it clearly and on time. This trade-off between predictability and flexibility is one of the reasons that the majority of German Länder has implemented formula-based funding for only a small share of the total state grant. In each of these three models with a formula-share of over 20% - Brandenburg, Hamburg and Rheinland- Pfalz – it is nevertheless possible to differentiate between two components: a basic grant and a performance grant. The basic grants tend to have the function of contributing to the transparency of the funding allocations and are often based on relatively stable or predictable indicators.

In 2003 the Hessen model of funding allocation was similar to the above mentioned models and differentiated between a basic grant (80%) and a performance grant (15%) for the allocation of in total 95% of the state grant. The basic grant was allocated on the basis of agreed target numbers of students. In fact, in an effort to further improve the transparency of the model, it was decided to implement a so-called “price model”, which affixed a set price to each unit of measurement – e.g. the number of students. Therefore, for each additional student, a university would receive a set amount of funding. The problem with this model was that the state grant was insufficient to cover an unexpected growth in the number of students, particularly because the grant for the sector was frozen at the rate for 2001. In the context of a fixed and constrained state budget, the consequences of this model were that the increased number of students within a fixed budget led to each university receiving less money per student (i.e. a reduction in price). However, in competition between each other for a share of this fixed budget universities could only increase their share by increasing the number of students. This consequence contradicted the initial choice for a clear price model and the model was therefore put on hold.

A formula measures performance on the basis of changes in indicators. In this way, an institution is encouraged to invest in measures which will improve its performance, as it can anticipate a financial pay-off for this investment. However, institutions also compete with one another for this financial “reward” if they are funded on the basis of the same indicators (including weightings on indicators). A further benefit of this system is that changes to a subject profile in an institution can be easily accounted for in the allocation model.

Often the object of formula-based funding is to reallocate funding on the basis of performance. The consequence of this is that there will inevitably be winners and losers. To prevent large shocks, many of the German Länder use tolerance bands of between 1% and 2% of the total budget. Any losses outside of this band will be capped under this system. The choice and weighting of the indicators used in a formula determine the dimensions of performance and competition which is implemented. One can differentiate between provision based (say input oriented), demand oriented and success (or output) oriented indicators. The set of indicators chosen can be seen to attempt to reflect the key tasks of a university. All of the funding models used reflect performance in the areas of teaching, learning and research. In general there tends to be a broad focus on teaching rather than research. This is particularly the case for Fachhochschulen. All of the Länder also include gender equality as a third area in their funding model. Usually such equality indicators will make up 2 or 5% of a university’s formula-based budget, but in Baden-Württemberg, an exceptionally high share of nearly 16% is reached and in Hamburg, where the universities choose indicators to reflect both their profile and their potentials for improvement, it ranges between 10% and 25%. A further area of performance reflected in almost all formula models is internationalisation. This is most commonly measured by teaching-related indicators such as the number of foreign students (Jongbloed, 2009).

The funding system of higher education in Germany is undergoing a period of change. The detailed state control exercised by the Länder is increasingly being replaced by the autonomous action of higher education institutions. The initial impact of the reform approaches will primarily make itself felt in the distribution modalities. Budget funding is hence increasingly apportioned via performance-related parameters, taking into account such criteria as the number of students within the Regelstudienzeit (standard period of study) and the total number of graduates or the level of external funding, known as Drittmittel, attracted for research purposes and/or the number of doctorates (Lohmar, Eckhardt, 2013). As far as research performance is concerned, the most important indicators are third-party-funding as well as the number of doctorates and Habilitationen. It is not unusual for third-party funding

(sometimes weighed against the number of professors) to make up roughly a third of a university's formula-based funds. Since only universities can grant doctors' titles, an indicator such as the number of doctorates (also weighed against the number of professors in some cases) only makes sense in this sector of the higher education system. Where they are used, they can determine between 5% (Bavaria) and 17% (Bremen) of a university's formula-based budget.

The use of output-related indicators such as the number of graduates may impose the danger of a loss of quality, for such an indicator could be seen as an incentive to make more students pass by lowering quality standards. So as to avoid such malfunctions and unintended consequences, specific measures to maintain quality standards may have to be introduced. The low share of grant allocated by formula in Germany does, however, mean that currently the incentive to decrease quality is relatively weak and further constrained by the continuing close relationship between state and individual universities (Jongbloed, 2009).

The awarding of funds based on performance can be particularly successful in cases where the financial autonomy of higher education institutions is extended and their management structures are strengthened. The relationship between the state and higher education institutions is increasingly marked by agreements on objectives and performance requirements, which define the deliverables. Higher education institutions have increasing scope as regards specific measures to implement the agreed objectives. They have also been given greater flexibility in the use of the funds thanks to the introduction of global budgets, for instance. In addition to their basic funding, higher education institutions apply for funds from public and private bodies to promote research and development and to support teaching and up-and-coming academics (Lohmar, Eckhardt, 2013).

Lump sum funding in most Länder in related to higher education institutions and Länder governments agree upon certain institutional policies and goals. These agreements are contract-like in which funding for achievement of institutional goals is laid down. In the last few years there has been an increasing trend towards using a combination of formula funding and such individual performance agreements to enact higher education policy. Nordrhein-Westfalen, which has the largest higher education system in Germany, was the first state to introduce both instruments at the same time. At their introduction, the performance agreements had the explicit purpose of supporting innovations and developments, which would contribute to reaching the state's goals for the sector as set out in the so-called "quality

pact". Initiatives which were agreed between the state and individual universities received supplementary funding (Jongbloed, 2009).

7 THE DETERMINATION THE MAIN DIFFERENCES OF FUNDING OF TERTIARY EDUCATION IN THE CZECH REPUBLIC AND THE FEDERAL REPUBLIC OF GERMANY

The main differences are following:

The responsibility of conception, state and development of education

In the Czech Republic the Ministry of Education, Youth and Sports is responsible for of conception, state and development. It is responsible for all country as a whole (MEYS, 2011). In the Germany, the main responsibility of conception, state and development of education have state ministries of education (Länder) (Lohmar, Eckhardt, 2013). This is due to political systems in these countries. Czech Republic is parliamentary republic and is divided into thirteen regions and one capital city (CZRegion, 2014). The Germany is a democratic and social federal state. The exercise of governmental powers and the discharge of governmental functions are divided between the Federation and the Länder (Grundgesetz, 2012). Germany consists of sixteen federal states (Länder). Each Länder has it is own serenity (Göbbels-Dreyling, 2003).

Who funds tertiary education

In the Czech Republic public universities receive funds from the state budget for their running and capital costs. The government splits money between ministries and MEYS splits money between universities (MEYS, 2011). In the Germany the public higher education institutions are maintained by the Länder, and therefore receive the majority of their financial backing (90%) from the Land concerned, which essentially also decides on the allocation of resources. The Länder supply these institutions with the funds they need to carry out their work from the budget of the Ministry of Education and Cultural Affairs or the Ministry of Science and Research (Lohmar, Eckhardt, 2013).

Differences in tertiary education system

In the Czech Republic ISCED 5B means tertiary professional schools. They provide students with practically oriented qualifications. Their aim is to fill the gap in qualification needs between secondary and tertiary education.

Graduates do not have a statue of higher education. They receive a title Dis., it means “certified specialist”. ISCED 5A are universities based on Bologna system: Bachelor and Master programmes (Koucký, Bartušek, Zelenka, 2008). In the Germany ISCED 5B is quite different. There are two types of schools: technical colleges (Fachschulen) and vocational academies (Berufsakademien). Fachschule graduates receive the title “state-approved technician” or master craftsman’s diploma. The latter can also be obtained on the basis of several years of work. Berufsakademien are academic training combined with practical in-company professional training. Graduates receive a title “bachelor”. The German higher education sector ISCED 5A is two-tiered, consisting of traditional research-oriented universities (based on Bologna system) and more practically oriented polytechnics or universities of applied science (Fachhochschulen) (Schneider, 2007).

The methods of allocating finances

In the Czech Republic public universities receive funds from the state budget for their running and capital costs. MEYS creates The Principles and Rules of Financing of Public Universities (MŠMT, 2012). Based on this Principle universities receive a financial contribution according to the number of students and graduates, the economic costliness of the relevant study programme and certain quality and performance indicators, as you can see in Chapter 4.1 and Annex 3. The Ministry of Education, Youth and Sports also finance public universities through project grants. Part of the budget is allocated to schools on the basis of qualitative criteria; also see in Chapter 4.1 and Annex 3. This system is applied in all public universities in the Czech Republic (MEYS, 2011). In Germany the system of allocating finances to universities is not so clear. Given that in Germany are 16 Länder with 16 Ministries of Education, there are almost 16 methods of allocating finances to universities. The higher education institution notifies the Land authorities of its finance requirement in the form of an estimate to be included in the budget of the Land ministry responsible for higher education. The entire budget is then compiled by the competent minister by agreement with the other responsible ministries and finally included in the budget proposals the government presents to parliament for its approval. The funds are made available once the parliament has discussed the budget and adopted it. The Land distributes and spends the funds according to requirements within the institution, a process which is again supervised by the Land (Lohmar, Eckhardt, 2013). Currently 14 of the 16 Länder apply performance-based formulae to determine some part of the state grant, which institutions receive (see table 6 in Chapter 5.1.2). In the other Länder, the remaining 80% of the state grant is appropriated on the basis of discretionary-incremental decisions. Often the object of formula-based funding is to

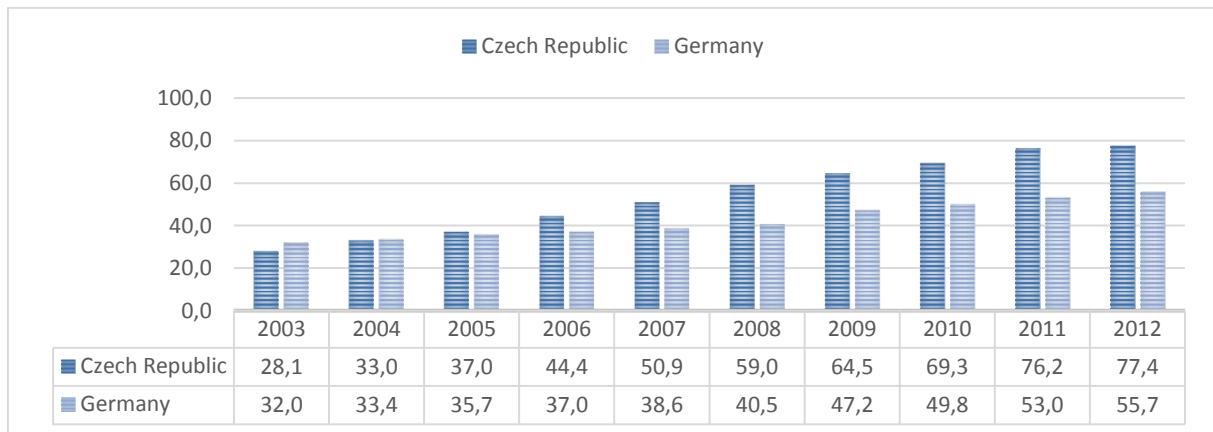
reallocate funding on the basis of performance. The choice and weighting of the indicators used in a formula determine the dimensions of performance and competition, which is implemented. One can differentiate between provision-based (say input-oriented), demand-oriented and success- (or output-) oriented indicators. The set of indicators chosen can be seen to attempt to reflect the key tasks of a university. All of the funding models used reflect performance in the areas of teaching, learning and research. All of the Länder also include gender equality as a third area in their funding model. Usually such equality indicators will make up 2 or 5% of a university's formula-based budget. A further area of performance reflected in almost all formula models is internationalisation. This is most commonly measured by teaching-related indicators such as the number of foreign students (Jongbloed, 2009).

Increasing/decreasing number of students

In the Czech Republic the main task of tertiary education is to decrease number of students. The proportion of all first enrolled in tertiary education in the Czech Republic has reached a high level, which need not be further increased. The Long-term Plan for Educational, Scientific, Research, Development and Innovation, Artistic and Other Creative Activities of Higher Education for the Period 2011-2015 (further referred to as LTP) notes that the share should not exceed two-thirds of the population of corresponding age. A larger proportion of college graduates with a bachelor degree should go directly to the labour market and not to continue in the master study (today continue more than 80 %). According to LTP the share of university graduates of bachelor degree programs who continue in the master degree has to decrease to 50 %. The regulation of the number of students in master programs must go hand in hand with the promotion of graduates of bachelor degree programs in the labour market (MŠMT, 2012). In the Federal Republic of Germany is the opposite situation. The number of young people qualified to enter university is set to increase significantly by 2020. At the same time, international competition demands that universities put a greater emphasis on research. In order to maintain the performance of institutions of higher education and give more new entrants access to university, the Federal Government and the Länder have agreed on the Higher Education Pact 2020. The Federal Government is increasing funds for the Higher Education Pact 2020 by 2.2 billion euros to a total of over 7 billion euros between 2011 and 2015. Around 300 000 more university entrants that previously predicted are expected in the second programme phase between 2011 and 2015. The Federal Government and

the Länder want to finance an additional 625,000 university entrants in this time period. The costs per additional university entrant will increase from 22,000 Euros to 26,000 Euros, of which the Federal Government will provide 13,000 Euros. The Länder will take on general funding responsibility (Higher Education Pact, 2013).

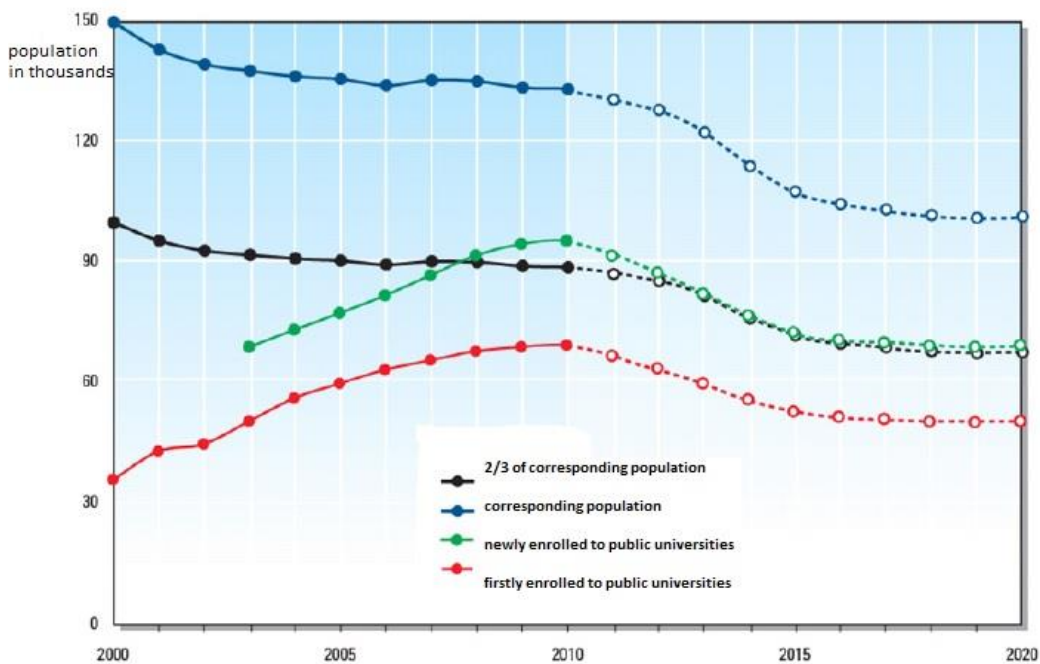
Graph 3: Total graduates (ISCED 5-6) per 1 000 of population aged 20-29



Source: Eurostat, 2014

Graph 3 shows how many people aged 20 – 29 per 1000 of population study at university in the Czech Republic and Germany. You can see huge increase in people who study in the Czech Republic in 9 years compared to Germany.

Graph 4: Enrolled to public universities in the Czech Republic (2000 – 2020)



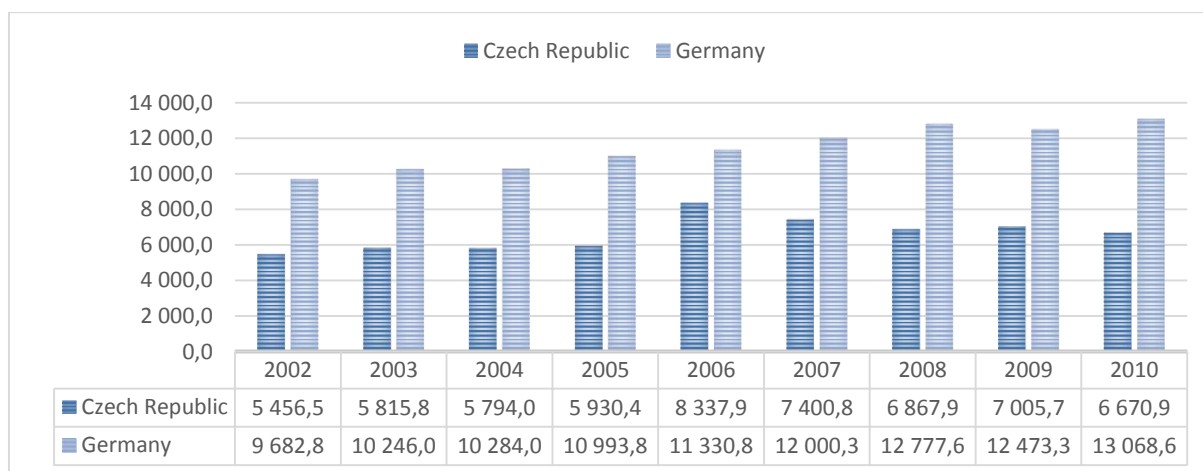
Source: MŠMT, 2011

8 THE PROPOSALS THAT WOULD LEAD TO THE IMPROVEMENT OF THE SYSTEM OF FINANCING TERTIARY EDUCATION IN THE CZECH REPUBLIC

Quality vs. Quantity

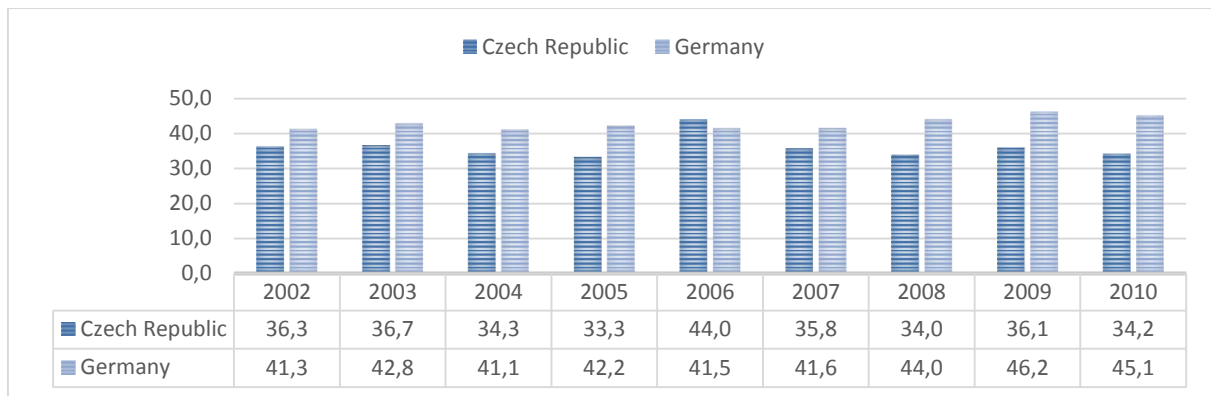
In Germany we see huge focus on quality rather than quantity. They spend more money per student than in the Czech Republic and they plan to continue to do so because of Higher Education Pact. University equipment and teaching staff is at a very high level. Due to the fact that a smaller percentage of Germans have a university degree, it may be easier for university graduates to find good jobs. It is need to say that on the basis of Zásady a pravidla financování VVŠ 2012 (MŠMT, 2011) Czech Republic progressively decreases number of graduates. It would be profitable to use saved money, which were obtained by reducing the number of students and invest them in the lower number of university students. It could help them to improve education skills and to be more competitive on the labour market.

Graph 5: Annual expenditure on public educational institutions per student in PPS, at tertiary level of education (ISCED 5,6), based on full-time equivalents



Source: Eurostat, 2014

Graph 6: Annual expenditure on public educational institutions per student compared to GDP per capita, at tertiary level of education (ISCED 5,6), based on full-time



Source: Eurostat, 2014

School instead of work experience

Nowadays it is serious problem in the Czech Republic: university graduates have problems to find a job because they have “only” a certificate, no work experience. Who wants to be successful has to work in parallel with study. But sometimes it is not good enough. In Germany Fachschule graduates have an advantage. Fachschulen award the highest vocational qualifications available in Germany and are internationally considered as tertiary. Successful Fachschul-graduates e.g. receive the title “state-approved technician” (staatlich geprüfter Techniker) or the master craftsman’s diploma, known as Meisterbrief. The latter can also be obtained on the basis of several years of work experience (without attending Fachschule) after passing detailed examinations supervised by the respective Chamber. It ensures that its holder is able to lead his/her own company and to instruct trainees on an adequate level (Schneider, 2007). If the Czech Republic adopt the same system, it would help to the Czech students who do not want to continue to University to find a job easily.

Research funding

As part of the Excellence Initiative of the Federation and the Länder for the Promotion of Science and Research in German Higher Education Institutions (Exzellenzinitiative des Bundes und der Länder zur Förderung von Wissenschaft und Forschung an deutschen Hochschulen) adopted in 2005, the Federation and the Länder support scientific activities of universities and their cooperation partners in the higher education sector, in non-university research as well as in the economy (Lohmar, Eckhardt, 2013). With this initiative the federal government and the Länder created competition between universities for additional research funding (Jongbloed, 2009). 75% of grants are provided by the Federation, and 25% by the

Land where the respective seat is located (Lohmar, Eckhardt, 2013). The funding is allocated by the Deutsche Forschungsgemeinschaft (DFG, German Research Council) and split into three project-based approaches. This "Initiative for Excellence" aims to strengthen the German universities' efforts in research and development and build up internationally visible centres of excellence.

The increasing strives for excellence in German research and science policy has led to the promotion of clusters. The result of this competition is the funding of five clusters of excellence that have recently been identified (Top Cluster Competition). The goal of the competition is to strengthen clusters that involve frequent collaboration and interaction between industry and science leading to higher innovativeness and competitiveness. The measure is part High-Tech Strategy (Hightech Strategy for Germany) which was initiated in 2006. The promotion of clusters is another attempt of German research, development and innovation policy to link academic research and industrial application by bringing together academic organisations with private firms (Jongbloed, 2009).

In brief, Germany induces a competition for their universities in research and development. It is good idea for all sides: students, universities, as well as Federation, win-win strategy. Students are more connected with their university. The university wants to win, so it has to strive to make more research focused students. The university gets more money and the Federation has more researchers and has better opportunity for research and development.

In the Czech Republic there are also institutions for research and development that support students, for example GA ČR (Czech Science Foundation). It is an independent government agency that supports fundamental scientific research. As part of the announced programs provide financial support for scientific projects for scientists and teams, and for young and beginning researchers. Furthermore GA ČR funded bilateral projects and projects in the framework of European and international programs. Every year the GA ČR receives around 3000 petitions bidding for grants, of which roughly one forth obtain them (GAČR, 2014). Institutions that support students in research and development in the Czech Republic are focused only on individuals or teams, but not to universities. As a great amount of university finances are from third parties, it is good idea to support it by research and development competition among all universities. Introduction of such competition could enhance Czech universities to focus more on academic research. It can bring more money to universities, in the long term as well as to state treasury.

9 CONCLUSION

The aim of this work was to determine the main differences of financing of education in the Czech Republic and Federal Republic of Germany with a focus on tertiary education and also proposed suggestions that would lead to the improvement of the system of financing tertiary education in the Czech Republic.

While The Czech Republic and The Federal Republic of Germany are neighbours, as well as being in the European Union, both have different educational systems as well as university financing. A lot of differences are based on the state system. The Czech Republic is a parliamentary republic. Germany is a federation with 16 states (Länder). Each state has his own government and ministries. With regards to educational systems, there are differences in responsibility of conception, state and development of education. In the Czech Republic the Ministry of Education, Youth and Sports is responsible for education for whole country. In the Germany the main responsibility of conception, state and development of education is to have state ministries of education (Länder). Funding of tertiary education comes in the Czech Republic mainly from MEYS, indirectly from state budget. In Germany the public higher education institutions receive the majority of their financial backing (90%) from the Land concerned, which also decides on the allocation of resources. Another difference we can find in the first stage of tertiary education (ISCED 5). In the Czech Republic ISCED 5B means tertiary professional schools. Their aim is to fill the gap in qualification needs between secondary and tertiary education. Graduates do not have a statute of higher education. ISCED 5A are universities based on Bologna system: Bachelor and Master Programmes. In Germany there are two types of schools (ISCED 5B): technical colleges (Fachschulen) and vocational academies (Berufsakademien). Berufsakademien graduates receive a title “bachelor”. Sector ISCED 5A is two-tiered, consisting of traditional research-oriented universities (based on Bologna system) and more practically oriented polytechnics or universities of applied science (Fachhochschulen). The main differences we can see is in the financing of the tertiary education. In the Czech Republic MEYS creates The Principles and Rules of Financing of Public Universities. Based on this principle universities receive a financial contribution according to the number of students and graduates, the economic cost of the relevant study programme and certain quality and performance indicators. The MEYS also finance public universities through project grants. This system is applied in all public universities in the Czech Republic. In Germany the higher education institution notifies the Land authorities of its financial requirement in the form of an estimate to be included in the budget of the Land

ministry responsible for higher education. The entire budget is then compiled by the competent minister by agreement with the other responsible ministries and finally included in the budget proposals the government presents to parliament for its approval. The funds are made available once the parliament has discussed the budget and adopted it. Currently 14 of the 16 Länder apply performance-based formulae to determine some part of the state grant, which institutions receive. In the other Länder, the remaining 80% of the state grant is appropriated on the basis of discretionary-incremental decisions. The last main difference is that in the Czech Republic the main task of tertiary education is to decrease number of students. In Germany it is the opposite situation. The proportion of all first enrolled in tertiary education in the Czech Republic has reached a high level, which need not be further increased. The number of tertiary students should not exceed two-thirds of the population of the corresponding age. Today more than 80% continue with their master studies instead of going directly into the labour market. The ministry plans to decrease the share of university graduates in bachelor degree programs who continue with their master degree to 50%. In Germany they plan to increase the number of young people qualified to enter university significantly by 2020. The Länder want to finance an additional 625,000 university entrants in this time period. The costs per additional university entrant will increase from 22,000 Euros to 26,000 Euros, of which the Federal Government will provide 13,000 Euros.

Based on findings were proposed suggestions that would lead to the improvement of the system of financing tertiary education in the Czech Republic. It seems to be good to focus on quality rather than quantity. Nowadays in the Czech Republic too many people have a university degree. It is not obvious that a university degree will ensure a good job. It would be profitable to use saved money, which were obtained by reducing the number of students and invest them in the lower number of university students. It could help them to improve education skills and to be more competitive on the labour market. Another suggestion apparent from the German idea of Fachschule graduates. Successful Fachschul-graduates receive the title “state-approved technician” or the master craftsman’s diploma, known as Meisterbrief. The latter can also be obtained on the basis of several years of work experience (without attending Fachschule) after passing detailed examinations supervised by the respective Chamber. These days many employers in the Czech Republic prefer several years of work experience than university degree or certificate. It seems to be good to implement this possibility to the Czech educational system and negotiate this idea with employers. Last suggestion is about university research funding. The Federation and the Länder supported scientific activities of universities and their cooperation partners in the higher education

sector, in non-university research as well as in the economy. With this initiative the federal government and the Länder created a competition between universities for additional research funding. Universities compete with one another. They involve more students with this initiative and thus they feel more affinity with the university. This brings more money to universities from third parties. This system also supports federal research and science and can bring more money to the federal treasury. Introduction of such competition could enhance Czech universities to focus more on academic research. It can bring more money to universities, in the long term as well as to state treasury.

10 SOURCES

- 1) Česká republika. Školský zákon. In: *561/2004 Sb.* 2008.
- 2) Česká republika. Úplně znění zákona o vysokých školách a o změně a doplnění dalších zákonů. In: *č. 111/1998 Sb.* 2010.
- 3) Český statistický úřad (2013). Školy a školská zařízení 2012/2013 [online]. Přístup dne 01.12.2013 z <http://www.czso.cz/csu/2013edicniplan.nsf/p/3301-13>
- 4) Český statistický úřad (2008) Mezinárodní standardní klasifikace vzdělávání-ISCED. [online]. Přístup dne 23.10.2013 z http://www.czso.cz/csu/klasifik.nsf/i/mezinarodni_standardni_klasifikace_vzdelavani_isced
- 5) CZRegion (2014). Regionweb [online] Přístup dne 22.03.2014 z <http://www.czregion.cz/ceska-republika>
- 6) Deutschland. Grundgesetz für die Bundesrepublik Deutschland. In: Teil I vom 23/05/1949 Seite 1. Berlin: Deutscher Bundestag, 2012. Přístup dne 20.4.2014 z <https://www.btg-bestellservice.de/pdf/10060000.pdf>
- 7) Directorate for Education. Education and Training Policy Division (2010). Vocational Education and Training in Germany: Strengths, Challenges and Recommendations. *OECD* [online]. Přístup dne 01.12.2013 z <http://www.oecd.org/edu/skills-beyond-school/45938559.pdf>
- 8) European Commission (2007). The Education System in Germany 2006/07, Eurybase The Information Database on Education Systems in Europe. Přístup dne 20.4.2014 z http://www.eurydice.org/ressources/Eurydice/pdf/eurybase/2006_DNDE_EN.pdf
- 9) Eurostat (2014) Education and Traininig. EUROPEAN COMMISSION. [online]. Přístup dne 23.03.2014 z [\http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database
- 10) Göbbels-Dreyling, B. (2003) University Financing Alternatives: The German Example, Higher Education in Europe ,Vol. XXVIII, No. 2.
- 11) Grantová agentura České republiky (2014) O GAČR. [online]. Přístup dne 23.3.2014 z: <http://www.gacr.cz/o-ga-cr/>
- 12) Hainmüller, B. (2003) The Educational Structure of the German School System. Luleå tekniska universitet. Přístup dne 20.4.2014 z http://www.ltu.se/cms_fs/1.4767!/7c7da33e.pdf

- 13) Higher education in Germany(2012). In: European consortium for accreditation [online]. Přístup dne 01.12.2013 z http://www.eacaconsortium.net/ecapedia/Higher_education_system_in_Germany
- 14) Higher Education Pact for more university entrants (2013). Federal Ministry of Education and Research (BMBF)[online]. Přístup dne 19.01.2014 z <http://www.bmbf.de/en/6142.php>
- 15) Jongbloed, B. (2009) Higher Education Funding Systems: An overview covering five European jurisdictions and the Canadian province of Ontario. Center for Higher Education Policy Studies (CHEPS). Přístup dne 20.4.2014 z <http://www.ugc.edu.hk/eng/doc/ugc/publication/other/2010/HEFS-overview.pdf>
- 16) Kaiser, F., Florax, R., Koelman, J. & Vught, F. (1992) Public Expenditure on Higher Education. A Comparative Study in the Member States of the European Community. London. Great Britain:Jessica Kingsley Publishers.
- 17) Klepetářová, J. (2001) Dvacet let reformy vysokého školství v Evropě po roce 1980. Praha. Česká republika: Ústav pro informace ve vzdělávání.
- 18) Koucký, J., Bartušek A. & Zelenka M. (2008) Účast na vzdělávání, financování škol a uplatnění absolventů. Praha. Česká republika: Vydavatelství Pedagogické fakulty, Univerzita Karlova.
- 19) Lohmar, B. & Eckhardt T. (2013). The Education System in the Federal Republic of Germany 2011/2012. Bonn: Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany. Přístup dne 20.04.2014 z <http://www.kmk.org/dokumentation/das-bildungswesen-in-der-bundesrepublik-deutschland/dossier-englisch/publikation-zum-download.html>
- 20) Ministerstvo školství, mládeže a tělovýchovy (2011) Zásady a pravidla financování VVŠ 2012. Praha. Česká republika.
- 21) Ministerstvo školství, mládeže a tělovýchovy (2014) Financování vysokých škol – rok 2012 [online]. Přístup dne 28.4.2014 z <http://www.msmt.cz/vzdelavani/vysoke-skolstvi/financovani-vysokych-skol-2012>
- 22) Policejní akademie České republiky v Praze. (2013) Výroční zpráva Policejní akademie České republiky v Praze za rok 2012 [online]. Praha. Česká republika: Policejní akademie České republiky v Praze. Přístup dne 02.12.2013 z http://www.polac.cz/dokument/vyr_12.pdf
- 23) Reis, F. (2008). 5% of EU GDP is spent by governments on education – Issue number 117/2008 Přístup dne 21.04.2014 z <http://epp.eurostat.ec.europa.eu/portal/page/portal/education/publications>

- 24) Sam, M. (2014) How Should Developing Countries Finance Higher Education?
University of Manchester. UK. Přístup dne 21.04.2014 z
https://www.academia.edu/1228730/Financing_Higher_Education_in_Developing_Countries
- 25) Schneider, S. (2007) Applying the ISCED-97 to the German educational qualifications. Přístup dne 20.04.2014 z
http://www.equalsoc.org/uploaded_files/publications/schn08d_applyingtheisced97totheermaneducationalqu.pdf
- 26) Schwarzenberger, A. (2007) Funding allocation in German higher education. Hochschuls Information System GmbH. Přístup dne 20.04.2014 z
http://www.dzhw.eu/pdf/pub_vt/23/2007-03-06_schwarzenberger1.pdf
- 27) The Ministry of Education, Youth and Sports of the Czech Republic (2011) The education system in the Czech Republic. Praha. Česká republika: Cermat.
- 28) UNESCO Institute for Statistics (2012). International Standard Classification of Education ISCED 2011. UNESCO Institute for Statistics P.O. Box 6128, Succursale Centre-Ville Montreal, Quebec. Canada: UNESCO Institute for Statistics.
- 29) UNESCO Institute for Statistics (2012) ISCED: International Standard Classification of Education [online]. Přístup dne 23.10.2013 z
<http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>
- 30) United Nations Statistic Division. (2011). Classifications Newsletter: Number 27, August 2011. New York, USA. Přístup dne 20.04.2014 z
http://www.uis.unesco.org/Education/Documents/UNSD_newsletter_27e_ISCED.pdf
- 31) Univerzita obrany (2013). Výroční zpráva o činnosti za rok 2012 [online]. Brno. Česká republika: Univerzita obrany. Přístup dne 02.12.2013 z
http://www.unob.cz/uredni_deska/Documents/VZ_UO_2012.pdf
- 32) Urbánek, V. (2007) Financování vysokého školství. Praha. Česká republika: Oeconomica.
- 33) Walterová, E. (2006) Struktura vzdělávacího systému v Německu. Metodický portál: Inspirace a zkušenosti učitelů[online]. Přístup dne 01.12.2013 z
<http://clanky.rvp.cz/clanek/c/Z/510/struktura-vzdelavaciho-systemu-v-nemecku.html/>

11 ABSTRACT

It is generally recognised that education systems play a fundamental role in our societies and economies. They provide populations with access to knowledge and the opportunity to develop competences and skills. These are important for the well-being of individuals, the good functioning of societies and economic growth. Despite the fact that Federal Republic of Germany and Czech Republic are neighbouring countries and both are members of European Union, each has a different educational system and different system of university financing. The aim of this master thesis is to determine the main differences in financing of education in the Czech Republic and Federal Republic of Germany with a focus on tertiary education and also to propose a suggestion that would lead to the improvement of the tertiary education financing system of the Czech Republic.

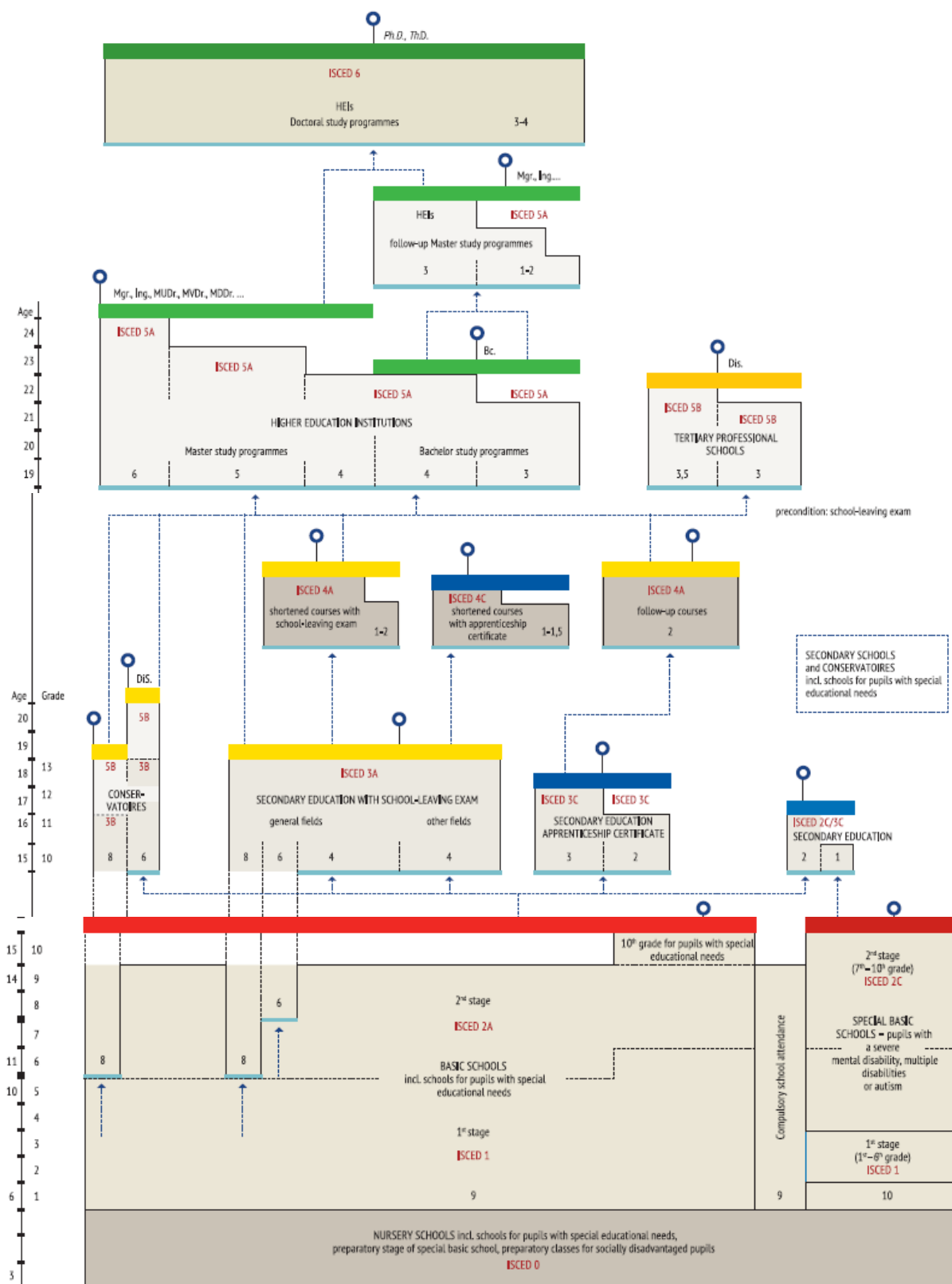
In the Czech Republic public universities receive funds from the state budget towards their running and capital costs. Higher education institutions receive a financial contribution based on the number of students and graduates, the economic costliness of the relevant study programme and certain quality and performance indicators. The Ministry of Education, Youth and Sports is also used to finance public universities through project grants. Part of the budget is allocated to schools on the basis of qualitative criteria. In Germany the public financing arrangements for the education system are the result of decision making processes in the political and administrative system in which the various forms of public spending on education are apportioned between Federation, states (Länder) and local authorities (Kommunen) and according to education policy and objective requirements.

Key words:

tertiary education, educational system, university financing, funding

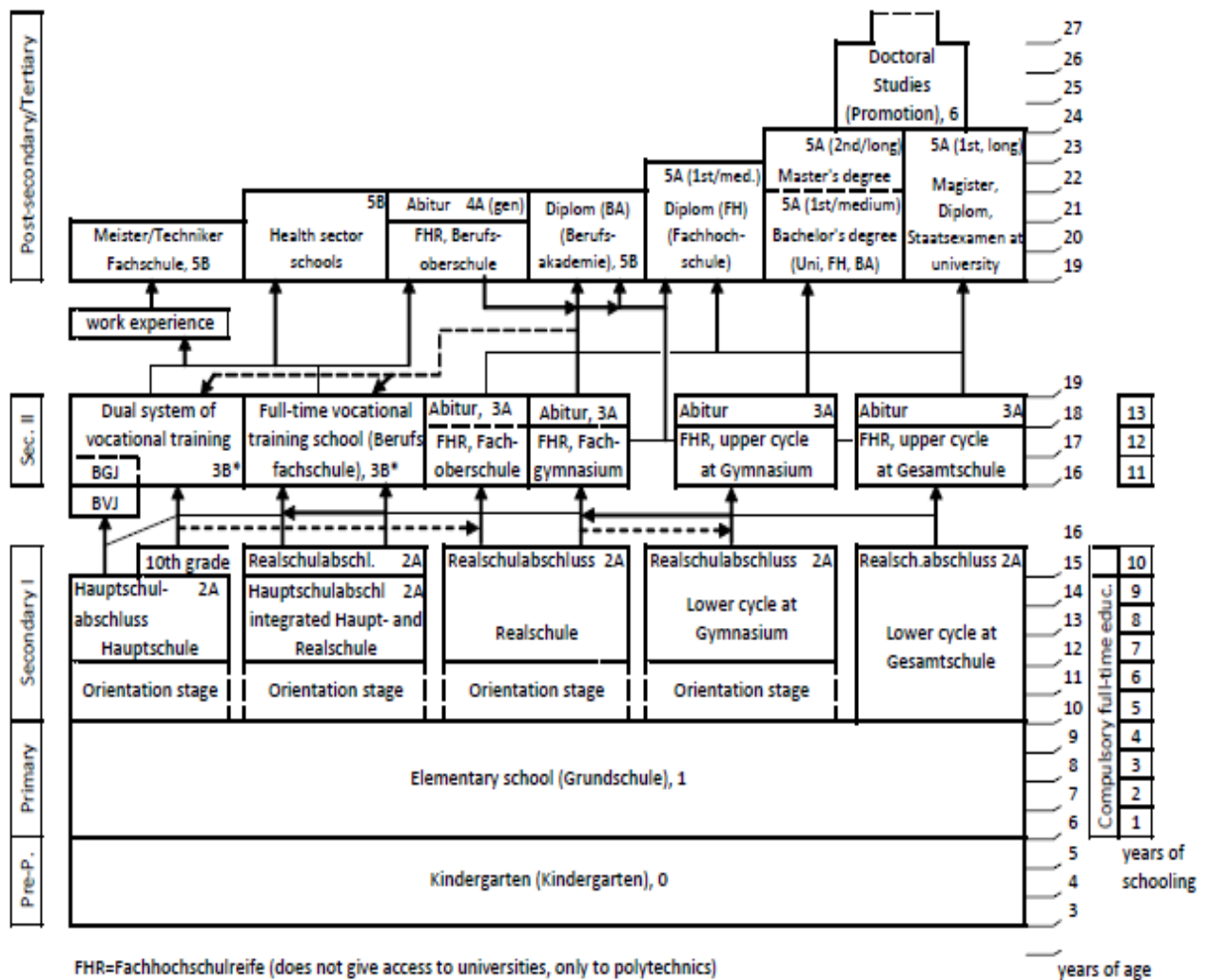
12 ANNEXES

12.1 THE STRUCTURE OF THE EDUCATIONAL SYSTEM IN THE CZECH REPUBLIC



Source: KOUCKÝ, BARTUŠEK, ZELENKA, 2008

12.2 THE STRUCTURE OF THE EDUCATIONAL SYSTEM IN GERMANY



FHR=Fachhochschulreife (does not give access to universities, only to polytechnics)

BVJ=Pre-vocational training year (*Berufsvorbereitungsjahr*)

BGJ=Basic vocational training year; optional first year without a specific employer (*Berufsgrundbildungsjahr*)

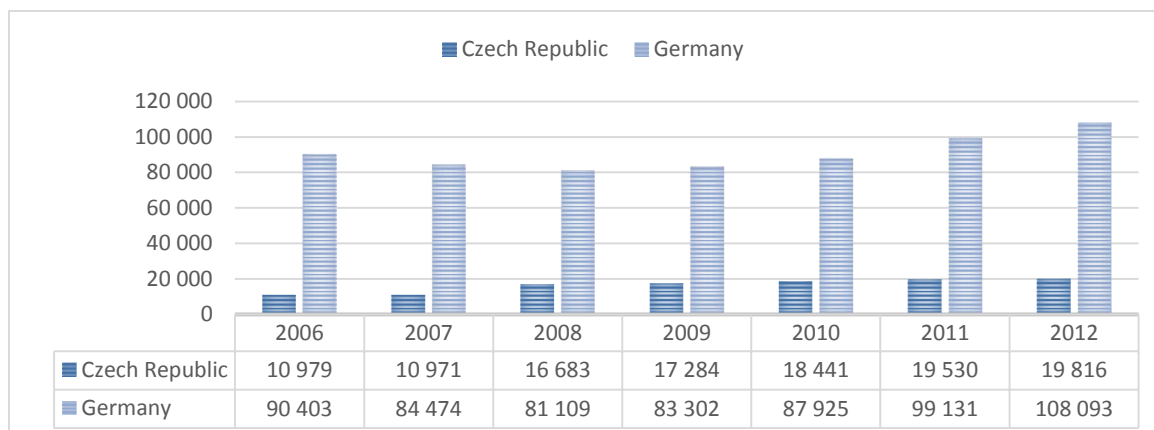
* Classified 4A (voc) if vocational training follows a 3A qualification (*Abitur, Fachhochschulreife*) and 4B if it follows vocational training for a different occupation

Not shown: one-year health sector schools (*einjährige Schulen des Gesundheitswesens*). Their position would be similar to *Berufsfachschule*.

Source: SCHNEIDER, 2007

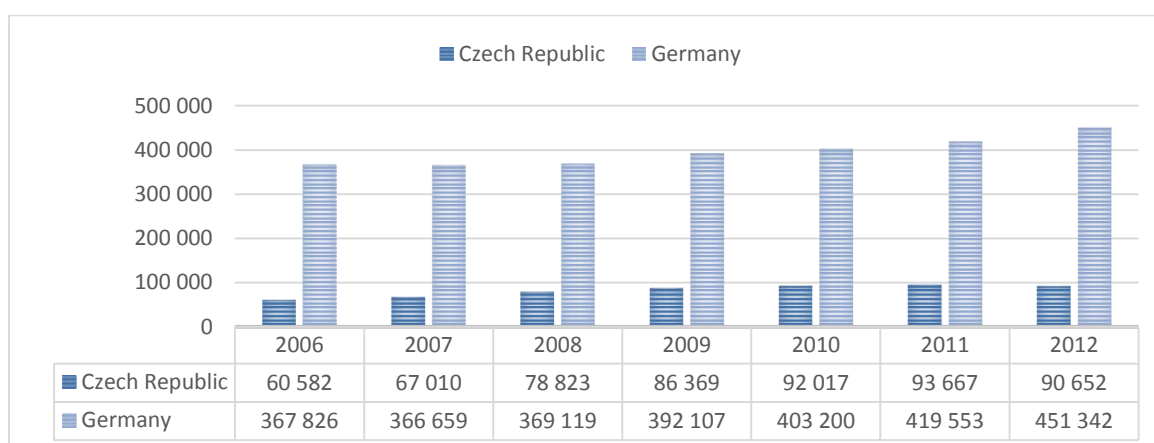
12.3 TERTIARY STUDENTS (ISCED 5-6) BY FIELD OF EDUCATION

Architecture and Building



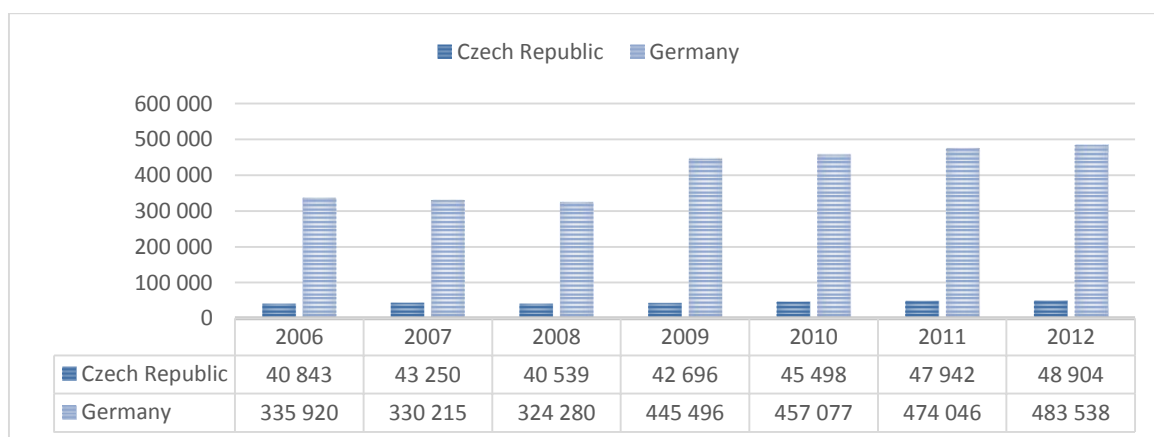
Source: Eurostat, 2014

Business and Administration



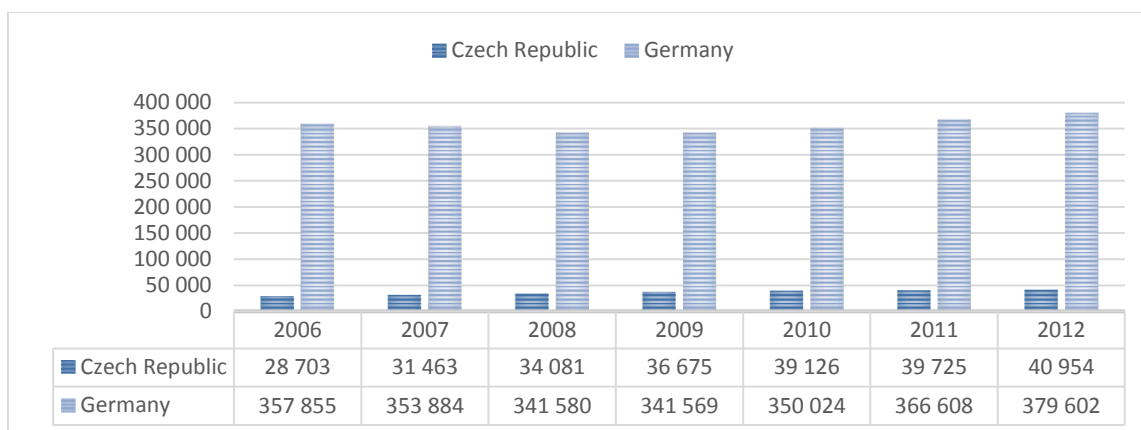
Source: Eurostat, 2014

Health and Welfare



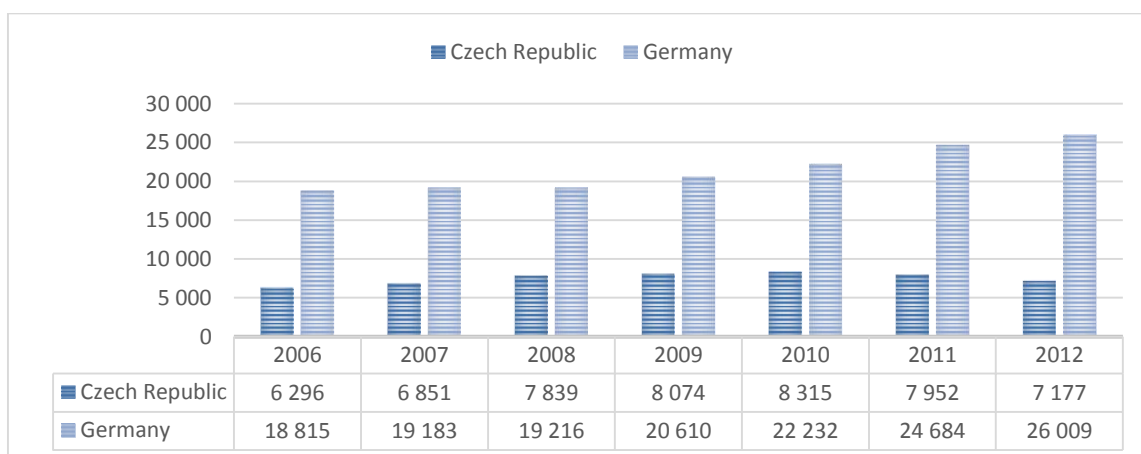
Source: Eurostat, 2014

Humanities and Arts



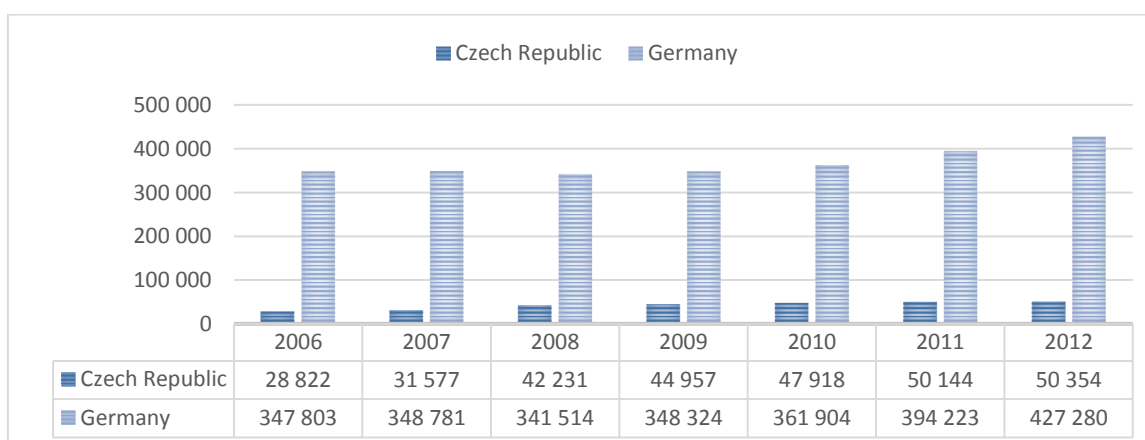
Source: Eurostat, 2014

Manufacturing and Processing



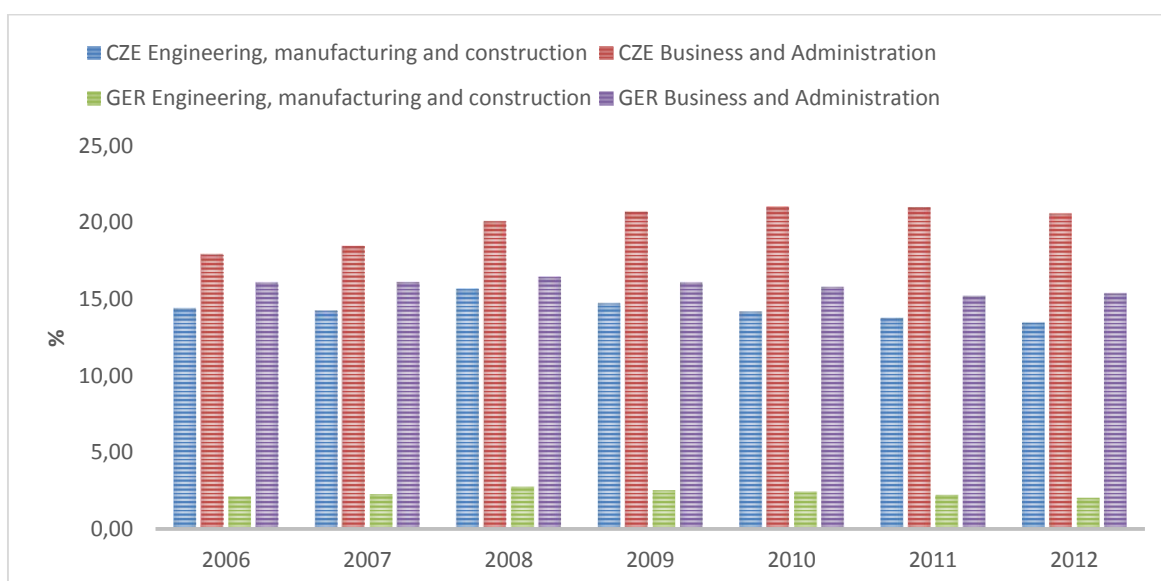
Source: Eurostat, 2014

Science, mathematics and computing



Source: Eurostat, 2014

Tertiary students (ISCED 5-6) in % by total numbers: technical fields compare to business fields.



| % | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|-------|-------|-------|-------|-------|-------|-------|
| CZE Engineering, manufacturing and construction | 14,39 | 14,23 | 15,65 | 14,71 | 14,18 | 13,76 | 13,47 |
| CZE Business and Administration | 17,96 | 18,48 | 20,08 | 20,72 | 21,04 | 20,99 | 20,59 |
| GER Engineering, manufacturing and construction | 2,12 | 2,26 | 2,74 | 2,51 | 2,43 | 2,22 | 2,02 |
| GER Business and Administration | 16,07 | 16,09 | 16,44 | 16,08 | 15,78 | 15,18 | 15,35 |

Source: Eurostat, 2014

12.4 THE BALANCE OF RESOURCES FOR ALLOCATION OF CONTRIBUTIONS AND GRANTS IN 2012 IN THE CZECH REPUBLIC

| Item | 2010 | 2011 | 2012 estimate | % | Item | 2010 | 2011 | 2012 estimate | difference in % |
|----------------------|-----------|--------|---------------|-------|-------------------------------------|-----------|----------|---------------|-----------------|
| Average normative | 34 770 Kč | 33 012 | 30 546 | -7,5% | Scholarship for doctoral studies | 93 380 Kč | 89 429 | 83 041 | -7,1% |
| Nominal normative | 29 554 Kč | 26 428 | 24 437 | -7,5% | Accommodation scholarship/1 student | 6 250 Kč | 5 800 Kč | 5 367 Kč | -7,5% |
| Graduate's normative | 8 690 Kč | 15 254 | x | | Social scholarship/monthly | 1 620 Kč | 1 620 Kč | 1 620 Kč | 0,0% |
| | | | | | Subsidies for 1 meal | 21,25 Kč | 19,40 Kč | 17,95 Kč | -7,5% |

| Contribution | Subsidy | Item | Budget 2010 (+ 800 mil. Kč) | Budget 2011 (+ 1000 mil. Kč) | % share of total (sl. 3) | Annual development (sl. 3 vs 2) | Budget 2012 | % share of total (sl. 6) | Annual development |
|---|---------|---|-----------------------------|------------------------------|--------------------------|---------------------------------|-------------------|--------------------------|--------------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| The budget area I, the normative part of the budget | | | | | | | | | |
| P | | Indicator A+B1 - study programmes | 14 782 615 | 13 288 205 | 64,2% | -10,1% | 12 382 584 | 64,1% | -6,8% |
| P | | Indicator B 2 - study programmes, bonifications for absolvents B,M,N,F | 978 194 | 1 655 202 | 8,0% | 69,2% | x | x | x |
| P | | Indicator K - quality and performance | 1 630 532 | 1 655 202 | 8,0% | 1,5% | 3 095 646 | 16,0% | -6,5% |
| | | Total - normative part | 17 391 341 | 16 598 609 | 80,2% | -4,6% | 15 478 230 | 80,2% | -6,7% |
| The budget area II, the social affairs of students | | | | | | | | | |
| P | | Indicator C - scholarships for students of accredited doctoral study programs | 1 013 279 | 1 054 455 | 5,1% | -4,1% | 998 821 | 5,2% | -5,3% |
| D | | Indicator J - subsidies for student accommodation and meals | 217 770 | 198 340 | 1,0% | -8,9% | 180 629 | 0,9% | -8,9% |
| P | | Indicator S1 - social grants for public universities | 85 909 | 57 248 | 0,3% | -33,4% | 51 000 | 0,3% | -10,9% |
| D | | Indicator S2 - social grants for private universities | 4 172 | 3 255 | 0,0% | -22,0% | 3 038 | 0,0% | -6,7% |
| P | | Indicator U - accommodation scholarships for public universities | 960 361 | 903 679 | 4,4% | -5,9% | 835 310 | 4,3% | -7,6% |
| D | | Indicator U - accommodation scholarships for private universities | 50 146 | 66 622 | 0,3% | 32,9% | 57 282 | 0,3% | -14,0% |
| | | Total - social affairs of students | 2 331 637 | 2 283 599 | 11,0% | -2,1% | 2 126 080 | 11,0% | -6,9% |
| The budget area III, the development of universities | | | | | | | | | |
| D | | Indicator G - educational development projects of the Higher Education De | 334 000 | 319 638 | 1,5% | -4,3% | 287 548 | 1,5% | -10,0% |
| D | | Indicator I - development programs | 1 131 885 | 1 083 213 | 5,2% | -4,3% | 974 734 | 5,0% | -10,0% |
| | | Total - the development of universities | 1 465 885 | 1 402 851 | 6,8% | -4,3% | 1 262 282 | 6,5% | -10,0% |
| The budget area IV, the international cooperation and others | | | | | | | | | |
| | | Indicator D - foreign students accepted in the context of international deve | 311 379 | 310 082 | 1,5% | -0,4% | 292 180 | 1,5% | -5,8% |
| D | In it: | AKCION | 5 000 | 4 500 | 0,0% | -10,0% | 4 500 | 0,0% | 0,0% |
| D | | CEEPUS | 10 000 | 10 000 | 0,0% | 0,0% | 10 000 | 0,1% | 0,0% |
| D | | ERASMUS | 272 797 | 272 000 | 1,3% | -0,3% | 253 883 | 1,3% | -6,7% |
| P | | Sommer schools of Slavic studies | 9 182 | 9 182 | 0,0% | 0,0% | 9 397 | 0,0% | 2,3% |
| P | D | International students (International agreements) | 13 500 | 13 500 | 0,1% | 0,0% | 13 500 | 0,1% | 0,0% |
| D | | Travel reimbursement | 900 | 900 | 0,0% | 0,0% | 900 | 0,0% | 0,0% |
| D | | International development aid | 0 | 0 | 0,0% | | 0 | 0,0% | |
| | | Indicator F - Education policy fund | 100 000 | 81 500 | 0,4% | -18,5% | 150 000 | 0,8% | 84,0% |
| P | D | In it: New public universities (unfunded yet wholly or partly by indicator | 35 000 | 25 000 | 0,1% | -28,6% | 0 | 0,0% | -100,0% |
| | | Support for creative activities | | | | | 40 000 | 0,2% | |
| D | | Private universities | 15 000 | 10 000 | 0,0% | -33,3% | 10 000 | 0,1% | 0,0% |
| | | Univerzita obrany (University of Defence) | 15 000 | 26 000 | 0,1% | 73,3% | 26 000 | 0,1% | 0,0% |
| P | | Interpreting services for deaf | 2 000 | 2 000 | 0,0% | 0,0% | 0 | 0,0% | -100,0% |
| D | | Conclusions of Melk's process to JETE | 0 | 0 | 0,0% | | 0 | 0,0% | |
| P | D | Third age universities (U3V) | 5 000 | 3 500 | 0,0% | -30,0% | 19 000 | 0,1% | |
| P | | The study of students with special needs | 0 | 0 | 0,0% | | 40 000 | 0,2% | |
| P | D | Genofondy - professional experience at agricultural schools or fore | 13 000 | 0 | 0,0% | -100,0% | 0 | 0,0% | |
| P | D | Others | 15 000 | 15 000 | 0,1% | 0,0% | 15 000 | 0,1% | 0,0% |
| P | D | Indicator M - extraordinary tasks and activities | 15 000 | 10 000 | 0,0% | -33,3% | 0 | 0,0% | -100,0% |
| | | Total - the international cooperation and others | 426 379 | 401 582 | 1,9% | -5,8% | 442 180 | 2,3% | 10,1% |
| | | | | | 10 308 772 | | 100,0% | | |
| | | Total contribution + subsidy | 21 615 242 | 20 686 641 | 100,0% | -4,3% | 19 308 772 | 100,0% | -6,7% |
| | | The funds allocated for the purposes of section 4 of co-financing program VaVpl | | -525 733 | | | -450 000 | | |
| | | Budget indicator for universities | 21 615 242 | 20 160 908 | 97,5% | -6,7% | 18 858 772 | 97,7% | -6,5% |
| | | Difference | 0 | 0 | | | | | |

Source: MŠMT, 2014

