UNIVERSITY OF LJUBLJANA FACULTY OF ECONOMICS

DIPLOMA THESIS

## THE BOLOGNA REFORM: CASE OF SLOVENIA

Ljubljana, Avgust 2011

MAJA ČERNEC

#### STATEMENT

I, Maja Černec, hereby certify to be the author of this diploma thesis, that was written under mentorship of prof. Mitja Kovač, Ph.D. In compliance with the Act of Author's and Related Rights – Para 1, Article 21, I hereby agree this thesis to be published on the website pages of the Faculty of Economics, University of Ljubljana, Slovenia.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

# TABLE OF CONTENTS

INTRODUCTION	1
1 THEORETICAL BACKGROUND - HUMAN CAPITAL THEORY	2
2 CHRONOLOGICAL REVIEW OF THE BOLOGNA PROCESS	3
3 BOLOGNA PROCESS: CASE OF SLOVENIA	6
3.1 THE BACKGROUND OF SLOVENIAN HIGHER EDUCATION SYSTEM	7
3.2 SITUATION IN THE SLOVENIAN HIGHER EDUCATION SYSTEM	7
3.3 FINANCING OF THE SLOVENIAN HIGHER EDUCATION SYSTEM	9
3.4 MOVING TOWARDS EUROPEAN HIGHER EDUCATION AREA	11
3.5 ATTAINING THE GOALS OF BOLOGNA REFORM IN SLOVENIA	12
3.5.1 Degree structures	12
3.5.2 European credit transfer and accumulation system (ECTS)	13
3.5.3 Diploma Supplement	13
3.5.4 Quality assurance	13
3.5.5 Mobility	14
3.5.6 Promoting of Slovenian Higher Education Area	14
3.5.7 Lifelong learning	15
3.5.8 Social dimension	15
3.6 SWOT ANALYSIS OF THE BOLOGNA REFORM IN SLOVENIA	15
3.6.1 Strengths	16
3.6.2 Weaknesses	16
3.6.3 Opportunities	18
3.6.4 Threats	
4 TRENDS IN SLOVENIAN LABOUR MARKET AND THE PROBLEM OF	
EMPLOYABILITY OF NEW GRADUATES	19
CONCLUSION	21
POVZETEK	23
REFERENCE LIST	27

# LIST OF FIGURES

8
8
9
10
11
21
-

## **INTRODUCTION**

The story of a single European Higher Education Area dates back to 1999 when the Bologna declaration was signed. The Bologna declaration represents a basis for reformation and modernization of the higher education systems in Europe. Given the geographical dimension of participants in the Bologna Process, it is one of the largest higher education reforms in the history. The aim of the process is to create a common area of higher education till 2010 and to make European higher education more attractive and competitive in a global context.

Vassiliou (2010, pp. 1-2) describes what was Europe's higher education like ten years ago. There were a lot of structural challenges: study duration was uneven, mobility was difficult, too few universities regarded the employability as part of their concern and they were not attractive to students and academic staff from other parts of the world.

Today the European higher education has changed in many aspects. There are 47 signatory countries and they are all focusing on cooperation to create European Higher Education Area. Some countries did not have any major problems with restructuring their higher education systems, while others (including Slovenia) faced a lot of obstacles and failures in implementing the Bologna system until 2010. In Slovenia many problematic issues address actual degradation of students' knowledge and increasing uncertainty about their employability which is completely opposing the Bologna declaration's main goals. Since changes of the Bologna reform directly affect students and future employees, it has a big influence on a labour market and therefore it is important to discuss its problems. The purpose of this thesis is to find out how the new educational system of Bologna reform was carried out in Slovenia and what effects does it have on the current situation of Slovenian higher education area and on the Slovenian labour market.

Bologna reform has been discussed in many literatures but as far as our knowledge goes none of them presented an overall examination of its effects in the case of Slovenia through the SWOT analysis of Bologna reform, combining it with the historical backgrounds of Slovenian labour market and Slovenian higher education system. Many researches have been done focusing only on one specific problematic issue of implementing Bologna reform in Slovenia without giving a clear view to the other factors that also have to be presented in the case of discussing the successfulness of its implementation. With this thesis reader can get a brief idea about the important issues of Bologna Process in general on one hand, and connect them with the implementation in the case of Slovenia, without searching for another literature on the other hand.

The content of this thesis is divided in three main chapters. First the theoretical background of the human capital theory is explained. In the second part the chronological review of the Bologna reform in general is given, while the third part gives an extended overview of the

implementation of Bologna reform in Slovenia, including the historical backgrounds of the labour market and higher education system and the SWOT analysis of the Slovenian Bologna reform.

## **1 THEORETICAL BACKGROUND - HUMAN CAPITAL THEORY**

The foundations of the theory of human capital were built at the beginning of the sixties by Schultz, Mincer and Becker. According to their theory, the idea of human capital refers to the fact that people invest in themselves through education, training and other activities, not only from their own current satisfaction of needs but also because of the potential increase in earnings from work in the future. Schultz (1961, p. 1) divides the entire capital into components of human capital and nonhuman or physical capital. He argues that human capital cannot be purchased on the market, but can only be gained by investing in people (Schultz, 1961, p. 2). Investing in human capital includes investment in education, professional training on the workplace, health, economic information and migration (Schultz, 1961, p. 9).

Human capital is important from two aspects, namely in terms of quantity and quality. With the economic development the importance of the quality of human capital is increasing. The main factor that increases the quality of human capital is education, especially through increasing the knowledge, skills and expertise of the population as a whole or as a part of the workforce. Expenditure on education is a kind of investment in increasing the quality of human capital (Bevc, 1991, p. 22). Belfield (2000, p. 16) says that the human capital model may be regarded for linking education and the labour market. More educated individuals or individuals with more human capital are more productive than the less educated. Thus, their earnings in the labour market are expected to be higher (Becker & Chiswik, 1966, p. 368). Even Adam Smith (1966) wrote that education as part of the human capital impacts the increase in workers' productivity, similar as investment in machinery and equipment increase the income and wealth. A skilled (more educated) worker expects a higher wage than a regular worker for the same work performance, at least to cover the costs of education (Smith, 1966, p. 63). However, if education is to be taken into account it has to pay off in some way, and typically this is through the increased earnings (Belfield, 2000, p. 16). When deciding about the investment in human capital the individual will be weighing between the present value of the costs and benefits of the possible education (Schultz, 1961, p. 8). "Benefits include cultural and other nonmonetary gains along with improvement in earnings and occupations, whereas costs usually depend mainly on the forgone value of the time spent on these investments" (Becker, 1993b, p. 7).

Becker was the first (already in 1964) to introduce the distinction between general human capital and specific human capital, which are the key factors in productivity. General human capital is acquired through the general education, e.g. school, college or university and is useful to all employers. Specific human capital refers to skills or knowledge that is

useful only to a single employer or industry. Economists view firm specific human capital as risky, since the firm's closure or an industry's decline lead to skills that cannot be transferred (Becker, 1993a, pp. 30-40).

The human capital theory can be linked to the idea of restructuring the higher education area in Europe in 1999, when the Bologna declaration was signed. To increase the quality of general human capital, which is acquired through the general education, they have set some main action lines in order to change and improve the European higher education system. The main purposes of the Bologna Process, which are facilitating mobility, increasing employability and strengthen Europe's attractiveness and competitiveness, can be reached by providing individuals with education that can be used in wide range of areas and is easily comparable. This can be reached with standardisation in high education institutions and homogenisation in degrees. Students gain general human capital by enrolling in higher education institutions and with a degree their prospects of possible employment get higher. Becker (1964, p. 3) argues that it is "a fact that human capital is absolutely essential to growth in the modern world". An investment in people and in their human capital is an essential factor for the economic progress. The fundamental ingredient of a country's standard of living is how well it succeeds in utilizing the knowledge, skills and health of its people (Becker, 1964, p. 4). For now it is too early to say if the investments in education during the Bologna Process will pay off in some way and if they will lead to a noticeable economic growth in Europe.

## 2 CHRONOLOGICAL REVIEW OF THE BOLOGNA PROCESS

Higher education is vital for the development and maintenance of a stable economy. In the today's world the processes of globalisation, internationalisation and lifelong learning are causing the expectations of the new educational profiles and a different way of acquiring knowledge (Prispevek študentske organizacije Slovenije k javni razpravi o razvoju visokega šolstva, 2010, p. 2). During the last decade the Bologna Process is being implemented in Europe: a process where ideas of comparability, mobility and transparency are put forward as a means to create the European Higher Education Area (hereafter EHEA) that will facilitate mobility, increase employability and strengthen European competitiveness. The Bologna Process is definitely the greatest educational experiment in the European history. In order to establish and to promote EHEA worldwide, the Bologna declaration was signed by Ministers of Education from 29 European countries in 1999. According to the Bologna declaration (1999) Europe should become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth, with more and better jobs and greater social cohesion by 2010. With the implementation of Bologna Process, the higher education systems in European countries are to be organized in such a way that it is easy to move from one country to another. The EHEA provides Europe with a broad, high-quality advanced knowledge base, and ensures the further development of Europe as a stable, peaceful and tolerant community benefiting from a cutting-edge European Research Area (Council of Europe, n.d.).

The cornerstone of the evolution of higher education institutions was set in 1988, when Rectors of European Universities gathered in Bologna for the ninth anniversary of the oldest universities in Europe. They came together to sign the **Magna Charta Universitatum**, otherwise known as the Great University Charter. They set some fundamental values of the university: academic freedom, the freedom to teach and to learn, and with it, university autonomy (Magna Charta Universitatum, 1988).

The next step towards the Bologna declaration was the **Lisbon Convention** on the Recognition of Qualifications concerning Higher Education in the European Region in 1997. The signatories acknowledged that the right to education is a fundamental human right. Higher education also helps to acquire high quality knowledge. Due to the political, cultural and economic differences between nations it is necessary to enable education for students and other professionals also in other countries. The key aspects for these processes are fairness of the recognition of qualifications and institutional autonomy (Lisbon Convention, 1997).

On the Sorbonne Joint Declaration on harmonisation of the architecture on European higher education system in 1998 Ministers recognised that Europe is not only Europe of banks and economy, but also Europe of knowledge. The intellectual, cultural, social and technical dimensions need to be strengthened. The university plays the most important role in their development. With a system, in which two main cycles, undergraduate (bachelor degree) and graduate (master and doctoral degree), should be recognized for international comparison and equivalence. Much of the originality and flexibility in this system will be achieved through the use of credits (such as in the ECTS scheme) and semesters. With this system the students, teaching and research staff would be encouraged to spend at least one semester in universities outside their own country. The main aim of this declaration is to improve external recognition and to facilitate the mobility of students and teachers in the European area and their integration into the European labour market. The initiative was taken outside the EU framework, however by four central EU-members. With the Sorbonne declaration the awareness of the new education system has increased and confirmed the ideas and conclusions that were reached in Lisbon. This was also the most significant introduction to the Bologna declaration (Sorbone Declaration, 1998).

**The Bologna Declaration on the European Higher Education Area** was signed in June 1999 by 29 European countries. "This Declaration became the primary document used by the signatory countries to establish the general framework for the modernisation and reformation of European higher education. The process of reform came to be called the Bologna process" (Focus on Higher Education in Europe 2010, p. 12). The objective of the Bologna declaration is to increase the international competitiveness of the European

system of higher education and to ensure that this system attracts significant attention from all around the world (The first decade of working on the European Higher Education Area, n.d., p. 5). European higher education institutions have accepted the challenge and taken up a main role in constructing EHEA. With the Bologna declaration they set the main objectives in order to establish the EHEA and to promote the European system of higher education world-wide, which are written in the Bologna declaration (1999, pp. 3-4):

• Adoption of a system of **easily readable and comparable degrees**, also through the implementation of the **Diploma Supplement**.

• Adoption of a system essentially based on **two main cycles**, undergraduate and graduate. The second cycle should lead to the master and/or doctorate degree as in many European countries.

- Establishment of a system of credits such as in the ECTS system.
- Promotion of **mobility** for students, teachers, researchers and administrative staff.
- Promotion of **European cooperation in quality assurance**.
- Promotion of the **necessary European dimensions in higher education**.

After the meeting in 1999 there have been follow-up meetings every two years in order to review the progress of the Bologna Process. Two years after signing the Bologna declaration ministers met in Prague (**Prague Communiqué**) in order to review the progress achieved and to set directions and priorities for the coming years of the Bologna Process. Furthermore new action lines were emphasized (Prague Communiqué, 2001, pp. 2-3):

#### • Lifelong learning

• **Involvement** of higher education institutions and students

• **Promoting the attractiveness of the EHEA** to students from Europe and other parts of the world

In the **Berlin Communiqué** the ministers defined a new objective to the Bologna Process (Berlin Communiqué, 2003, p. 7):

• Including **doctoral studies** as the third cycle in the Bologna Process and the synergy between the EHEA and The European Research Area.

For a mid-term review and for setting goals and priorities towards 2010 ministers met in Bergen. At this time the Bologna Process extended to 45 signatory countries. There were no action lines added in the **Bergen Communiqué**, but the document repeated and strengthened the importance of higher education as a public responsibility. As they moved closer to 2010, they undertook to ensure that higher education institutions enjoy the necessary autonomy to implement the agreed reforms, and they recognized the need for sustainable funding of institutions. According to Bergen Communiqué (2005, p. 2) "there is a need for greater dialogue, involving Governments, institutions and social partners, to increase the employability of graduates with bachelor qualifications, including in appropriate posts within the public service". At this point the ministers also charged the Follow-up Group with presenting comparable data on the mobility of staff and students as well as on the social and economic situation of students in participating countries as a basis for future stocktaking and reporting in time for the next Ministerial Conference (Bergen Communiqué, 2005, p. 5).

In the **London Communiqué** the ministers welcomed the creation of the European Quality Assurance Register (EQAR). They recognized the need to improve the availability of data on both mobility and the social dimension across all the countries participating in the Bologna Process (London Communiqué, 2007).

In the **Leuven Communiqué** the ministers acknowledged that the EHEA is not yet a reality and they established the priorities for the decade until the year 2020. They agreed that each country should set measurable targets to expand joint cooperation and to increase participation of under-represented social groups in higher education by the end of the next decade; by 2020 at least 20% of those graduating in the EHEA should have had an experience of studies or training abroad; lifelong learning and employability are important tasks of higher education, student-centered learning should be the objective of the course curriculum reform (Leuven Communiqué, 2009).

The last follow up meeting was in 2010 in **Budapest and Vienna** to launch the EHEA, as provided in the Bologna declaration of 1999. "The Bologna Declaration in 1999 set out a vision for 2010 of an internationally competitive and attractive European Higher Education Area where higher education institutions, supported by strongly committed staff, can fulfil their diverse missions in the knowledge society; and where students benefiting from mobility with smooth and fair recognition of their qualifications, can find the best suited educational pathways" (Budapest-Vienna Declaration, 2010, p. 1). The number of signatories expanded from 29 in 1999 to 47 countries in 2010. The institutions have engaged in a series of reforms to build an EHEA based on trust, cooperation and respect for the diversity of cultures, languages, and higher education systems (Budapest-Vienna Declaration, 2010). The ministers committed themselves to a proper implementation of the agreed objectives for the next decade. They asked the Bologna Follow-up Group to propose measures to facilitate the proper and full implementation of the agreed Bologna principles and action lines across the EHEA, especially at the national and institutional levels, among others by developing additional working methods, such as peer learning, study visits and other information sharing activities. The next Ministerial Meeting will be hosted by Romania in Bucharest on 26-27 April 2012 in order to review the progress of implementing Bologna system (Budapest-Vienna Declaration, 2010, p. 2).

## **3 BOLOGNA PROCESS: CASE OF SLOVENIA**

In this part of the thesis the process of implementation of the Bologna reform in Slovenia will be presented into details. First the historical background of Slovenian higher education system will be discussed, followed by the current situation and financing of the Slovenian higher education system. In chapter 3.5 the specific goals of the Bologna reform will be presented, with special interest to Slovenia. This chapter will be concluded with a SWOT analysis of the Bologna reform in Slovenia.

#### 3.1 THE BACKGROUND OF SLOVENIAN HIGHER EDUCATION SYSTEM

At the end of the eighties the central planned economic system in Middle and Eastern Europe has been dismantled. Untenable over-industrialised socialist countries, including Socialist Federal Republic of Yugoslavia, under the rough political leadership and pressures of people struggling for democracy and liberalisation, led to the transition period towards a completely new market-economy approach. The establishment of the new system focused on three main dimensions: enterprise, private property rights and decentralised decision-making. The emancipation of Slovenia in 1991 raised a great deal of opportunities to become a well developed and competitive market. Joining the European Union in 2004, after thirteen years of rapidly growing and stabilising period, has lead Slovenia to a completely new world, world of globalisation and interdependence. Besides affecting the national economy, changing transition period had a great impact also on the reformation of Slovenian higher educational system. The post-industrial era has exposed the value of knowledge and education as one of the main competences in order to be progressive and successful. Following the requirements of the new knowledge-based environment, the role of university has changed. It became an autonomic institution, independent of all political power and economic forces (Prunk, 1996; Setnikar Cankar, 2008).

#### **3.2 SITUATION IN THE SLOVENIAN HIGHER EDUCATION SYSTEM**

The current structure of Slovenian higher education is as following (Resolucija o nacionalnem programu visokega šolstva Republike Slovenije, (hereafter ReNPVS), 2007-2010): the institutional framework includes 4 universities and 19 private self-supporting higher education institutions. University of Ljubljana includes 26 members (22 faculties, 3 artistic academies and one higher school), University of Maribor 17, University of Primorska 9 and University of Nova Gorica up to 6 members. With an increasing demand for high educated labour force also the number of students rapidly increased. Figure 1 shows that compared to the year 1997, while the total number of participants in the tertiary education in Slovenia was 68.126, the number of students has increased by 68% in 2008. One might argue that an increase of participation in tertiary education was due to the increase of the population.

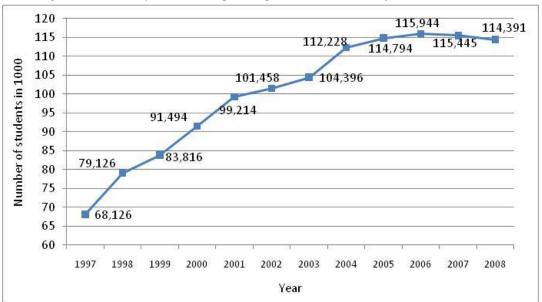


Figure 1: Tertiary education participation in Slovenia from 1997 – 2008.

Source: Students in tertiary education by type of education and mode of study, Slovenia, annually, 2010.

By observing the Figure 2, that shows the dynamics in the number of population aged between 19 and 24 it can be evidenced that there was an absolute decrease in the population between 1999- 2008. The number of people in generation 19-24 decreased by 9% in the observing period, while the number of students in tertiary education aged between 19 and 24 increased. In year 1999 there were 60.053 students enrolled in tertiary education and this number increased to 75.826 in year 2008. The result of this demographic change was a relative increase in a tertiary education participation of a specific age group – from 19 to 24 years – as a percentage of the whole population in that age.

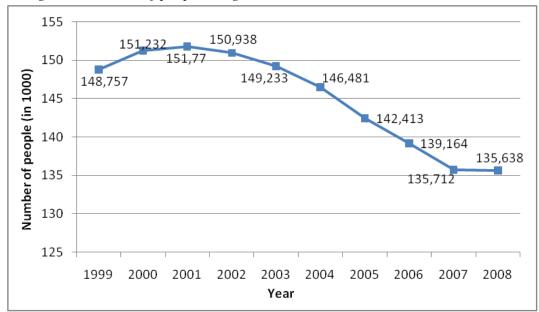
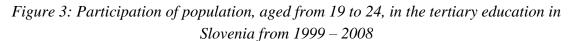
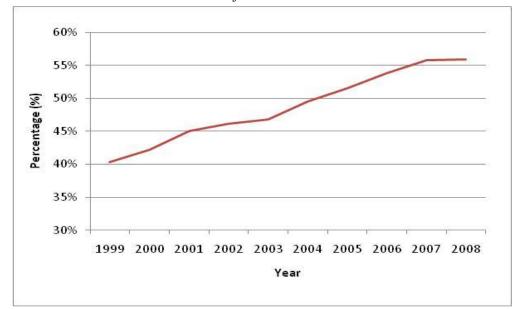


Figure 2: Number of people in age 19-24 in Slovenia between 1999 and 2008

Source: Population by large and 5 year age groups and sex, statistical regions, Slovenia, Half yearly, 2010.

On the other hand Figure 3 shows that the percentage of the population aged from 19-24 in years 1999-2008 included in the tertiary education increased and has reached more than 50% of the whole population.





Source: Students in tertiary education by sex and age, Slovenia, annually, 2010.

#### 3.3 FINANCING OF THE SLOVENIAN HIGHER EDUCATION SYSTEM

Since the emancipation in 1991 Slovenia has been lagging behind the most developed countries in the field of higher education and has financially neglected it. A large increase in the number of students, the continuous decrease of funding for the tertiary education, a large student/teacher ratio and very weak quality assurance mechanisms are the most important issues, reflecting the current situation in Slovenian higher education system. Figure 4 shows that Slovenia has been mainly investing educational funds in the development of primary and secondary education, while the share of the expenditures invested in the tertiary education represents less than a third of the total public expenditures distributed for the formal education.

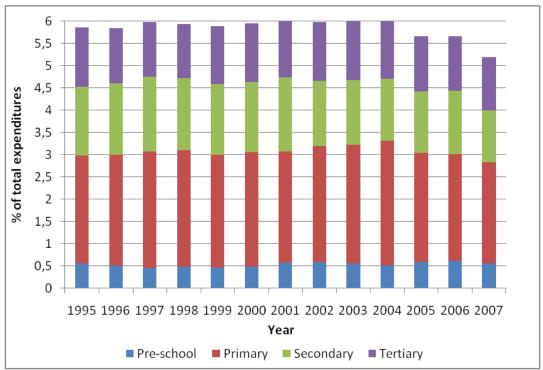


Figure 4: Share of total public expenditure for formal education as a % of GDP by level of education

Source: Statistical Yearbook of the Republic of Slovenia 2008, table 6.3.2.; 2010, table 6.28.

Three problematic issues that are denoting Slovenian higher educational system should be emphasised at this point:

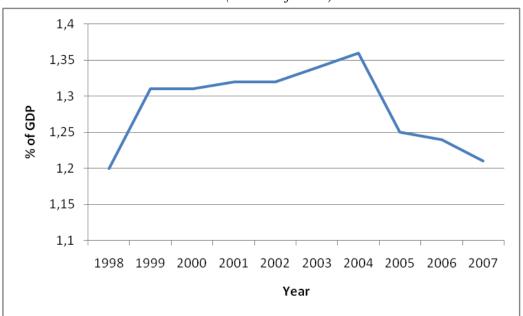
• The number of the participants in tertiary education is relatively *increasing* (due to the increasing importance of knowledge as a main competence in a new era), while the share of the GDP earmarked for the tertiary education is relatively *decreasing*.

• Most of the public expenditures for education are distributed for financing primary education. It is important to assure a quality primary knowledge, but not by impairing the investment in the human capital of tertiary education with the largest developing potential in the future. Figure 4 shows that relatively small percentage of the total public expenditure for the formal education goes for the tertiary education (around 20% of the total expenditures or 1,2% of GDP).

• Since 2000, when Slovenian universities started reforming study programs in consideration of the Bologna reform, the expenses for tertiary education have rapidly increased. The second/master degree in the new educational system of Bologna reform was practically equalized with the bachelor degree of an old university system. It led to at least one year longer period of studying (for the same degree as before student will now have to study for 5 years instead of 4), which is consequently increasing the costs of the study. Besides that the new Bologna approach requires lowering the student/teacher ratio, increasing the academics' research activities and tends to implement a more interactive way of work. There is no exact data collected to measure the increase in expenses but the previsions of Bologna reform are ranging between 15% of increase for naturalistic and

technical faculties and even up to 40% of increase in costs for sociological faculties (Marn, 2008, pp. 10-11). It would not have been a problem if the government assured relatively more funds to cover the rising costs of new Bologna system. But the Figure 5 shows that the shares of the total public expenditures for tertiary education in Slovenia are relatively decreasing since 2004.

Figure 5: Share of total public expenditure for tertiary education in Slovenia from 1998 - 2007 (as a % of GDP)



Source: Statistical Yearbook of the Republic of Slovenia 2008, table 6.3.2.; 2010, table 6.28.

#### 3.4 MOVING TOWARDS EUROPEAN HIGHER EDUCATION AREA

Globalisation, very strong market competition and an increased tendency towards the knowledge based society required the reformation of existing Slovenian educational approach, especially in the field of tertiary education. Merely the knowledge is not enough for the successful progress. Three other aspects have to be emphasised while describing the importance of education (ReNPVS, 2007-2010):

• To assure the development of generic competences, this is the basis for the continuing education and for a higher employability.

• To tender an opportunity for lifelong learning and for the improvement of expert knowledge.

• To encourage students to acquire new educational competences even after finishing their degree, every time it is needed in their careers.

The Slovenian higher education situation over the current decade has been denoted by signing two important documents: Lisbon Strategy and the Bologna declaration. Following the main principles of the two strategies, Slovenia has been planning to become a part of the most competitive, dynamic and knowledge based economies in the world, with the full-

time employment including the formation of a common higher education area. On one hand, regarding the Bologna directives, it is necessary to assure the quality programs that will satisfy the Slovenian labour market needs. On the other hand it is important to increase the number of teachers in the higher education institutions that will improve the quality of reformed programs and enabled interactive academic work, focused on the student and working in smaller teaching groups. The main goal of all higher education institutions should not only be focused on presenting the theoretical basis to students, but also to encourage them for innovative and interactive learning accompanied with analysing the real world practices and experimental work (ReNPVS, 2007-2010). All the described improvements are connected with a need for higher investment in the research infrastructure, information sources and in development of competences for new graduates. Thus this shows greater investment in education, which will, according to the human capital theory, lead to increase in general human capital. Becker (1964, p. 3) argued that the investments in people and their human capital are an essential factor for economic growth. Essentially, improvements in education will lead to a more developed country.

#### 3.5 ATTAINING THE GOALS OF BOLOGNA REFORM IN SLOVENIA

Throughout the Bologna Process various goals were set and the participants of the Bologna reform were acquainted with different tools, which help them by achieving these goals. In the next part of the thesis some important areas of attaining the goals of Bologna reform are presented.

#### **3.5.1 Degree structures**

Most institutions in the EHEA have now in place the three-cycle degree structure in most academic fields. Considering the fact that since 2003 13 new countries joined the Bologna Process there has been a significant increase in the number of institutions, which implemented the new structure: from 53% of institutions in 2003 to 95% in 2010 (Trends 2010: A decade of change in European Higher Education Area, 2010, p. 7). Student's Organization of Slovenia notices in the daily practice several obstacles, resulting in the current structure of the Bologna study, which in Slovenia is not uniform. They have several different systems, which prevent horizontal and/or vertical transitions to other faculties. The programs are currently being formed by two different keys for the first and second Bologna degree, the form of 3 + 2 + 3 and 4 + 1 + 3. Some faculties also have a 5 + 0 + 3 structure, where the graduate goes directly to the master degree. All these different structures are causing unnecessary confusion. They prevent comparability, create difficulties in the recognition of qualifications and studies and hinder the transition of studies from one discipline to others (Prispevek Študentske organizacije Slovenije k javni razpravi o razvoju visokega šolstva, 2010, p. 4).

#### **3.5.2 European credit transfer and accumulation system (ECTS)**

The adoption of the Bologna Process has radically changed the Slovenian higher education area. One of the key changes related to the reform was the implementation of European credit transfer and accumulation system (hereafter ECTS). ECTS is today used as a tool for the Bologna Process as part of the curriculum design (The first decade of working on the European Higher Education Area, n.d., p. 7). However, this European credit system was developed long before Bologna declaration. It was used at the end of the 1980 to facilitate credit transfer in the Erasmus program and thus to promote students` mobility. It was only with the introduction of the Bologna reform that ECTS was further developed as a credit accumulation system at the national level and gradually mainstreamed as a generalised credit system for the EHEA (Focus on Higher Education in Europe 2010, p. 49). Credit points are based on the time that students invest in the studying, both organized university forms, as well as the home studies. The duration of the first (bachelor) level is defined with 180 ECTS if it is 3 years long (or with 240 ECTS if it is 4 years long), the master degree with 60/120 and doctoral degree with 180 ECTS. The course programs should be adjusted on the actual load of work of students based on ECTS. With this they could efficiently implement the new ECTS system (Prispevek Študentske organizacije Slovenije k javni razpravi o razvoju visokega šolstva, 2010, p. 26). Problems still occur in relation to the recognition of credits by the 'home' institution at the end of the period spent by a student at another institution abroad, thus hampering mobility and greater cooperation within Europe (Trends 2010: A decade of change in EHEA, 2010, p. 55).

#### 3.5.3 Diploma Supplement

The Diploma Supplement (hereafter DS), the second important Bologna 'tool', was developed with the intention of facilitating mobility through recognition. It is a standardised template, which contains a description of the nature, level, context, content and status of studies completed by an individual noted on the original diploma (Focus on Higher Education in Europe 2010, p. 21). The goal of the DS is to increase transparency of education acquired for the purposes of securing employment and facilitating academic recognition for further studies and to improve understanding of knowledge, skills and competences acquired by the student (Berlin Communiqué, 2003, p. 5). In Slovenia the DS is issued to all the students, free of charge, in the language of instruction and/or more official EU languages (Focus on Higher Education in Europe 2010, p. 135).

#### 3.5.4 Quality assurance

Slovenia is not a member of Quality Assurance Agency of the European Association for Quality Assurance in Higher Education (ENQA). Since March 2010 Slovenian Quality Assurance Agency in Higher Education (SQAA) is being in the process of establishment but is not functioning yet (Focus on Higher Education in Europe 2010, p. 135).

#### **3.5.5 Mobility**

Several European Commission programs support mobility, including the Erasmus mobility program within the EU, Tempus Program for funding within certain European but not EU members, as well as Erasmus Mundus for mobility outside of Europe. Leuven Communiqué (2009, p. 4) describes the importance of mobility and sets a benchmark figure of 20% by 2020. In order to develop the common studying programs (i.e. Jointdegrees) it is necessary to encourage mobility of students. Unfortunately the mobility of Slovenian students is still very low. According to the researches, made by Evroštudent SI (Ekonomski in socialni položaj ter mednarodna mobilnost študentov v Sloveniji, 2007, Figure 53), only 12,4% of students had an experience in any kind of foreign students` exchanges. The main reasons for this low participation are following: problems of financing, not enough of promotion and encouragement by academics and universities, disability to ratify students' credit points acquired abroad etc. By implementing Bologna Process the situation is expected to improve. 19% of students in year 2007 planned to go on exchange in the next years. The research Evroštudent SI 2010 (Ekonomski, socialni, bivalni položaj in mednarodna mobilnost študentov v Sloveniji, 2010, p. 46) does not show any improvements in mobility. The majority of students 74,8% still does not think about studying abroad, 17,6 % of students are planning to go on exchange in future and only 7,6% of students realised a study period abroad. Also in Slovenia the number of foreign students is increasing. According to the Institute of Macroeconomic Analysis and Development there was a 127% increase in the number of foreign students in Slovenia between 2000 and 2008. However, this number may be misleading, because the share of foreign students in Slovenia is very small. In year 2000 the share of foreign students in Slovenia was 0.9% of all students and in year 2009 the same share was 1,7%. The reason for the small participation in tertiary education of foreign students in Slovenia can be a limited supply of English taught study programs. The majority of the foreign students come from Croatia, Bosnia and Herzegovina, Serbia and Monte Negro (Crnović, 2010). For the Slovenian students most attractive mobility destinations are Western Balkans and Euro-Mediterranean Regions (Focus on Higher Education in Europe 2010, p. 135).

#### 3.5.6 Promoting of Slovenian Higher Education Area

According to the Academic Ranking of World Universities 2005 University of Ljubljana is the top ranking university of Slovenia. One of the biggest faculties of University of Ljubljana has achieved two important international accreditations. "The Faculty of Economics University of Ljubljana joined an elite group of institutions that have achieved business accreditation from AACSB International. Only 593 schools of business, or less than 5% worldwide, have earned this distinguished hallmark of excellence in management education. Moreover, combined with EQUIS accreditation, we are ranked among 45 best business schools"(About FELU, n.d.). But the problem is that only this faculty is investing in the international promotion and accreditation. In order to promote Slovenian higher education institutions and to attract foreign students it is necessary to increase the incentive to reach that kind of international accreditations for all the faculties in Slovenian universities.

#### 3.5.7 Lifelong learning

The main lifelong learning activities are: professional development courses for those in employment, continuing education for adults, distance learning, special support and counselling services for lifelong learning students, pre-bachelor preparatory courses, courses for senior citizens, bridging courses to Master's level etc. (Trends 2010: A decade of change in EHEA, 2010, p. 68). More than 25% of young generation aged above 15 in EU-15 have finished at least secondary school. In Slovenia this share is only 18%. According to lifelong learning it is necessary to include adults back to the studying process again. In that sense the establishment of new studying programs that will enable the return of adults (employed/unemployed, active/inactive) back into the secondary and tertiary education is needed (ReNPVS, 2007-2010).

#### 3.5.8 Social dimension

There are differences between the countries participating in creation the EHEA in relation to the social dimension of higher education. So it was not appropriate to narrowly define the social dimension or to suggest a number of detailed actions for all countries to implement (Focus on Higher Education in Europe 2010, p. 28). Instead, Working Group on Social Dimension recommended that each country develops its own strategy, including an action plan, for the social dimension (Bologna Process 2007-2009). The main categories of students monitored as a part of the social dimension policy in Slovenia are gender, students from underdeveloped regions, Roma students and students with special needs (Focus on Higher Education in Europe 2010, p. 135). Nowadays in Slovenia, the most decisive factor for being able to access studies is the financial ability of the student. For a successful completion of studies, certain conditions, which offer the student a stable environment, must be provided. In Slovenia the forms of support to create the suitable living conditions for a student are treated as students' housing, scholarships, subsidized student's nutrition, co-financed public transport and health insurance. A big role in covering the educational costs and providing financial independence to students also plays the student's work, which is currently under a legislation change (Prispevek Študentske organizacije Slovenije k javni razpravi o razvoju visokega šolstva, 2010).

#### **3.6 SWOT ANALYSIS OF THE BOLOGNA REFORM IN SLOVENIA**

By signing the Bologna declaration in 1999 Slovenia has committed itself to reform its higher education system and to adopt the study programs of the tertiary education. Since 2005, while higher education institutions started implementing the new Bologna university programs, Slovenia has put a lot of effort in fulfilling goals of the new higher education reform. In the following chapter the SWOT analysis on the current situation of Slovenian

higher education system, regarding Bologna reform, will be presented. It includes Strengths and Weaknesses on one hand as well as Opportunities and Threats on the other hand. Most of the chapter is based on ReNPVS (2007-2010), unless written differently.

## 3.6.1 Strengths

- High and an increasing share of participation in tertiary education of population in the age 19 24 (see chapter 3.2).
- An aspiration of society and of the Republic of Slovenia for an increasing investment into the tertiary education.
- Tendency towards globalisation of higher education area.
- Students have a good command of at least one foreign language. 98% of all the Slovenian students in 2007 have at least the basic knowledge of the first foreign language English, and 80% of all the students can operate with the knowledge of their second foreign language German (Ekonomski in socialni položaj ter mednarodna mobilnost študentov v Sloveniji, 2007, Figure 51).
- A great interest of students in reforming existing programs to more qualitative Bologna programs.
- Excellent international research and development achievements of students such as acquiring the international awards for innovation and development.
- High level of women participating in higher education and finishing the university degrees. Between years 1999 and 2010, there were more than 50% of all students women enrolled in tertiary education. (SURS, Students in tertiary education by sex and age, n.d.).
- An existing social secure network for students (subsidized food, scholarships etc.)
- Small geographic distances to reach the higher education institutions.
- Participation of Slovenia in Central European Exchange Program for University Studies (hereafter CEEPUS) in order to increase students' mobility.

## 3.6.2 Weaknesses

- The duration of the studying process is too long. An average duration of studying process in Slovenia in 2007 was 6,9 years (Ekonomski in socialni položaj ter mednarodna mobilnost študentov v Sloveniji, 2007, Figure 12). One of the reasons for this situation is the lack of sufficient control in student's position proceedings.
- Insufficient structure of the study programs, inadequate textbooks and study material. A little of them are translated in English which has a negative impact on attracting foreign students to come to study in Slovenia.
- High students-to-teachers ratio. It lowers the quality of the studying process. Students are arranged in large teaching groups and consequently there is a little direct interaction between the student and the teacher. Teachers have to supervise too many students and that limits their participation in research and development activities. The reformation of the studying process should focus on the individual student's work and on smaller teaching groups. The course content is supposed to be transformed from theoretical memorizing to the problem solving approach. Officially that kind of work is being established. But the actors of implementing the Bologna reform in Slovenia do not take

into account that the concept of reforming the studying process is based on the British concept of the 3 years long study, where there is enough of well educated teachers to cover very small students groups. Frequently the number of students per teacher is used as a measure of quality of pedagogical process, where a lower ratio (lower number of students per teacher) implies higher quality of the teaching process. The ratio of students to teaching staff in Slovenia is higher than in most of the European countries. The last available international data show that the ratio totalled 21,7 in 2008 which was notably behind the average of the EU-19, where the ratio was 15,3 (Institute of Macroeconomic Analysis and Development, 2009, pp. 100-101).

- Slovenian universities are not enough internationally recognized to encourage the mobility of students sufficiently (See chapter 3.5.6).
- Insufficient distribution of the students and graduates to the field of study comparing to the current labour market needs. Most of the students and out-coming graduates are included in social science, business administration and law. According to the statistical data 47,1% of all students in Slovenia in 2004 graduated from social science, business administration and law. To clarify the picture even more, the ratio between students graduated in the social science and students graduated in the natural and technical science in 2004 was on average 2,5 for Slovenia and 1,2 for European Union (ReNPVS, 2007-2010). The problem of the insufficient studying field distribution is reflecting also in the fact that there are too many overqualified people in the Slovenian labour market regarding the fields of social science, business administration and law. One might argue that this situation may lead to problems of finding their first job. In chapter 5 the situation of employability of new graduates in Slovenia is presented into details.
- Standardisation instead of higher quality. Dr. Jože Mencinger (in Pirc, 2008) acknowledges that the reform is changing the universities into companies that produce standardized human capital, to reduce the work force market risks. Most of the programs in Slovenian universities only changed the formal structure of the courses in the direction of higher demand for elective courses, changing the names of the courses and requiring more home students' work, without concentrating in changing their quality and the complete structure. Dr. Pavel Zgaga (in Kocbek, 2009) said that the Slovenian Bologna reform is being held especially as a formal reform. It is focusing on transforming university programs into 3 + 2 or 4 + 1 formula, but the content matters are being neglected. The Bologna reform transformed an old system of 4 years bachelor program and 1 year of scientific master program into 3 years of bachelor and 2 years of master (one variation is also 4 + 1 or 5 + 0). It supposed to shorten the studying process and to encourage students to start working on practical knowledge earlier. But the problem is that the master degree, reached according to the new Bologna system, has practically been equalised with the bachelor degree of an old system (both represent the seventh educational level). It means that for acquiring the same formal degree as before it is now required to study one year more (European Commission, Education & Training, n.d.).

- Problem of financing the Bologna reform (see chapter 3.3)
- Problems of measuring the quality of higher education system (the Quality assurance agency of Slovenia is not functioning yet). The quality of higher education system in Slovenia is based on 4 pillars: self-evaluation, external evaluation, accreditation and improvement according to the current situation. Accreditation and quality evaluation are made by the government agency Council of Republic of Slovenia for Higher Education and the National Commission for Quality Assurance. Taking all four dimensions into account Slovenia is comparable with EU only in the case of self-evaluation but there is no agency to assure an external control of the quality of higher education. In that sense the Quality assurance agency, independent from the regulatory and university institutions, which would assure unbiased, transparent and international comparative evaluation of quality, should be established (Študenti podprli čim prejšnjo ustanovitev Agencije za zagotavljanje kakovosti v visokem šolstvu, 2009)
- Brain drain problem. Slovenian researchers and high educated workers leave the country due to: better chances of employment abroad, extended research opportunities, higher standards and higher wages, etc. The most favourable countries: USA, Germany, Great Britain, Austria, Italy, France.

## **3.6.3 Opportunities**

- The formation of new study programs.
- Supporting current universities and programs to develop and innovate.
- To attract the private capital investments in the tertiary education sector.
- To create better conditions for researchers and high educated workers in order to lower the brain drain problem and to improve the quality of pedagogues.
- To attract more foreign students and to increase mobility of students and teachers.
- To include researchers from national economy, universities and public Research and Development (R&D) institutions in the common research area for Slovenian higher education.
- To assure new working opportunities for young researchers to work in researchapplicable-innovation fields of economy.
- To increase the number of women with the highest level of education in higher management of pedagogic institutions.
- An opportunity to establish a new university for natural and technical science.
- To strengthen the involvement of students organisations in improvement of study programs.
- To develop new interdisciplinary studying fields.
- To establish an external independent agency for quality evaluation.
- To improve current study programs and to enlarge the enrolment in lifelong learning programs.
- To evaluate the competences acquired in informal learning according to ECTS qualification.
- To introduce the national network of career centres.
- To establish new bilateral agreements in CEEPUS project in order to encourage the mobility of students, regardless their social-economic position.

#### **3.6.4** Threats

- Rigidness of higher educational institutions can have a negative effect on international competitiveness of Slovenian universities.
- Only the formal changing of study programs according to Bologna reform without improving the quality can cause a students` outflow and migration to the foreign universities.
- Without improving the financial distribution of funds for tertiary education, universities will not be able to continue with establishment of new Bologna programs.
- Without an external quality evaluation agency the quality of acquired students` knowledge will diminish and the opportunities of well educated people in an international labour market will be limited.
- Weakly informed students of future generations can make bad decisions about the field of study due to the information asymmetry.

## 4 TRENDS IN SLOVENIAN LABOUR MARKET AND THE PROBLEM OF EMPLOYABILITY OF NEW GRADUATES

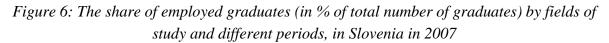
Slovenian labour market has changed significantly over time. The ageing population, emancipation in 1991, drastic Yugoslavian market share losses and expansion of higher education system denoted the structural changes in Slovenian labour market. The employees experienced less and less social security to protect them against job losses. A registered unemployment started rapidly increasing after the emancipation and reached the peak in 1993, when it amounted to 14,5%. It started decreasing at the end of the decade, when the positive economy growth effects and the regulation changes of formalising the position of an unemployed person have stabilized the situation. The registered unemployment rate is ranging from 6,5 to 7,5 % annually in last few years (Zavod Republike Slovenije za zaposlovanje, n.d.). Changes in the labour market were closely connected to the changes in Slovenian higher education. An increasing trend of students enrolled in tertiary education, was followed by the enlarging number of young graduates. In 2008 the total number of graduates was 17.221, which was two times more comparing to 1996 and almost three times more comparing to the year 1991. Also the percentage of students that successfully finished their studying (measured as a percentage of graduates to the total number of students) increased from 12,34% in 1997 to 15,1% in 2008 (SURS, n.d.a). After signing the Bologna declaration in 1999 the institutions of higher education started with the gradual reformation of the existing university programs. In 2005 the first six students graduated from these programs, in 2006 the number increased to 347 and in year 2008 580 students got the bachelor degree, 243 got the master degree and 3 of them the doctorate degree. In 2008 the average age of finishing bachelor level of tertiary education was 25 years (SURS, n.d.b). In 2010 15,936 students graduated at universities and independent higher education institutions. The sixth year after the Bologna reform in Slovenia 4,046 students graduated under the revised programs. 3,328 students finished the first Bologna stage (Bachelor degree), 683 students graduated from the second Bologna stage-(Master's degree) and 35 finished the third Bologna stage (Doctoral program). The

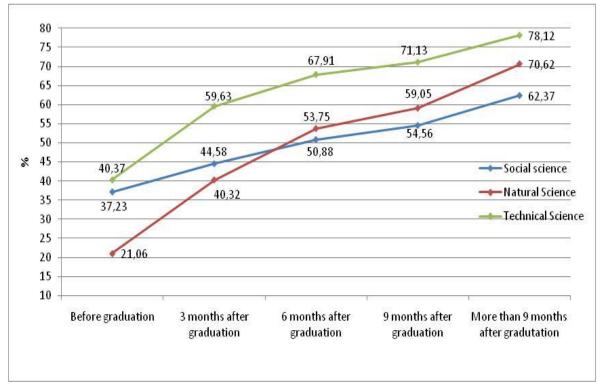
proportion of the Bologna graduates in higher education was 25%. This is significantly more than in year 2009, when the share was only 15%. There is still a domination of old program graduates (SURS, 2011). It can be concluded that the number of graduates finishing their degree according the Bologna Process is still relatively small comparing to 17 thousand graduates annually on average in Slovenia. Due to the very small sample of Bologna students it is impossible to measure and make any statistically significant conclusions about the dynamics of the higher educational system, taking only this group of students into account. Therefore, the following data and interpretations include old university studying programs as well as the new Bologna programs, but focusing on the period that includes graduates from the new Bologna programs.

In the last few years the problem of employing graduates with the highest degree of education has arisen. The unemployment rate of graduates from tertiary education is relatively high comparing to the unemployment rates of other levels of education. Table 1 in Appendices shows that the percentage of unemployed graduates with finished tertiary education has increased from 8,8% in 1997 to 20,4% in 2009.

In the context of finishing graduation it is relevant also to observe different fields of reached education. Table 2 in Appendices shows the number of graduates of tertiary education by the fields of education regarding an International Standard Classification of Education (ISCED-97) for Slovenia in different years. In the observing period 2004-2008 most of the students finished their tertiary education in the field of social sciences, business and law (almost 50%) followed by the graduates in the field of engineering, manufacture technology and construction and the graduates in the field of health and welfare. The share of graduates in natural science, engineering and computing on the other hand was low comparing to other areas. It was varying from 3,75 % in 2004 to 4,38 % in 2007. One might argue that this kind of distribution is not critical and that it is due to the fact that the labour market demands for such professions. However when we look at the unemployment rate by the area of education (Table 3 in Appendices), we can see that the unemployment rate of generation between 20 and 35 in years 2003-2007 was only 2,5% in the natural science, engineering and computing while in the field of social sciences, business and law it was 6,7% in the same period. The highest unemployment rate for the same period was in the field of services 8,4%, followed by humanities and art with 7,3%. The problem of higher unemployment of graduates from social science, business and law comparing to other fields can also be evidenced by observing the period of searching for the employment after the graduation. Figure 6 shows that the highest employability of graduates was evidenced in the technical science field. In 2007 Slovenian graduates from technical science got employed earlier than social science graduates and natural science graduates. 40,37% of the students in technical science have found a job already before graduation, 6 months after graduation this number increased to 67, 91% and more than 9 months after the graduation only 21, 88% of technical science graduates were still unemployed. On the other hand, in the area of social sciences only half of the graduates got employed after 6

months and almost 40% of the graduates still have not found the job 9 months after the graduation. Generally it can be concluded that in Slovenia there is the insufficient relationship between the educational professions and the demand of the labour market. At this point a question 'why do people invest in human capital, if there is no guarantee for a future employment' can be made. To answer the question further research on people's grounds for education must be made.





Source: Ministrstvo za visoko šolstvo, znanost in tehnologijo (2010), own calculations, 2010.

Because there is a lack of proper information in the labour market and since the employers do not have enough of knowledge regarding Bologna Process, the misunderstanding about the reached educational degrees and competences of new graduates arise. However, it is an important issue for young graduates. Regarding these labour market failures new graduates meet a lot of difficulties while looking for their first job. Students that reached the bachelor degree do not have sufficient competences while entering the labour market. That is why most of the students have to continue with their master studies to reach the seventh educational level which has a higher chance of employability (Bologna Process 2007-2010).

#### CONCLUSION

Ten years after the Bologna declaration most of Bologna 'architecture' is now in place. The purpose of the diploma thesis is to present the effects of implementation of Bologna reform with a special interest to the case of Slovenia. Have the planned goals of the Bologna declaration been reached? Has Slovenia faced any problems by implementing the Bologna system? Those and many other questions are answered in this thesis. The current situation in the Slovenian higher education system shows that the number of participants in tertiary education is relatively increasing. However, the institutions are facing a continuous decrease of funding for the tertiary education. In addition, when in year 2000 Slovenian universities started reforming study programs in the consideration of Bologna reform, the expenses for tertiary education have rapidly increased. The SWOT analysis, used in the thesis, revealed some important issues according to the Bologna Process in Slovenia, such as: high students-to-teachers ratio, which lowers the quality of the studying process; insufficient distribution of the students and graduates to the field of the study comparing to the current labour market needs; problems of measuring the quality of higher educational system; insufficient structure of the study programs etc. Also the unemployment rate of graduates from tertiary education is relatively high comparing to the unemployment rates of other levels of education. However, "The fact that there are strengths and weaknesses in the newly born EHEA should not be taken as a bad forecast for its early years. They should only be recognised and openly addressed. We are entering a new decade with a mixture of old and new problems on the table - but also empowered by the new mode of European cooperation in higher education to address them efficiently" (Zgaga, 2010, p. 10).

## POVZETEK

Zgodba o poenotenju evropskega visokošolskega prostora sega v leto 1999, ko je bila podpisana Bolonjska deklaracija. Bolonjska deklaracija je dokument, ki predstavlja osnovo za reformacijo in posodobitev visokošolskih sistemov v Evropi. Zaradi geografskih razsežnosti udeležencev v bolonjskem procesu je to ena izmed najobsežnejših visokošolskih reform v zgodovini. Cilj bolonjskega procesa je bil oblikovanje skupnega visokošolskega prostora do leta 2010 ter povečanje privlačnosti in konkurenčnosti evropskega visokega šolstva v globalnem kontekstu. Pred desetimi leti je bilo v visokem šolstvu v Evropi veliko strukturnih izzivov. Trajanje študija je bilo neenakomerno, mobilnost študentov in akademikov je bila omejena, univerze niso upoštevale, da zaposljivost mladih temelji tudi na njihovih aktivnostih, evropske univerze niso bile privlačne za študente in akademike iz drugih delov sveta (Vassiliou, 2010, str. 1-2).

Vsebina te diplomske naloge je razdeljena na tri glavna poglavja. V prvem poglavju je predstavljeno teoretično ozadje teorije človeškega kapitala. V drugem delu sledi kronološki pregled poteka bolonjske reforme na splošno. Tretji del pa se osredotoča na izvajanje bolonjskega procesa v Sloveniji. S pomočjo SWOT analize so predstavljene prednosti, slabosti, priložnosti in nevarnosti, na katere se je potrebno osredotočiti v procesu implementacije bolonjske reforme v Sloveniji. Zaključi se z opisom trendov na slovenskem trgu dela in problemom zaposljivosti mladih diplomantov

Bolonjski proces je proces prestrukturiranja visokega šolstva v evropskem prostoru. Začel se je s podpisom Magne Charte Universitatum evropskih univerz, nadaljeval pa z Sorbonsko in Lizbonsko deklaracijo. Bolonjsko deklaracijo, ki je ime dobila po mestu Bologna v Italiji, je junija 1999 podpisalo 29 ministrov evropskih držav pristojnih za visoko šolstvo. Med njimi je bila tudi Slovenija. Do danes je bolonjsko deklaracijo podpisalo že 47 držav članic. Pristojni ministri držav podpisnic se sestajajo vsaki dve leti (Praga 2001, Berlin 2003, Bergen 2005, London 2007, Lueven, Louvain-la-Neuve 2009), kjer ocenjujejo napredek posameznih držav, in se dogovorijo o smereh nadaljnjega razvoja procesa ter določijo potrebne ukrepe za dosego ciljev Bolonjske deklaracije. Na vsaki konferenci tako sprejmejo poseben komunike s predlogi za nadaljnji razvoj bolonjskega procesa.

Namen bolonjskega procesa je oblikovati skupen evropski visokošolski prostor, ki izpostavlja pestrost visokošolskih sistemov evropskih držav, hkrati pa razviti skupne mehanizme, ki bodo študentom in akademikom omogočili mobilnost ter priznavanje študija v tujini na domačih visokošolskih ustanovah. Ukrepi bolonjske reforme se nanašajo predvsem na vzpostavitev primerljivih in preglednih visokošolskih struktur in stopenj (1.,2.,3. bolonjska stopnja), na vzajemno priznavanje visokošolskih kvalifikacij, na vzpostavitev medsebojno priznanih kreditnih sistemov (ECTS kreditne točke) in sistemov

zagotavljanja kakovosti, na spodbujanje mobilnosti študentov in akademikov, razvijanje evropske dimenzije v izobraževanju ter na konkurenčnost evropskega visokega šolstva v svetu. Nekatere države s prestrukturiranjem svojih izobraževalnih sistemov niso imele večjih težav, medtem ko se druge (med njimi tudi Slovenija) soočajo s problemi predvsem v fazah implementacije in integracije reforme v obstoječe visokošolske programe.

## SWOT analiza Bolonjske reforme v Sloveniji

Od leta 2005, ko so visokošolski zavodi pričeli z izvajanjem novih bolonjskih univerzitetnih programov, je Slovenija vložila veliko truda v izpolnjevanje ciljev bolonjske reforme. V naslednjem delu bodo s pomočjo SWOT analize predstavljene prednosti, slabosti, priložnosti in nevarnosti uvedbe bolonjskega procesa v slovenski visokošolski prostor. To poglavje temelji na Resoluciji o nacionalnem programu visokega šolstva Republike Slovenije 2007-2010 Ur.1. RS, št.94/2007.

## Prednosti

- Visok odstotek šolajočega se prebivalstva v terciarnem izobraževanju med 19. in 24. Letom starosti (podrobneje predstavljeno v poglavju 3.2).
- Pripravljenost družbe in vlade Republike Slovenije za dodatna vlaganja v raziskave&razvoj in visoko šolstvo.
- Pripravljenost za odprtje in širjenje izobraževalnega sistema.
- Mlada generacija obvlada minimalno en tuj jezik.
- Velik interes mlade generacije za bolonjske študijske programe.
- Izjemni dosežki v raziskovalnih nalogah na nekaterih fakultetah oziroma oddelkih.
- Visoka zastopanost ženskega spola v terciarnem izobraževanju in v dokončanih univerzitetnih študijih.
- Socialnovarstvena mreža za študente (boni za študentsko prehrano, študentski domovi, itd).
- Majhne geografske razdalje do glavnih visokošolskih središč.
- Vključenost Slovenije v projekt CEEPUS.

#### Slabosti

- Študij traja predolgo.
- Pomanjkljiva sestava učnih programov, pomanjkljivost študijskega gradiva, malo učbenikov je prevedenih v tuje jezike.
- Visoko razmerje študent/profesor.
- Slaba uveljavljenost slovenskih univerz v svetu (podrobneje predstavljeno v poglavju 3.5.6).
- Neustrezno razmerje študentov in diplomantov po študijskih področjih, glede na trenutne potrebe trga dela.
- Standardizacija namesto kvalitete.
- Težave pri financiranju bolonjske reforme ( podrobneje predstavljeno v poglavju 3.3).

- Nizka raven samoevalvacije v visokošolskem sistemu. V Sloveniji ni neodvisnega telesa za zunanjo evalvacijo kakovosti visokošolskih zavodov in programov.
- Beg možganov in neustrezne razmere za vračanje slovenskih strokovnjakov iz tujine v Slovenijo.

## Priložnosti

- Spodbujanje razvoja obstoječih univerz in novih programov.
- Pritegnitev zasebnega kapitala v terciarne izobraževalne institucije.
- Pripravljenost slovenskih strokovnjakov v tujini, da se vrnejo v Slovenijo in s tem pomagajo pri izboljšavi kakovosti raziskovalne in pedagoške dejavnosti.
- Promocija študija v Sloveniji tujim študentom in akademikom.
- Sodelovanje raziskovalcev iz gospodarstva, univerz in javnih raziskovalnih zavodov.
- Ustvariti nova začasna delovna mesta za mlade raziskovalce iz raziskovalnih organizacij in gospodarstva za pedagoško-raziskovalno delo na visokošolskih institucijah.
- Povečanje števila žensk z najvišjimi pedagoškimi nazivi ter na vodilnih položajih visokošolskih institucij.
- Možnost za ustanovitev naravoslovne tehnološke univerze s pomočjo mlajših raziskovalcev.
- Vključenost dejavnosti študentskih organizacij v izboljšanje študijskih programov.
- Sooblikovanje novih študijskih programov, razvoj novih interdisciplinarnih študijskih področij.
- Izgradnja in razvoj neodvisnega sistema zagotavljanja kakovosti.
- Večje števila programov in števila vpisanih v programe vseživljenjskega učenja.
- Ustrezno ovrednotenje ob študijskih dejavnosti s kreditnimi točkami in priznavanje kompetenc pridobljenih z neformalnim izobraževanjem.
- Sodelovanje nacionalne mreže kariernih centrov.
- Vzpostavljanje novih bilateralnih sporazumov v projektu CEEPUS.

#### Nevarnosti

- Organizacijska togost in zaprtost visokošolskih zavodov.
- Spremembe študijskih programov so samo formalne, kar lahko povzroči zmanjšanje števila študentov zaradi odhoda na tuje univerze.
- Zaradi slabega finančnega načrtovanja lahko ostanemo brez zadostne in potrebne raziskovalne infrastrukture in opreme na univerzah ter v visokošolskih in inovacijskih središčih.
- Če se ne bo vzpostavil sistem samoevalvacij in zunanjih evalvacij, se bo v povprečju kakovost diplomantov poslabšala.
- Slaba informiranost bodočih študentov pri vpisu v terciarno izobraževanje.

#### Trendi na trgu dela v Sloveniji in problem zaposljivosti diplomantov

Spremembe na trgu dela so bile tesno povezane s spremembami v slovenskem visokem šolstvu. Naraščajočemu trendu študentov vpisanih v terciarno izobraževanje, je sledilo povečanje števila mladih diplomantov. Po podpisu Bolonjske deklaracije leta 1999 so visokošolski zavodi začeli s postopno prenovo obstoječih univerzitetnih programov. Leta 2005 je diplomiralo prvih 6 študentov iz bolonjskih programov, v letu 2006 se je število povečalo na 327. V letu 2010 je delež bolonjskih diplomantov v visokem šolstvu znašal 25% vseh diplomantov. To je bistveno več kot v letu 2009, ko je ta delež znašal le 15%. Vendar pa še vedno prevladujejo diplomanti starih programov (SURS, Izobraževanje 2011). Iz tega je mogoče sklepati, da je število diplomantov z zaključeno prvo bolonjsko stopnjo še vedno relativno nizko v primerjavi s 17.000 diplomanti v povprečju v Sloveniji. Zaradi majhnega vzorca bolonjskih diplomantov je težko delati statistične analize.

V zadnjih letih se je pojavil problem zaposlovanja diplomantov z najvišjo stopnjo izobrazbe. Stopnja brezposelnosti diplomantov terciarnega izobraževanja, je v primerjavi s stopnjo brezposelnosti na drugih ravneh izobraževanja relativno visoka. Tabela 1 v prilogah kaže, da se je delež brezposelnih diplomantov s terciarno izobrazbo povečal z 8,8% leta 1997 na 20,4% v letu 2009. Razmerje med povpraševanjem na trgu dela in doseženo izobrazbo kaže na to, da se mladi raje odločajo za študij družboslovja, čeprav za te poklice ni zagotovljenih delovnih mest. Na tem mestu se pojavi vprašanje zakaj ljudje vlagajo v izobraževanje, če ni zagotovljene prihodnosti. Za rešitev tega problema bi bilo potrebno bolj usmerjeno vlaganje v človeški kapital, vendar so za to potrebne širše raziskave, ki pa v tem diplomskem delu niso bile izvedene.

#### Sklep

Deset let po podpisu bolonjske deklaracije je večina zastavljenih ukrepov v veljavi. Namen tega diplomskega dela je bil pregledati učinke in vplive izvajanja bolonjske reforme v Sloveniji in ali so bili načrtovani cilji reforme doseženi. Sedanje razmere v slovenskem visokošolskem sistemu kažejo na to, da se število udeležencev v terciarnem izobraževanju relativno povečuje. Vendar pa se večina visokošolskih institucij sooča z naraščajočim zmanjševanjem sredstev za terciarno izobraževanje. SWOT analiza prikazuje nekatera pomembna vprašanja, na katera se je potrebno osredotočiti v nadaljevanju izvajanja bolonjskega procesa v Sloveniji. Zgaga (2010, str. 10) pravi da dejstva, da obstajajo prednosti in slabosti v novonastalih programih ne bi smeli vzeti kot slabo napoved za začetna leta izvajanja bolonjske reforme. V novo desetletje vstopamo z mešanico starih in novih problemov, ampak nov način evropskega sodelovanja na področju visokega šolstva bo njimi spopadal učinkovito in uspešno. se Z

#### **REFERENCE LIST**

- 1. *About FELU, AACSB*. (n.d.). Retrieved June 11, 2010 from http://www.ef.unilj.si/en/info/aacsbEN.asp
- 2. Becker, G. S. (1964). Human capital. Retrieved June 8, 2010, from http://www.um.edu.uy/docs/revistafcee/2002/humancapitalBecker.pdf
- 3. Becker, G. S. (1993a). *Human capital: a theoretical and empirical analysis, with special reference to education*. New York: Columbia University Press.
- 4. Becker, G. S. (1993b). Nobel lecture The economic way of looking at life. Retrived August 16, 2011, from http://cenet6.nsd.edu.cn/download/8924-1.pdf
- Becker, G. S., & Chiswik, B. R. (1966). Education and the Distribution of Earnings. *The American Economic Review*, 56(<sup>1</sup>/<sub>2</sub>). Retrieved June 8, 2010, from http://www.jstor.org/stable/1821299
- 6. Belfield, C. R. (2000). *Economic principles for education: theory and evidence*. Cheltenham and Northampton: Edward Elgar Publishing Inc.
- Bergen Communique (2005, May 19-20). The European Higher Education Area -Achieving the Goals. Communiqué of the Conference of European Ministers Responsible for Higher Education. Retrieved June 8, 2010, from http://www.bolognabergen2005.no/Docs/00-Main\_doc/050520\_Bergen\_Communique.pdf
- Berlin Communique (2003, September 19). Realising the European Higher Education Area. Communiqué of the Conference of Ministers responsible for Higher Education. Retrieved June 8, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/Berlin\_Com munique1.pdf
- 9. Bevc, M. (1991). Ekonomski pomen izobraževanja. Radovljica: Didakta.
- Bologna Declaration (1999, June 19). Joint declaration of the European Ministers of Education. Retrieved June 1, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/BOLOGNA \_DECLARATION1.pdf
- 11. Bologna Process 2007-2010. Retrieved June 20, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/
- Budapest-Vienna Declaration (2010, March 12). Budapest-Vienna Declaration on the European Higher Education Area. Retrieved May 15, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/2010\_conference/documents/ Budapest-Vienna\_Declaration.pdf

- 13. Council of Europe. (n.d.). Bologna for Pedestrians. Retrieved June 20, 2010, from http://www.coe.int/t/dg4/highereducation/ehea2010/bolognapedestrians\_en.asp
- 14. Crnović, D. (2010). Število tujih narašča. *Mladina*. Retrieved August, 27, 2011 from http://www.mladina.si/tednik/201001/stevilo\_tujih\_narasca
- 15. *Ekonomski in socialni položaj ter mednarodna mobilnost študentov v Sloveniji* (2007). Retrieved June 12, 2010, from http://www.avantis.si/media/evrostudent.si.2007.pdf
- Ekonomski, socialni, bivalni položaj in mednarodna mobilnost študentov v Sloveniji (2010). Retrieved August 17, 2011, from http://www.mvzt.gov.si/fileadmin/mvzt.gov.si/pageuploads/doc/dokumenti\_visokosols tvo/KNJIZNICA/Eurostudent\_SI\_2010.pdf
- 17. *European Commission, Education & Training*. (n.d.). Retrieved May 18, 2010, http://ec.europa.eu/education/higher-education/doc1290\_en.htm
- Eurostat. (n.d.). Unemployment rate by field of study (ISCED 5-6) and age (2003-2007) %. Retrieved May 13, 2010 from http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database
- Focus on Higher Education in Europe 2010. Retrieved June 9, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/2010\_conference/documents/F OCUS\_HE\_2010\_EN.pdf
- 20. Institute of Macroeconomic Analysis and Development (2009). Development report. Retrieved May 17, 2010, from http://www.umar.gov.si/fileadmin/user\_upload/publikacije/pr/2009/apor09\_splet.pdf
- 21. Kocbek, D. (2009). Vsa Evropa se drži za glavo. *Mladina*. Retrieved May 15, 2010, from http://www.mladina.si/tednik/200927/vsa\_evropa\_se\_drzi\_za\_glavo
- Leuven/Louvain-La-Neuve Communique (2009, April 28-29). The Bologna Process 2020 - The European Higher Education Area in the new decade. Communiqué of the Conference of European Ministers Responsible for Higher Education. Retrieved June 8, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/leuven louvain-la-neuve communiqu%C3%A9 april 2009.pdf
- 23. *Lisbon Convention* (1997, April 11). Retrieved June 8, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/LRC/Lisbon\_Reco gnition\_Convention.pdf
- 24. London Communique (2007, May 18). Towards the European Higher Education Area: responding to challenges in a globalised world. Communiqué of the Conference of European Ministers Responsible for Higher Education. Retrieved June 8, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/London\_Communique18May2007.pdf

- 25. Magna Charta Universitatum (1988, September 18). Retrieved June 8, 2010, from http://www.bologna-bergen2005.no/Docs/00-Main\_doc/880918\_Magna\_Charta\_Universitatum.pdf
- Marn, U. (2008). Podhranjeno financiranje. *Mladina. Priloga o izobraževanju*. Retrieved May 23, 2010, from http://www.mladina.si/media/izobrazevanjeavgust08.pdf
- 27. Mincer, J. (1985). Investment in Human Capital and Personal Income Distribution. *The Journal of Political Economy*, *66*(4), pp. 281-302. Retrieved May 20, 2010, from http://www.jstor.org/stable/1827422
- 28. Ministrstvo za visoko šolstvo, znanost in tehnologijo (2010). Poročilo raziskovalnega dela na projektu v okviru Ciljnega raziskovalnega programa (CRP) «Konkurenčnost Slovenije 2006 – 2013«. Retrieved August 16, 2011 from http://www.mvzt.gov.si/fileadmin/mvzt.gov.si/pageuploads/doc/dokumenti\_visokosols tvo/KNJIZNICA/CRP-F3T-porocilo.pdf
- 29. Pirc, V. (2008) Bolonjski pomisleki. *Mladina. Priloga o izobraževanju*. Retrieved August, 16, 2011 from http://www.mladina.si/media/izobrazevanje-avgust08.pdf
- 30. Population by large and 5-year age groups and sex, statistical regions, Slovenia, half-yearly. Retrieved May 20, 2010 from http://pxweb.stat.si/pxweb/Database/Demographics/05\_population/10\_Number\_Popul ation/10\_05C20\_Population\_stat\_regije/10\_05C20\_Population\_stat\_regije.asp
- 31. Prague Communique (2001, May 19). Towards the European higher education area, Communiqué of the meeting of European Ministers in charge of Higher Education. Retrieved May 22, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/PRAGUE\_C OMMUNIQUE.pdf
- 32. Prispevek Študentske organizacije Slovenije k javni razpravi o razvoju visokega šolstva (2010). Retrieved June 5, 2010, from http://www.mvzt.gov.si/fileadmin/mvzt.gov.si/pageuploads/pdf/visoko\_solstvo/SOS\_-\_Razvoj\_VS.pdf
- 33. Prunk, J. (1996). A Brief History of Slovenia. Ljubljana: Grad Publisher.
- 34. Resolucija o nacionalnem programu visokega šolstva Republike Slovenije 2007-2010 (ReNPVS) 2007-2010. *Uradni list RS* št. 94/2007.
- 35. Schultz, T. W. (1961). Investment in Human Capital. *The American Economic Review*, *51*(1). Retrieved May 23, 2010, from http://www.jstor.org/stable/1818907
- 36. Setnikar Cankar, S. (2008). Decentralisation, Privatisation and Changes in the Financing of Education in Slovenia: Greater Opportunities for Citizens? *Uprava*, 6(3).
- 37. Smith, A. (1966). Wealth of nations Originals. London: Dent.

- 38. Sorbonne Declaration (1998, May 25). Retrieved May 15, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/SORBONNE \_DECLARATION1.pdf
- 39. Statistical office of the Republic of Slovenia (2011). Graduates from vocational colleges and higher education institutions, Slovenia, 2010 final data. Retrieved August 16, 2011 from http://www.stat.si/eng/novica\_prikazi.aspx?id=3934
- 40. Statistical Yearbook of the Republic of Slovenia (2008). Retrieved May 6, 2010 from http://www.stat.si/eng/index.asp
- 41. Statistical Yearbook of the Republic of Slovenia (2010). Retrieved May 6, 2010 from http://www.stat.si/eng/index.asp
- 42. Students in tertiary education by sex and age, Slovenia, annually. Retrieved May 3, 2010 from http://pxweb.stat.si/pxweb/Database/Demographics/09\_education/08\_terciar\_education /01\_09550\_partipication\_general/01\_09550\_partipication\_general.asp
- 43. Statistical office of the Republic of Slovenia. (n.d.). Tertiary education graduates by fields of education (ISCED 97), sex and type of program, Slovenia, annually. Retrieved May 6, 2010 from : http://pxweb.stat.si/pxweb/Database/Demographics/09\_education/08\_terciar\_education /02\_09554\_graduates\_general/02\_09554\_graduates\_general.asp
- 44. Statistical office of the Republic of Slovenia. (n.d.a). Tertiary education on graduates, Slovenia, annually. Retrieved August 14, 2011 from http://pxweb.stat.si/pxweb/Database/Demographics/09\_education/08\_terciar\_education /02\_09554\_graduates\_general/02\_09554\_graduates\_general.asp
- 45. Statistical office of the Republic of Slovenia. (n.d.b)Tertiary education graduates by age, sex, type of program, Slovenia, annually. Retrieved August 14, 2011, from http://pxweb.stat.si/pxweb/Database/Demographics/09\_education/08\_terciar\_education /02\_09554\_graduates\_general/02\_09554\_graduates\_general.asp
- 46. *Študenti podprli čim prejšnjo ustanovitev Agencije za zagotavljanje kakovosti v visokem šolstvu* (2009). Retrieved June 14, 2010, from http://www.studentska-org.si/index.php/Odbor-za-visoko-solstvo/Studenti-podprli-cim-prejsnjo-ustanovitev-Agencije-za-zagotavljanje-kakovosti-v-visokem-solstvu.html
- 47. Students in tertiary education by type of education and mode of study, Slovenia, annually. Retrieved May 10, 2010 from http://pxweb.stat.si/pxweb/Database/Demographics/09\_education/08\_terciar\_education /01\_09550\_partipication\_general/01\_09550\_partipication\_general.asp
- 48. *The first decade of working on the European Higher Education Area Executive summary, overview and conclusions.* (n.d.). Retrieved June 7, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/2010\_conference/documents/I ndependentAssessment\_executive\_summary\_overview\_conclusions.pdf

- 49. Trends 2010: A decade of change in European Higher Education (2010) Retrieved June 8, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/2010\_conference/documents/E UA\_Trends\_2010.pdf
- 50. Vassiliou, A. (2010, March 11-12). Opening speech on The Bologna Ministerial Anniversary Conference Budapest/Vienna. Retrieved May 29, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/2010\_conference/documents/B MAC\_European\_Commission.pdf
- 51. Zavod Republike Slovenije za zaposlovanje. (n.d.). Stopnja registrirane brezposelnosti. Retrieved June 20, 2010 from http://www.ess.gov.si/
- 52. Zgaga, P. (2010, March 12). Speech on the Second Bologna Policy Forum, Vienna. Retrieved June 24, 2010, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/forum2010/documents/BPF\_in fo\_session\_Zgaga.pdf

APPENDIXES

# TABLE OF APPENDIXES

APPENDIX 1: List of frequently used abbreviations	.1
APPENDIX 2: Table 1: The structure of the registered unemployment according to	
the educational level for the population aged between 25 and 30 years for (in %)	.2
APPENDIX 3: Table 2: The number and the share of graduates of tertiary	
education by the fields of education for Slovenia in different years	.3
APPENDIX 4: Table 3: The unemployment rate of generation 20-34 years by the	
area of education in Slovenia for period 2003-2007	.4

## List of frequently used abbreviations

SWOT = Strengths Weaknesses Opportunities Threats EHEA = European Higher Education Area ECTS = European credit transfer and accumulation system ReNPVS = Resolution on National programme of higher education Republic of Slovenia SURS = Statistical Office of the Republic of Slovenia DS = Diploma Supplement CEEPUS = Central European Exchange Program for University Studies

Year	Total	Level I.	Level II.	Level III.	Level IV.	Level V.	Tertiary	
1997	14967	32.378%	7.356%	2.332%	21.407%	27.741%	8.786%	
1998	13970	31.682%	7.158%	2.004%	21.203%	28.769%	9.184%	
1999	12029	30.219%	7.124%	1.954%	20.550%	31.067%	9.086%	
2000	11467	28.831%	7.352%	1.535%	21.026%	31.482%	9.776%	
2001	12588	26.446%	7.269%	1.430%	20.663%	33.373%	10.820%	
2002	13471	24.326%	7.238%	1.114%	20.080%	34.274%	12.969%	
2003	14524	21.606%	6.341%	0.806%	17.839%	37.324%	16.084%	
2004	14754	19.418%	5.287%	0.569%	17.812%	40.220%	16.694%	
2005	15750	18.724%	5.410%	0.489%	16.724%	40.705%	17.943%	
2006	13174	16.874%	4.357%	0.357%	15.956%	42.591%	19.842%	
2007	10581	16.842%	4.489%	0.302%	14.649%	42.472%	21.227%	
2008	9824	18.322%	4.835%	0.234%	16.582%	40.544%	19.371%	
2009	15365	17.351%	4.842%	0.247%	16.733%	40.417%	20.384%	

Table 1: The structure of the registered unemployment according to the educational level
for the population aged between 25 and 30 years

Source: Summarized from Ministrstvo za visoko šolstvo znanost in tehnologijo. Poročilo raziskovalnega dela na projektu v okviru Ciljnega raziskovalnega programa(CEP) »Konkurenčnost Slovenije 2006-2013«., 2010.

Explanation of levels						
I.	Without education					
II.	Finished primary school					
III.	Finished vocational school					
IV.	Finished technical school					
V.	Finished secondary school					
VI.	Tertiary education (including bachelor, master and					
VII.	PhD degree)					
VIII.						

	2004		2005		2006		2007		2008	
Area of education/ year	Number of graduates	%								
Education	1.457	9,79	1.606	10,17	1.578	9,2	1.492	8,94	1.421	8,25
Arts and humanities	875	5,88	861	5,45	867	5,06	983	5,89	981	5,7
Natural science, computing, mathematics	558	3,75	638	4,04	601	3,51	731	4,38	700	4,06
Social sciences, business and law	7.017	47,13	7.183	45,5	8.504	49,6	8.282	49,65	8.591	49,89
Engineering, manufacturing and construction	2.219	14,9	2.259	14,31	2.168	12,65	2.105	12,62	2.337	13,57
Agriculture, Forestry, Fisheries, Veterinary	340	2,28	383	2,43	412	2,4	402	2,41	425	2,47
Health and welfare	1.357	9,11	1.723	10,91	1.703	9,93	1.312	7,87	1.335	7,75
Services	1.065	7,15	1.723	10,91	1.703	9,93	1.312	7,87	1.335	7,75
Total	14.888	100	15.787	100	17.145	100	16.680	100	17.221	100

# Table 2: The number and the share of graduates of tertiary education by fields ofeducation for Slovenia in different years

Source: SURS. (n.d.). Tertiary education graduates by fields of education (ISCED 97), sex and type of program, Slovenia, annually, 2010.

Table 3: The unemployment rate of generation 20-34 years by the area of education in
Slovenia for period 2003-2007

Area of education/ year	Unemployment rate (2003- 2007) %		
Education	6,4		
Arts and humanities	7,3		
Natural science, computing, mathematics	2,5		
Social sciences, business and law	6,7		
Engineering, manufacturing and construction	3,6		
Agriculture, Forestry, Fisheries, Veterinary	7,2		
Health and welfare	3,7		
Services	8,4		

Source: Eurostat, Unemployment rate by field of study (ISCED 5-6) and age (2003-2007) - %.