ENROLMENT TRENDS IN FULL-TIME UNDERGRADUATE TERTIARY EDUCATION STUDIES IN SLOVENIA

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Abstract:  
This paper aims to explore enrolment trends focusing on full-time undergraduate tertiary education studies (TE) in Slovenia. Inclusion of young people in TE in Slovenia is higher than the average of EU-27 countries by almost 20%. In parallel with the expansion of higher education institutions and higher vocational colleges, the study places for full-time undergraduate TE studies have grown extensively. The current situation raises questions primarily related to future enrolment trends and challenges. The impact of future demographic situation is becoming increasingly evident, since the number of potential students studying in TE will be as predicted in the coming decades considerably lower. The number of first time enrolled in the first year of full-time TE studies has already begun to decline, as tertiary education institutions (TEIs) and higher education policy have to face a completely different challenge than in the past, when the trend was reversed.

Keywords: tertiary education, Slovenia, enrolment, enrolment trends, full-time studies.
1. INTRODUCTION

In the past four decades, mass inclusion\(^1\) in tertiary education (hereinafter TE) has reached a global dimension\(^2\), which is due to structural changes, the transition to post-industrial societies, the growth of service sector and the shift towards a knowledge-based economy, innovation and competition (Altbach, Reisberg & Rubley, 2009, p. iv, 38; Souto Otero & McCoshan, 2005, p. vi). During this period the government policy has supported the concept of creating a knowledge society and the importance of knowledge recognition needed for economic development (Lisbon strategy, 2000), especially with the increase of highly educated professionals and the development and expansion of competitive knowledge to the benefit of society (European Commission, COM (2011) 902, p. 6, OECD, 2008, p. 11). European Higher Education Area has been facing mass enrolment growth in TE since the sixties, while in Slovenia this trend has been most noticeable from the nineties onwards (Koucky, Bratušek & Kovarovič, 2010, p. 56).

In 2011 Slovenian government, with regard to EU recommendations and guidelines of Europe 2020 (2010), adopted the National Development Programme for Higher Education 2011–2020 (Re NPHE 2011–20, 2011, p. 47), in which particular attention is paid to widening access and inclusion in TE\(^3\), although the “involvement of typical generation is high and average if compared to other European countries” (Pajnič, 2011, p. 10). According to Eurostat (2012, 2012b) in 2009 50.3 % students aged 19\(^4\) as a percentage of corresponding age cohort participated in TE in Slovenia, which is significantly more than the average EU-27 (31.8 %). Moreover, the proportion of the younger generation (between 20 and 24 years) involved in TE in Slovenia is also above average (47.7 % in 2009) according to the EU-27 average (29.3 % in 2009) (Eurostat, 2012a, 2012b) (see Appendix A).

The current situation raises questions related primarily to future enrolment trends and challenges. The impact of future demographic situation is becoming increasingly evident, since the number of potential students involved in TE will be, as predicted until 2060, significantly lower (Komljenović & Marijetić, 2010, p. 30) due to low fertility and population aging. A decreasing number of young generations have a direct impact on enrolment in TE, the number of teaching staff and expenditure for TE (Eurydice, 2011, p. 34).

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\(^1\) Inclusion in TE is an indicator most often used to measure the accessibility of TE and a possibility of participating in TE (Čelebič, 2008, p. 18).

\(^2\) Enrolment in TE worldwide has increased, doubling from 40 million (in 1975) to 80 million (in 1995) and reaching 150 million in 2007 (Altbach, 2009, p. 33). Between 1960s and 1990s the growth took place in developed countries, but the current growth is mainly in developing countries (Altbach, 2009, p. 33). Following above data higher education or TE is indeed "the largest institution of modern society" as Barnett (1997, p. 3) stated.

\(^3\) ReNPHE 2011–20 (2011, p. 40, 47) provides an increase in tertiary education participation by 2020 for:
- 40 % aged 30 to 34 years (in 2010 it had reached 34.8 %) (Eurostat, 2012c),
- 75 % aged 19 to 24 years (in 2010 it had reached 47.3 %) (SORS, 2010–2012),
- 20 % aged over 29 years (in 2010 it had reached 15.3 %) (SORS, 2010–2012) and
- attracting at least 10 % of foreign students for the entire study period (in 2010 2.12 %) (Ložar et al., 2012, str. 15).

\(^4\) Data on number of 19-year-olds is important in Slovenia, since most individuals by this year decide to enter TE.
In addition to the demographic conditions, considerable impacts\(^5\) on enrolment trends in TE have also the funding systems of TE, TE access policies and economic conditions\(^6\) (Eurydice, 2011, p. 33). The structure of upper secondary education has a very strong direct impact on enrolment trends as well (Komljenovič & Marjetić, 2010, p. 30), which Scofer and Meyer (2005) in their study identified as a key determinant of the mass enrolment in TE. Furthermore, we will pay particular attention to TE access policies and financial aspects of TE, future demographic trends, quantity of upper secondary education graduates, transition from the upper secondary education to TE, and relationship between the number of study places and number of students first time enrolled in the first year of full-time undergraduate TE studies in the period 2006–2011.

1 ACCESS TO TERTIARY EDUCATION IN SLOVENIA

Government policy can affect the accessibility of TE by increasing the number of study places for full-time undergraduate TE studies (hereinafter referred to as study places) and by awarding cash grants to students (Lesjak, 2011, p. 58). The Higher Education Act (HEA, Official Gazette of RS, no. 67/1993 and its amendments) was adopted in 1993 which provides the legislation framework regulating conditions for the provision of higher education (HE) activities, defining education institutions as public service and regulating the way of funding. The right to study under the same conditions as stated by law (HEA, Official Gazette of RS, no. 67/1993 and its amendments, rule 7) has allowed greater access to HE to the general population of young people. In accordance with the legal basis began a rapid institutional development of HE expanding the number of study places for full-time HE studies (National Higher Education Programme (2002)). In the years between 2004 and 2008, the regional development policy promoted the expansion of (mainly single) higher education institutions outside the university centres, with the aim to strengthen the regional environment and providing quality jobs (Resolution on the National Higher Education Programme 2007–2010, Official Gazette of RS, no. 94/2007). Number of higher education institutions (HEIs) in the years between 1998 and 2011 more than doubled, increasing from 41 to 87, of which are 33 single higher education institutions (slo. samostojni visokošolski zavodi) (SORs, 2010–2012; MHEST, 2012).

Higher vocational colleges (HVC) were in the same time institutional separate from the HEIs (Lesjak, 2011, p. 11). The area of higher vocational education (HVE) was uniformly regulated in 2004, by the Law on Higher Vocational Education. Prior to this, since 1996, higher vocational education was carried out by the Law on Vocational Education, which also regulated the acquisition of state-approved HVE. Changes towards modernization of TE in Slovenia began with the implementation of the Bologna process and entry into the European Higher Education Area also in 2004.

By expanding the tertiary education institutions (TEIs) network, consequently the number of study places have grown, which resulted in increased enrolment. Additionally the public funding of TE has also largely contributed to widening access. Study by Souto Otelo and McCoshan (2005) notes that "the increase in public expenditure on TE equivalent to 1 % of

\(^5\) In addition to the mentioned factors according to Čelebić (2008, p. 13) information about TE studies, expected rate of return, academic success at the previous levels of education and place of residence, have also a strong impact on inclusion too.

\(^6\) Demand for TE in times of economic crisis usually increases (Douglass, 2010, p. 1) therefore it is important to maintain funding for TE at the time of recovery.
GDP affects 21% increase in gross enrolment rates\(^7\). In Slovenia, the government gives its consent to the tender study places for TE (undergraduate and postgraduate programs) for full-time studies, which are also financed in the current year (Strašek and others, 2010, p. 161).

Total public expenditure for TE as a percentage of GDP reached 1.38% of GDP in 2009 (Rapid reports, no. 22/2011, p. 2), which is 0.21 percentage points above the EU-27 average (1.17% of GDP (Eurostat, 2012d). The total public expenditure for formal education to TE pays 24% of assets, while the largest proportion (44%) of total public expenditure continues to receive primary (basic) education (Rapid reports, no. 22/2011, p. 3).

Public expenditure represents the majority (83%) in total expenditure on TEIs, 15% private and 2% international expenditure (Rapid reports, no. 22/2011, p. 7). The proportion of total expenditure on TEIs, expressed as percentage of GDP covered 1.3% of GDP in 2009 and was 0.17 percentage points higher than in previous year 2008 (Rapid reports, no. 22/2011, p. 7). 78% public funds were allocated for TEIs (Rapid reports, no. 22/2011, p. 3) and 22% for public transfers. The latter ranks above the EU-27 average, which amounted to 17.2% (Rapid reports, no. 22/2011, p. 3, Eurostat, 2012e). Nevertheless, the public expenditure on TEIs per student measured with purchasing power parity is below EU-27 average and lags behind Western countries (Figure 1).

\textbf{Figure 1:} Public expenditure on TEIs per student measured with purchasing power parity in 2009

Source: Eurostat, 2012f.

In Slovenia students are financially supported by their parents. Very important factors for inclusion in TE in Slovenia are public transfers which are available to all students who are not employed or registered as unemployed (Marjetič & Lesjak, 2011, p. 5). Beside free health insurance, tax relief and untaxed student work they can benefit from scholarships, subsidies meals, accommodation and transport (Marjetič & Lesjak, 2011, p. 5). As Marjetič & Lesjak (2011, p. 5) state “their aim is to decrease the costs of studies and create favourable conditions for students so that they can complete their studies without obstacles no matter what their socio-economic status and distance from place of study”. But the problem in Slovenia tend towards exploitation of public transport because everyone is entitled to them, even those who only obtain student status for social benefits it offers (Marjetič & Lesjak, 2011, p. 7).

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\(^7\) The gross enrollment rate is a statistical indicator that illustrates the relationship between the number of individuals who are involved in the school and the number of individuals of appropriate age for entry to school (Gross enrolment ratio, 2012).
2. DEMOGRAPHIC TRENDS IN SLOVENIA

The problem of aging societies has plagued the developed countries of Europe for the past decades and will also continue in the future period. The number of young people aged between 18 and 34 years are expected to decline, especially for countries in Central, Eastern and Southern Europe (Eurydice, 2011, p. 34). TE policy responses to demographic changes are concerning two different directions (Eurydice, 2011, p. 35): First, enhancing lifelong learning and widening access to TE for different groups of students and second, adjusting TE and their funding systems. According to the ReNPHE 2011–20 in Slovenia solutions tend towards the first statement, because “higher education is a public good and public responsibility”.

Moreover, the majority of young people, who first engage into TE, are aged 19. In the last six years this generation has been the most numerous between the years 2006 and 2008 and then the number has dropped significantly (Figure 2). By 2010, compared to 2007, the decrease was 12 %, which represents 3,351 fewer 19-year-olds in a generation. The projection of 19-year-olds in Slovenia forecasted a decline in the number of 19-year-olds by 2020, as a result of low fertility in the 1990s. By 2020 compared to 2010 the number of 19-year-olds is expected to decline for 20 % or for 4,000 19-year-olds. According to other data by 2025 there will be a reduction in the age group between 18 and 34 years by 20 % in EU-27 and by 30 % in Slovenia (Eurydice, 2011, p. 34). In addition, declining numbers of young people will continue until 2060 (Komlenovič & Marjetič, 2011, str. 30).

Figure 2: Number of 19-year-olds in Slovenia 2006-2011 and the projection of demographic decline until 2020


3. ENROLMENT POTENTIAL

The largest enrolment potential represent upper secondary school graduates who have successfully completed general or vocational matura exam, which allows the transition to TE (Figure 3). The majority of candidates enter directly TE after completing their secondary education studies (Figure 4). The former concern about excessive generations has over the last decade shifted toward concerns about the lack of generations (Komlenovič & Marjetič, 2010, p. 30).

Figure 3: Number of second year students


8 Most in year 2007, with 25,999 19-year-olds.
Upper secondary school enrolment has been decreasing since 2006 and this trend is still continuing. Between 2006 and 2011 the number of upper secondary school graduates who have successfully completed their studies with general or a vocational matura decreased by 3,000 students, which represented 13 % decrease and for the TE meant a significant reduction in enrolment potential. Decline in the number of students enrolled in the final year of upper secondary school is even more pronounced, because the number has decreased by nearly 4,345 students, representing a 19.5 % reduction.

Enrolment decline was most prominent in the short term vocational and vocational programs and programs of technical and other professional secondary education, while enrolment in general gymnasiums remained constant (Komljenovič & Marjetič, 2010, p. 30).

Figure 3: Students in final year of upper secondary education, general matura graduates, vocational matura graduates and enrolment potential for TE 2006–2011 in Slovenia


In accordance with the above findings, authors (Babič, 2011; Zupanc, 2010, 2010b) have detected quality problems of achieved knowledge on lower education levels before entry into TE. Through international comparisons (like PISA and TIMSS) mismatch between the school grades and achieved knowledge can be detected in Slovenia. Reduced number of young people in one generation has enabled entry to gymnasiums with almost no restrictions, therefore in the most demanding program of general upper secondary education may enter "anyone, whatever his abilities, aspirations and willingness to learn" (Babič, 2011, p. 189). Consequently the criteria and level of knowledge is decreasing as well as the quality of achieved knowledge10 (Zupanc, 2010b). Zupanc (2010b, p. 161) also notes that a "significant

10 The abolition of compulsory external examination (National External Examination) in the final year of primary school, has resulted in a remarkable decrease in the number of best matura graduates in 2010 (Babič, 2011, p. 193).
impact on the achieved knowledge at the end of schooling, has the proportion of the annual
generation who enrols in an individual educational program", which suggests that quantity
and quality are not always positive related.

4. TRANSITION FROM UPPER SECONDARY TO TERTIARY
EDUCATION

Transition from secondary to TE is in Slovenia very high and covers over 90 % generation,
which in the same year completes upper secondary education, four-year or more than four-
year long secondary education studies (Figure 4).

According to SORS (2010–2012) in generation 2009 the transition from upper secondary
education to TE was the highest and reached 96.5 %. Majority are students enrolled in HE
programs (85.9 %) and 10.6 % of students enrolled in HVE programs (see appendix B).

Figure 4: Percentage of generation, who in the current year enrol in TE 2004-2009


5. STUDY PLACES AND NUMBER OF STUDENTS FIRST TIME ENROLLED IN FULL-TIME UNDERGRADUATE TE
TERTIARY EDUCATION STUDIES

The impact of demographic decline has begun to show more clearly in TE when the number
of first time enrolled students in TE has decreased. Students’ entry in the first year of full-
time TE studies was increasing until 2009 and then in the next two years their number fell
sharply (Figure 5).

Figure 5 shows the number of available study places (for full-time undergraduate TE studies),
number of students first time enrolled in the first year of full time undergraduate TE studies
(hereinafter referred to as first time enrolled) and the number of enrolment potential in the
years 2006 to 2011. The most apparent is the mismatch between study places increase on the
one hand and enrolment potential decrease on the other. In 2006 there were 16 % less study
places than the enrolment potential. In 2007 there were fewer study places for 6 %. In
subsequent years, the number of study places exceeded the enrolment potential. Between
2008 and 2011 the number of study places was higher by 9 %, 14 %, 17 % and 16 %, respectively.

During the five-year period from 2006 to 2010, the number of study places in TE increased by 22 %. Between 2007 and 2008, notably the increase was due to establishment of new single HEIs (with concession), the increase in the number of public study programs with concession and also the growth of the University of Primorska. In 2009 a public institution of HE Faculty of Information Studies in Novo mesto was formed and has accepted students for the first time. TE policy had gone towards increasing the number of study places and was most successful at the time when the enrolment trend began to decline.

**Figure 5:** Enrolment potential, study places for full-time undergraduate TE and first time enrolled students in full-time undergraduate TE 2006-2010 in Slovenia

Note: The number of full-time study places in TE includes the number of study places covered by HE and HVE. In the number of students first time enrolled in full-time HE studies are included students who have enrolled during the first, second and third application deadline, without repeaters, foreign students, graduates or students studying parallel.


From 2008 onwards, study places exceeded the number of first time enrolled students (**Figure 5**). Most first time enrolled students were in year 2009 when their number reached 23,194, although 3 % study places remained unfilled. The ratio between the number of available study places and the first time enrolled students has in latest years between 2010 and 2011 increased. In 2010 11 % study places remained unfilled and in 2011 already 15 %. However, in 2011 the number of available study places has for the first time decreased by 300.

Within the TE we can distinguish differences in enrolment ratios between the enrolment dynamics of HE and HVE. **Figure 6** illustrates the total collected data and above-mentioned variables separated on HE and HVE.

5.1. **Higher education (HE)**

After 2009 the inclusion in HE has declined. Before this period the number of students first time enrolled in HE was growing steadily throughout (**Figure 6**). The increasing number of first time enrolled students was held in accordance with the policy’s increasing the number of study places, but for the predicted demographic decline HE had not responded in time.
Already in 2007 there were fewer first time enrolled students, as there were more and more study places (Table 1). The ratio between the number of study places and first time enrolled students in 2009 was 6% in favour of study places, in 2010 already 17% and in 2011 21% (see appendix C).

Table 1: First time enrolled students in the first year of full-time undergraduate HE and study places for full-time undergraduate HE 2006–2011 in %

<table>
<thead>
<tr>
<th>Year</th>
<th>Students first time enrolled according to the no. of study places in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>103</td>
</tr>
<tr>
<td>2007</td>
<td>98</td>
</tr>
<tr>
<td>2008</td>
<td>95</td>
</tr>
<tr>
<td>2009</td>
<td>94</td>
</tr>
<tr>
<td>2010</td>
<td>84</td>
</tr>
<tr>
<td>2011</td>
<td>79</td>
</tr>
</tbody>
</table>


5.2. Higher vocational education (HVE)

Number of first time enrolled in HVE has in a six-year period exceeded the number of study places, despite the annual increase in the number of places (Figure 6, see appendix C). Following suggests an increase in demand for HVE, which provides short-term study, a less demanding study process and the possibility of obtaining professional competence in line with the labour market.

Increasing the number of study places is also largely a result due to expansion of the public and private HVC network. Between 2009 and 2010 the number of study places increased due
to the increased tender places for full-time study at private HVC with a concession, which in previous years could not be detected, because the study at these schools held only part-time studies. In 2006 there were a total of 51 colleges and in 2009 already 60 (the same in 2010). Most HVCs were founded in 2007, namely five private, one public and two private HVCs with a concession.

6. CONCLUSION AND DISCUSSION

By being aware of the value of human capital to increase production capacity of the economy and thus achieving higher levels of development, the focus attention had turned to the production of TE as a long-term investment for the future welfare for both society and the individual (Ahčan and others, 2008, 1, OECD, 2008, p. 11). Maintaining the competitive advantage over others, the responsibility for the development had transferred to TEIs as the key actors in modern society (European Commission, COM (2003) 58, p. 2–3). Recently, however, especially in Slovenia, TEIs face the challenge of demographic decline, whose influence is evident in more spare study places and a fewer number of students enrolled for the first time in TE.

After analyzing enrolment trends in TE, the decreasing inclusion will certainly be most challenging for the future development not only for Slovenian TE but also European. In the last six years, the number of 19-year-olds began to decline and this trend will continue until 2060. Meanwhile, the number of study places has in the same period increased (except in 2011) regardless of the trend. There was (and still is) a decline in enrolment potential, therefore it is expected to enrol less students in undergraduate full-time TE studies. Objectives set in ReNPHE 2011–20 (2011, p. 40 and 47) highlighted the problem of demographic decline of younger generation in Slovenia until 2020 and therefore aims for increasing participation rates in lifelong learning and ensuring access for different groups of students.

TEIs have many options how to respond to future challenges. Prior to all TEIs must be quality teaching, good reputation, employable graduates, responsible and active academic staff, research excellence, cooperation with local, regional and international environment and engagement with labour market. Furthermore good use of information technology, distance and e-learning, innovative ways of teaching can bring more competitiveness and attract different types of students, also international. “Demands of the globalized economy are such that lifelong learning has become much more necessary and common in many parts of the world”(Altbach, Reisberg & Rumbley, 2009, p. 123). On the other hand in the context of internationalization and marketization more joint degrees, transnational tertiary education or TE franchise can create TE market niche. Nowadays we cannot ignore the impact of academic imperialism and the creation of more and more global TE network so it is important for TEIs to adapt and prepare for changes to come.

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  pedagogika, 61/127(2), 142–163.
Appendix A

Figure: TE enrolment rates for 19–24 years old in Europe in %.

Table 2: Transition from upper secondary education to TE

<table>
<thead>
<tr>
<th>Year</th>
<th>Upper secondary education graduates (4-year or more)</th>
<th>Enrolled in current year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Higher vocational education</td>
<td>Higher education</td>
</tr>
<tr>
<td>2004</td>
<td>18.345</td>
<td>1.415</td>
<td>15.096</td>
</tr>
<tr>
<td>2005</td>
<td>17.890</td>
<td>1.572</td>
<td>14.966</td>
</tr>
<tr>
<td>2006</td>
<td>18.366</td>
<td>1.833</td>
<td>15.411</td>
</tr>
<tr>
<td>2007</td>
<td>18.130</td>
<td>1.719</td>
<td>15.229</td>
</tr>
<tr>
<td>2008</td>
<td>17.171</td>
<td>1.695</td>
<td>14.773</td>
</tr>
<tr>
<td>2009</td>
<td>17.003</td>
<td>1.791</td>
<td>14.605</td>
</tr>
</tbody>
</table>
### Table 3: Study places for full-time undergraduate HE and HVE studies and first time enrolled in full-time undergraduate HE and HVE 2006–2010 in Slovenia

<table>
<thead>
<tr>
<th>Year</th>
<th>Higher education</th>
<th>Higher vocational education</th>
<th>Tertiary education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study places for full-time HE study</td>
<td>First time enrolled in full-time HE</td>
<td>index</td>
</tr>
<tr>
<td>2006</td>
<td>17.037</td>
<td>17.509</td>
<td>100</td>
</tr>
</tbody>
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