

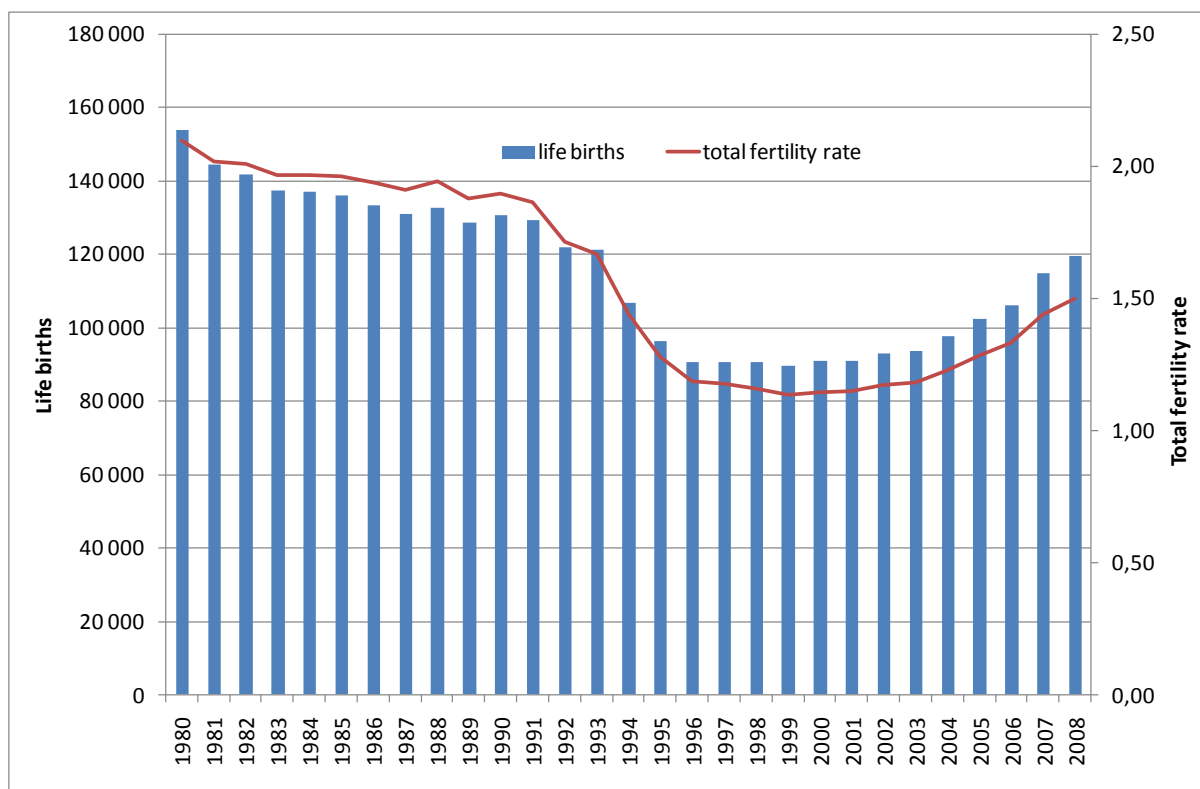
The development of the entrance to the tertiary education in the Czech Republic depending on the demographic development

Vladimír Hulík, Institute for Information on Education, Prague, vladimir.hulik@uiv.cz
Klára Tesárková, Charles University in Prague, klara.tesarkova@gmail.com

There are two theoretical concepts used for analysis of the situation of the tertiary system in the Czech Republic. The theory of the second demographic transition (which explains changes in the total fertility since 1980s) and Trow's system of tertiary education (which describes tertiary systems through entry rates, role in the society, institutional character, academic standards and other aspects) are used in the analysis in this paper.

The demographic development in the Czech Republic in 1990s was similar to the development in the Western and Northern European countries in 1960s but in the accelerated form – changes in the demographic behaviour in the Czech Republic were faster and more intensive. The number of birth in 1990s will affect the entrance to the tertiary education after the year 2010.

Graph 1: Life births and total fertility rate in the Czech Republic, 1980–2008



Source of data: The Czech Statistical Office

American sociologist Martin Trow classified tertiary education systems into three forms – elite, mass and universal (Trow, 1973). Those systems have a different role in the society. John Brennan summarized it in his article (Brennan, 2004, in Trow, 2005: 1):

1. elite – shaping the mind and character of a ruling class; preparation for elite roles;
2. mass – transmission of skills and preparation for a broader range of technical and economic elite roles
3. universal – adaptation of the ‘whole population’ to rapid social and technological change.

According to Trow, the borders among these forms were primarily set up to 15 and 50 % of the relevant age group.

“Countries that develop a system of elite higher education in modern times seem able to expand it without changing its character in fundamental ways until it is providing places for about 15 percent of the age grade. At that point or thereabouts the system begins to change its character; if the transition is made successfully, the system is then able to develop institutions that can grow without being transformed until they reach about 50 percent of the age grade.” (Trow, 1973: 7).

There was stated in the OECD Revision that the expansion of the tertiary education in OECD countries is faster than Trow’s estimations and experts suppose that it is time to reconsider the border between mass and universal tertiary education up to 80 % (OECD, 1998).

Table 1: Percentage entry rate to tertiary education according to age (age groups are in the first column) in years 1997 to 2008 (the first row), net entry rates in selected years (sums of columns) and entry rates based in cohort analysis (sums of coloured diagonal values)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
17	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
18	6,3%	7,0%	7,6%	7,7%	2,6%	0,5%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
19	6,1%	7,1%	8,2%	9,1%	11,7%	11,5%	14,0%	15,1%	16,2%	17,5%	18,3%	18,9%	
20	2,7%	2,9%	3,2%	4,5%	7,6%	10,2%	12,1%	13,1%	14,5%	15,5%	16,0%	16,7%	
21	1,7%	1,6%	1,4%	2,8%	1,5%	2,6%	2,8%	2,9%	3,2%	3,2%	3,2%	3,3%	
22	1,5%	1,2%	0,9%	1,9%	1,0%	1,1%	1,3%	1,4%	1,4%	1,6%	1,6%	1,7%	36,6%
23	1,0%	0,8%	0,6%	1,4%	0,7%	0,8%	0,8%	0,9%	1,1%	1,1%	1,2%	1,3%	
24	0,6%	0,5%	0,5%	1,0%	0,6%	0,6%	0,6%	0,7%	0,7%	0,8%	0,8%	0,8%	
25	0,3%	0,3%	0,4%	0,6%	0,4%	0,5%	0,6%	0,6%	0,6%	0,6%	0,7%	0,7%	
26	0,2%	0,3%	0,3%	0,3%	0,4%	0,4%	0,5%	0,6%	0,5%	0,5%	0,6%	0,6%	
27	0,2%	0,2%	0,2%	0,2%	0,3%	0,4%	0,4%	0,5%	0,5%	0,5%	0,5%	0,6%	
28	0,1%	0,2%	0,2%	0,1%	0,3%	0,3%	0,4%	0,4%	0,5%	0,5%	0,5%	0,6%	
29	0,1%	0,1%	0,1%	0,1%	0,3%	0,3%	0,4%	0,4%	0,4%	0,5%	0,5%	0,5%	24,5%
30-34	0,2%	0,1%	0,1%	0,0%	0,2%	0,2%	0,3%	0,4%	0,4%	0,4%	0,5%	0,5%	
35-39	0,0%	0,1%	0,1%	0,0%	0,1%	0,2%	0,2%	0,3%	0,3%	0,4%	0,4%	0,4%	
40+	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,1%	0,1%	0,1%	0,1%	0,1%	
	21,8%	23,2%	24,6%	29,7%	29,7%	31,8%	37,2%	41,0%	44,5%	48,3%	50,6%	53,2%	

Source of data: Register of university students, author’s calculations

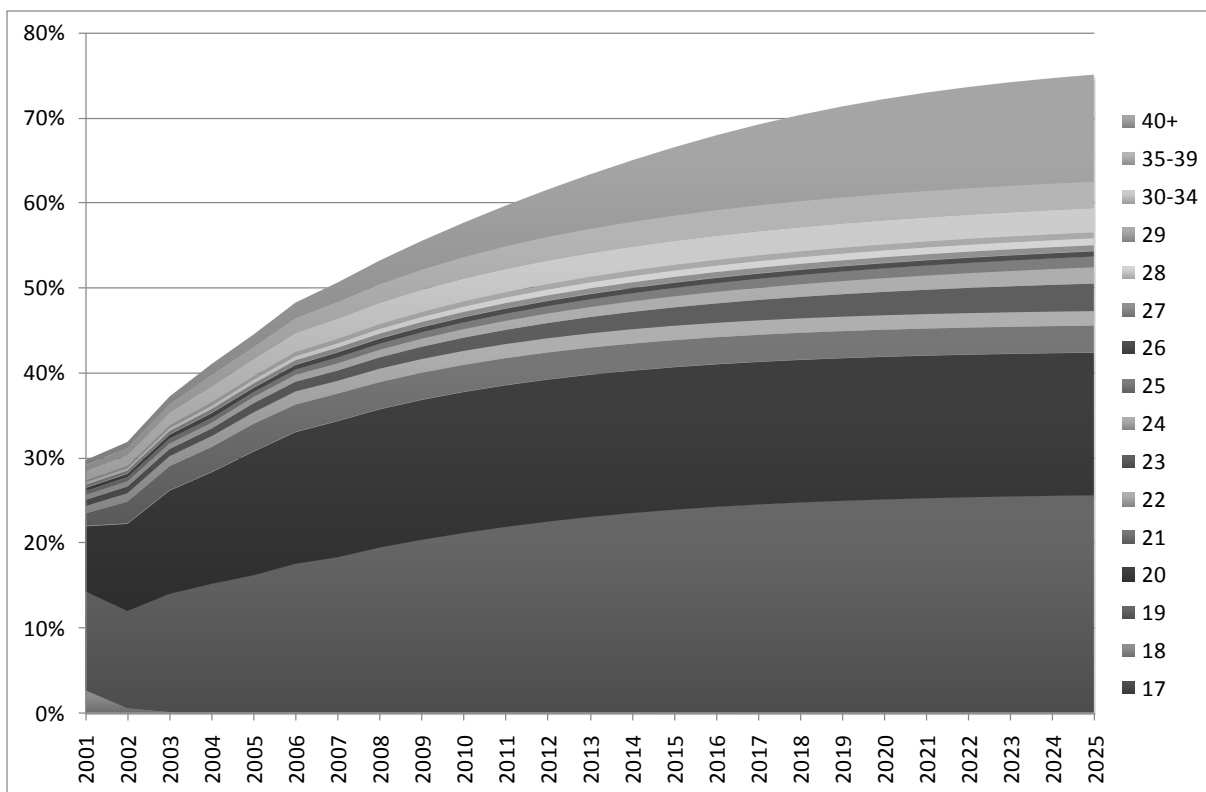
Note: The difference between green fields (percentage entry rate of 18 years old in the year 1997 and 2004) is a consequence of the change of the education system in the Czech Republic

We can analyze the tertiary systems through the **net entry rate** and the **entry rate based on cohort analysis**. The aggregated individual data are available since 2001 only for the ISCED 5A level. Massive changes in the Czech tertiary system have started after the year 2000 as a consequence of development of the European Higher Education Area and the adoption of the Higher Education Act in 1998. Table 1 shows the dynamics of the tertiary system development in the Czech Republic in the last 12 years.

Despite of the lack of data we can say that the Czech tertiary system changed from elite to mass in early 1990s. Indicator of entry rate based on cohort analysis shows that the cohort aged 18 years in 2004 will probably reach the total entry rate of 50 % finally and the Czech tertiary system is in the process of change from mass to universal. Our conclusions just a little bit disagree with OECD experts who mentioned in their report about the situation of the Czech tertiary system: *“Looking forward, it is apparent that the Czech tertiary system is approaching a mass system of education—but with persisting inequality.”* (OECD, 2006: 35).

Based on the demographic development and slight annual expansion of the entrance capacity of the Czech tertiary system we tried to forecast the net entry rates to the year 2025 by age groups. We expect increase of net entry rates in all age groups, especially in 19-, 20- and over 40-years-old. In absolute numbers there is a decrease in the young age groups (19- and 20-years-old) to the year 2019, but the number of entering from older age groups is supposed to be increasing for the whole estimated period.

Graph 2: Forecast of the net entry rate to the year 2025 (real values to the 2008)



Source of data: Register of university students, author's calculations

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