STATISTICAL OVERVIEW OF BIRTH, DEATH AND MIGRATION TRENDS AT EU LEVEL

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ABSTRACT – Statistical overview of birth, death and migration trends at EU level
RuralJobs is a collaborative research project partly funded under the European Commission Research and Development 7th Framework Program (FP7). It involves partner institutions from eight Member States. University of Debrecen is the coordinator. RuralJobs quantifies labour market, demographic and economic trends, and the impact of employment creation measures and policies in six, representative "reference areas" across the EU, and uses the information to demonstrate how rural development measures can be better targeted and how rural development policies should evolve. The Eurostat database was chosen as the main source of information for statistical analysis. The birth rates, death rates and the migration are described. According to a contemporary research the most important questions of the new generations of Europeans are: the quality of the health system, confrontation between generations on pensions, and the integration of immigrants which are closely related with employment issues.

Keywords: birth, death, migration, EU level, population

INTRODUCTION

It is forecasted that the demographic changes will cause unprecedented circumstances in the history of Europe which affects the regions prosperity, living standards and problems between generations (KWASNIEWSKI, 2005). From 2005 to 2030 the working age population of the European Union will decrease by 20.8 million (6.8%), and the age group of 65 and over will grow by 40 million (52.3%) therefore the dependency ratio will change unfavourably and the productive part of the population has to make extra efforts to maintain the cost of upbringing and pensions of the economically dependent population.
Demographic characteristics of the European Union have been changed drastically for decades. The most notable events of demography between 1999 and 2004 according to Philipov's study have been: fertility decline, postponement of births, population ageing and increased immigration (PHILIPOV ET AL., 2008). New situation arose with the enlargement of the EU in 2004 and 2007 when ten and two countries joined the Union respectively. The study of PHILIPOV ET AL., (2008), the most important questions of the new generations of Europeans are: the quality of the health system, confrontation between generations on pensions, and the integration of immigrants. Continuous follow up of demographic events and their effect on other areas is needed to tailor the policy of the community.
BIJAK ET AL. (2007) studied the impact of international migration on population ageing and developed population and labour force projections for 27 European countries. Based on the analysis of fertility, mortality, economic activity, assumptions on migration flow data and probable policy developments the research concluded that negative trends in population and labour force aging will not be compensated by reasonable immigration. The statements

have reference to the EU as a whole but in regions like Andalusia where the immigration is important the different patterns of behaviour of immigrants in terms of fertility lead to a change of trend and a greater increase in fertility rates which may result in population growth locally.

If fertility rates remain on the current level, EU population will be decreasing significantly, the ratio of elderly will increase, the number of working people will decrease, and the ratio of dependent population will grow. This negative trend should be changed to secure the increasing standard of living and economic development of the European citizens. One way of solving the problem of decreasing population is to increase the immigration. The UN Population Division determined the size of the immigration to the EU which counteracts the effect of low fertility rates to maintain current number of population. BOUVIER (2001) assessed the effects of immigration on the future of the European Union. Taking as a first base the fact that reproduction is density-dependent for many species LUTZ ET AL. (2006) studied the relationship between population density and human fertility on the time series of 145 countries. It was found that there was a negative relationship between population density and human fertility and individual fertility preferences were also in negative relationship with population density which suggests that population density should be taken into account when fertility issues are studied. In the same time this reationship affects negatively the sparsely populated rural areas.

The reason of population decrease in rural areas and increase in urban areas is believed as the consequence of better life conditions in urban areas than in rural areas. However GÓRZ AND KUREK (2000) learned from a research that since the growth of population was higher in rural areas than urban areas the living conditions were on a much more lover level in rural areas than urban areas. Rural areas were characterised with economic inefficiency, low living standards, high state support, hidden unemployment on small family farms, inefficient use of labour, decreased house building and domestic overcrowding. Similar tendencies happened in Romania where the population with small area of holdings migrated to rural areas in a hope to make a living on farming but the lack of capital, the lack of adequate knowledge and the small average size of holdings resulted in inefficient production and a low standard of living.

Aging population is also a significant problem of many non European countries. According to KINCANNON ET AL., (2005) the sum of the older population, aged 65 and over, of China and the United States was 29 % of the world's population in 2000. This number of elder people will grow double in size over the following three decades. The ratio of older population support and the effect of economies wellbeing of the population are significant questions of both countries.

METHODOLOGY

The Eurostat database was chosen as the main source of information for statistical analysis. The birth rates, death rates and the migration are described. When the data base was selected the following considerations were important: availability of data for all the EU 27 countries on national and regional (NUTS2 and NUTS3) level. The examined time period was from 2000 to 2006, the end was determined by the availability of data on the Eurostat database. Tendencies were evaluated by comparing the data of the first year and the last year of the examined period. Taking into account rurality the regions were divided into three groups: predominantly urban regions (PU), intermediate regions (IR) and predominantly rural regions (PR). The categorisation of rurality based on the methodology

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of the Organisation for Economic Co-operation and Development which method uses population density as the criteria of rurality.

RESULTS

The growth of a population depends on the number of births and deaths in a time period *(Table1 1)*. Natural change of population does not take into account the alteration of the population from immigration and emigration (net migration). Natural change of population is equal with crude birth rate minus crude death rate which shows the increase or decrease of a population in a certain time period. Crude birth rates were 9.78 (PU), 9.46 (IR) and 9.21 (PR) in the EU in 2006 which values were lower than crude birth rate values in 2000. Crude death rates ranged from 9.86 (PU) to 10.95 (PR) in 2006. The natural change of the population was different in PU, IR and PR regions of the EU being the less intensive in PU regions (-0.69), and the more intensive in PR regions (-2.67).

Table 1. Births rate (crude), deaths rate (crude) and population change in the EU27, NUTS3
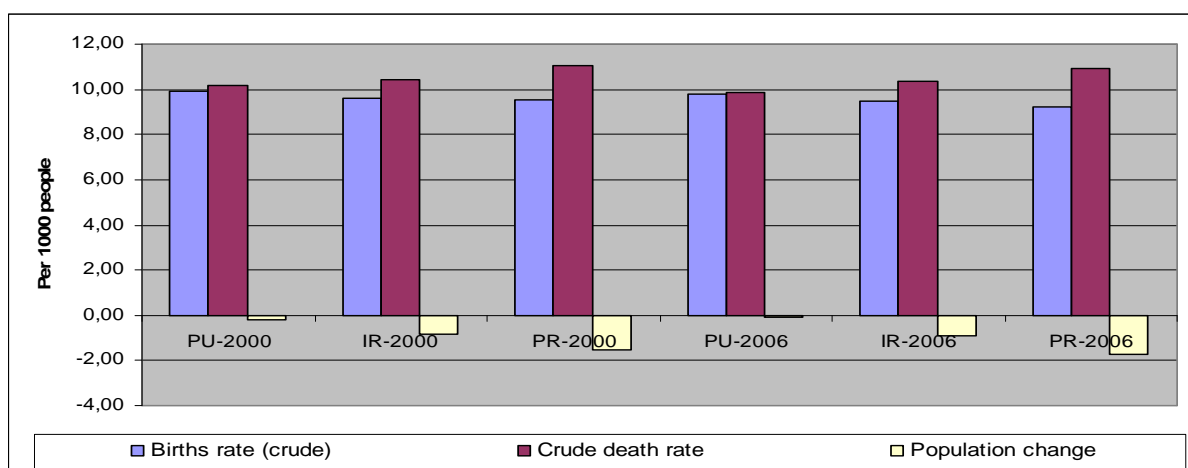
Source: Eurostat General and regional statistics, 2000, 2006

Table 2. Births rate (crude) NUTS 3

	2000-2006		
	%		
	PU	**IR**	**PR**
Average	-1.68	-1.72	-3.56

Source: Eurostat General and regional statistics, 2000, 2006

Crude birth rate values decreased in each category in PU, IR and PR regions by 1.68%, 1.72% and 3.56% *(Table 2)*. This tendency shows that the birth rate became more unfavourable in time in each region type but the pace of decrease was more than double in PR regions than in PU regions.
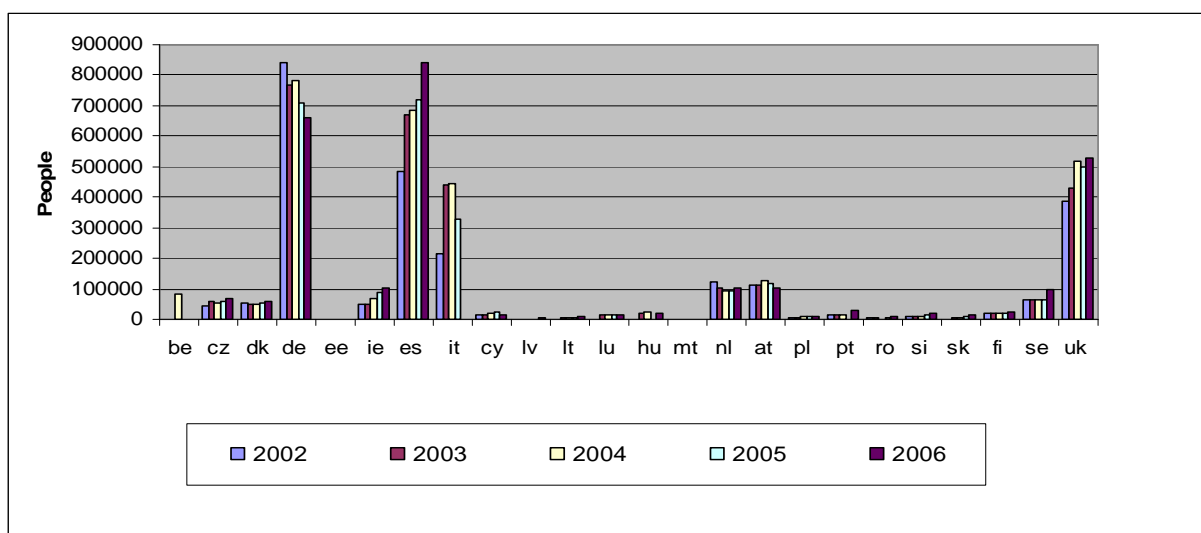
Table 3. Crude death rate NUTS 3

	2000-2006		
	%		
	PU	IR	PR
Average	-2.86	-0.79	-1.01

Source: Eurostat General and regional statistics, 2000, 2006

The crude death rate also decreased in PU, IR and PR regions by 2.86%, 0.79% and 1.01% respectively which trend relatively favourable for the urban population and adverse for rural people *(Table 3)*.
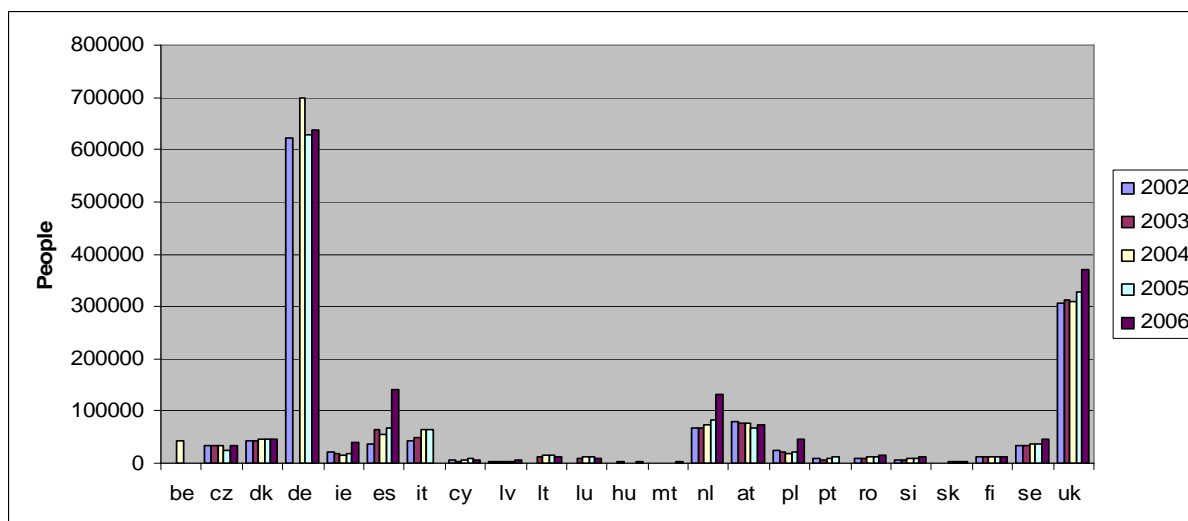
Table 4. Total immigration

Source: Eurostat General and regional statistics, 2002, 2006

The natural change of the population was found negative in PU, IR and PR regions of the EU but the average number of population increased moderately in the examined categories. The source of the increase of the population was the net migration to the EU. Since the ratio of missing immigration and emigration data is rather high, years of 2002-2006 with the most complete dataset was chosen to present an example of migration in different countries. Immigration to EU countries shows a very diverse picture. There were countries being extremely attractive for immigrants like Spain, Germany, Italy and the UK *(Table 4)*. These countries received more than two times of immigrants than the next countries with a rather high number of immigrants e.g.: Ireland, Netherlands, Austria, and Sweden. The immigration in absolute values to the remaining countries was on a low level. More immigrants arrived from outside the EU25 countries as the average total immigration was more than twice as big as the average immigration from the EU25.

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Table 5. Total emigration

Source: Eurostat General and regional statistics, 2002, 2006

The number of emigrants was a small fraction of the number of immigrants in the EU in the period of 2002-2006 *(Table 5)*. Germany and the UK were the most important immigrant countries and these two countries had also the biggest numbers of emigrants. The goal of emigrants was mainly a country out of the EU25 and only less than half emigrants aimed on EU25 country.

Table 6. Total net migration
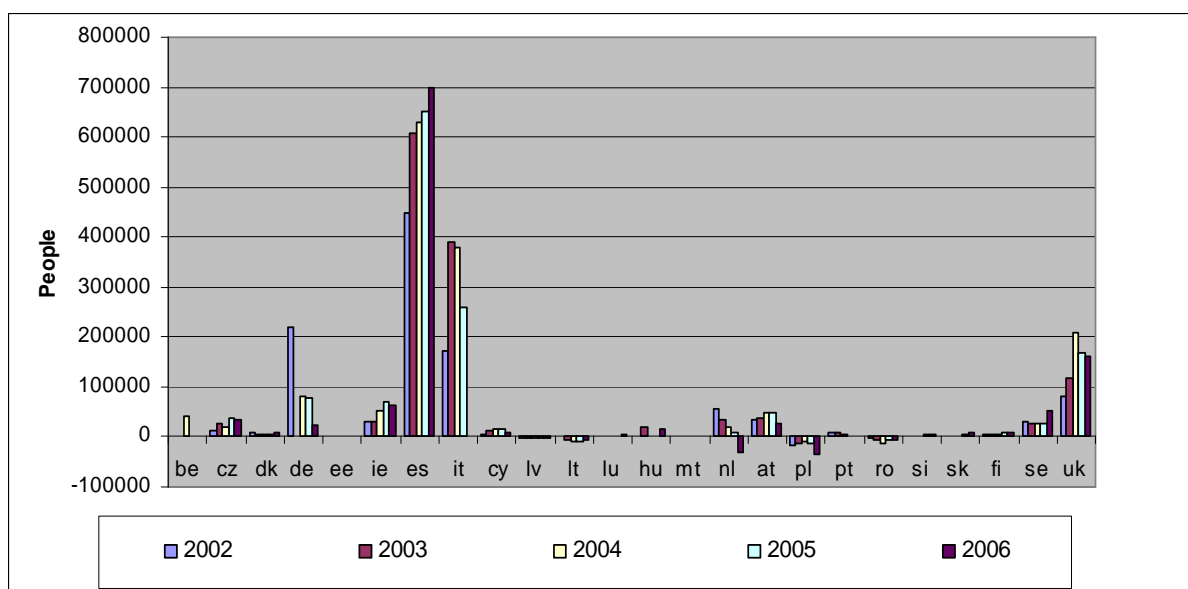
Source: Eurostat, 2002, 2006

Net migration, the difference between immigration and emigration, crude birth and crude death values of a time period determine the population change in a region *(Table 6)*. As the natural change of population was generally negative the source of population growth came from the net migration in the regions where population growth was experienced. Countries

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with higher net migration values usually had a population increase e.g.: Germany, Ireland, Spain, and the UK. Some eastern European countries with less developed economy had a negative net migration like Poland, Romania, Lithuania and Latvia. The Netherlands with a high negative net migration was an exception in 2006 which was an extremely high value since the population growth was positive from 2002 to 2006.

CONCLUSIONS

The immigration policy of a host country has to be adapted to the requirement of the labour market and to the needs of the immigrants. Immigrants' inclusion into the society or marginalization depends in a great deal on the law of the host country. The tendency of natural population change increased the disadvantageous position of rural areas. Crude birth rate decreased in PU, IR and PR regions of the EU from 2000 to 2006 and the decrease was more than double in PR regions than in PU regions. The crude death rate also decreased in PU, IR and PR regions which trend relatively adverse for rural people. The natural change of the population was different in PU, IR and PR regions of the EU with the best in PU regions and the least favourable in PR regions. Low fertility rates caused population decrease in every RuralJobs countries; however net migration did compensate this negative tendency in some areas. In France, Italy, Spain and the UK immigration was more intensive then emigration that led to population growth, but in Bulgaria, Hungary, Lithuania and Romania migration showed opposite tendencies which only deepened the demographic problems.

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