DEMOGRAPHIC TRENDS AND SOCIO-ECONOMIC INDICATORS IN EU AND GREECE

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Over the last decade Greece has achieved impressive converging trends with the rest of the European Member States. Real GDP growth outstripped the EU-25 average growing at a rate of more than 4.5%, unemployment has been declining since 2000, social expenditure has been increasing and life expectancy is one of the highest among the EU-25 Member States.

The main aim of this section is to provide general information concerning demographic trends, and socio-economic indicators in the E.U. Member States and Greece. It is generally accepted that there are many dimensions in which demography, health and quality of life could be measured. From the wide range of macro and micro indicators we have selected some indicative indexes which would portray the current state of development in life expectancy, health status and quality of life in Greece.

This chapter is divided into three parts. The first part presents a comparative view of population trends, life expectancy, mortality, disability and quality of life in EU-15. The second part focuses on Greece and discusses population growth and health status trends i.e. infant mortality trends over the period 1955-2004 and incidence of Aids and road traffic accidents. Finally in the third section we make use of some demographic and socio-economic indicators in order to analyze social cohesion and income inequalities in the accession countries.

EUROPEAN COMPARISONS

This section considers some international comparisons of demographic trends in the EU-15. There are some problems concerning the comparability of the international statistics, and the value of the calculated indexes. In order to avoid any conceptual miss-interpretations we focus only on validated indicators which have been developed by the Eurostat, the World Health Organization and the European Commission.

Population trends in Europe

In 2005, the population of the European Union (EU-25) was 459 million. On the base of this estimate, Europe is the third largest geographic unity in the world, after China (1,253 million), and India (1,009 million). It is also ahead in comparison to the population of United States (274 million) and Japan (126 million). The population of the accession members, i.e. the twelve countries that are in the face of membership negotiations, is around 106 millions.

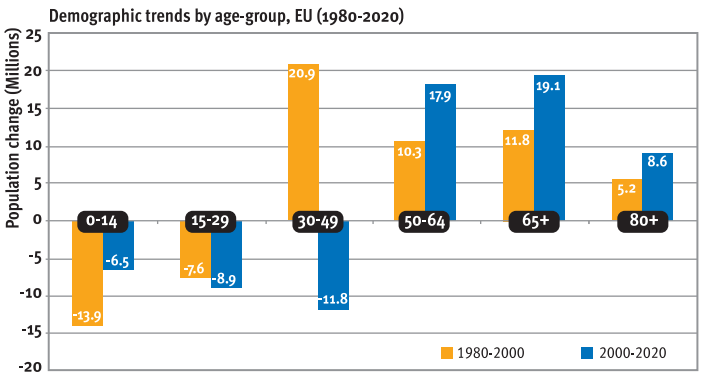
In the forthcoming decades of the second millennium, one of the striking aspects of the European Community's Social and Demographic problems is the increasing rate of the ageing. The extent and form of ageing varies significantly from one Member State to another.

In 1960 there were only 34 million elderly (above 65 years of age) in the EU-15. In 2000 this figure was almost double reaching the level of 60 million. The future prospects are gloomier since the proportion of elderly is expected to rise from 16% in 2000 to 27% in 2010.

In an effort to qualify the expected demographic trends over the period of the next 20 years (i.e. 2000-2020) we can clearly distinguish (see Diagram 1) between three broad age groups, which will undergo impressive changes.

1) The group of young people (0-29) is expected to fall by 15.4%. This reduction is expected to have an immediate impact on the educational infrastructure as well as on the social and health services relevant to the younger population. Despite this reduction, it has been pro-

Diagram 1 Demographic trend in the European Union



Source: Eurostat-1995 based (baseline) household projections

posed by the European Commission and the OECD that attention must be paid to ensuring a high equality of educational services. (Diagram 1)

2) The age group of working population (29-64) will present initially a decline by 11.8% in the age group 30-49, followed by a substantial increase by 17.9% in the age group 50-64 years. The net effect of the group (29-64) is expected to be an overall increase by 6.1%. This change will bring a profound impact in the labour force and the corresponding productivity.
3) The group of elderly (+ 65) will witness an impressive increase by 27.7%, generating new demands for elder services and imposing an extra burden in the pensions and health care services.

There are three predominant factors that have an important impact on the ageing of the European Population.

- The first is the continuous fall in fertility rates
- The second is the extended longevity and
- The third is the impressive decline in mortality.

We discuss below the significance of each of the above factors.

Fertility

The rate of fertility is defined as the average number of children that would be borne alive to a woman during her lifespan under the assumption that current fertility rates would continue. The average fertility rate dropped in the EU-25 from 2.35 in 1970 to 1.48 in 2000.

Declining fertility trends have been observed in all European Member states over the last three decades. Diagram 2 provides a comparable picture of the fertility rates in 1970 and 2000 across the EU-25.

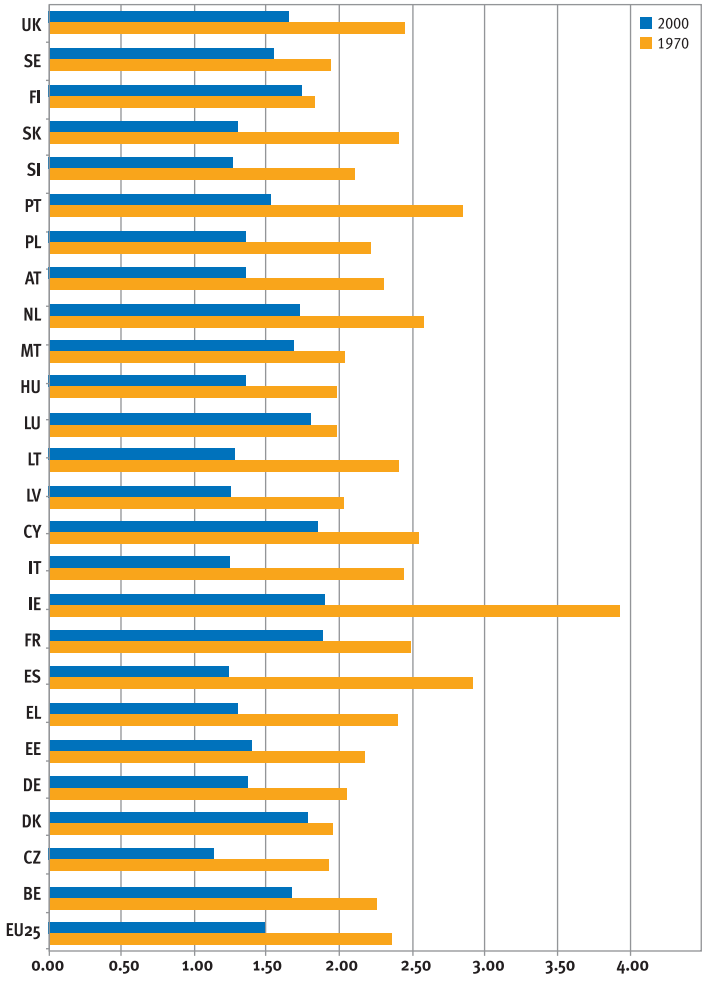
The Southern European Countries with the highest fertility trends in the 1970s and 1980s present currently (in 2000) the lowest rates. In Greece the fertility rate dropped from 2.39 in 1970 to 1.29 in 2000. Similar trends have been observed in Spain and Italy.

Life Expectancy at birth

A measure of the expectation of life at birth has the advantage of describing the overall mortality of a population in a more summary fashion than the mortality rates. Life expectancy indicators are calculated from life tables which present the record of survival and mortality within a hypothetical cohort (tables of life's generation), subject to the sequence of age specific mortality rates, estimated during a given calendar period among actual age cohorts.

Life expectancy has been constantly increasing across all the EU Member States. The total gain in years during the second half of the century is around ten years. Despite this success there have been significant differences among the EU-25 countries. In 2004 the male life expectancy at birth varied from 65 years in Latvia to 78 years in Sweden. A wider gap of 18 years could be identified among the countries with reference to the female life expectancy ranging from 76 years in Latvia to 84 years in Spain. Except the inter-regional variation, striking inequalities in

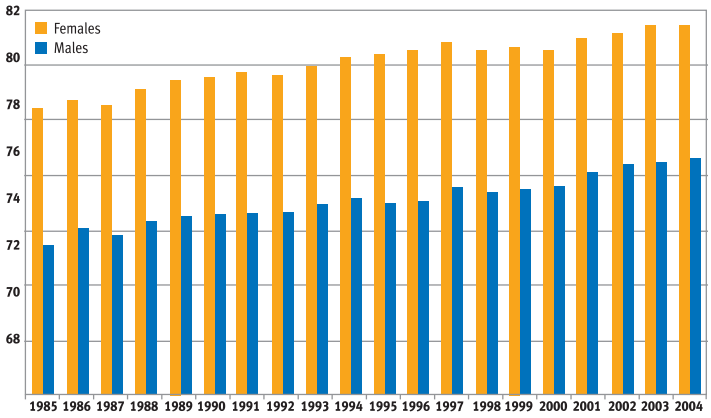
Diagram 2 **Fertility Rates in EU-25 (1970-2000)**



gender life expectancy have been identified within the countries ranging from more than 11 years in Latvia and Lithuania to 4.4 years in U.K., Sweden, and the Netherlands. In Greece a difference of five years between male and female life expectancy is observed over time. Diagram 3 presents the life expectancy trends for males and females over the period of 1985-2004.

On the base of diagram 3 we may distinguish two periods: The first period (1985-1997) is characterised by expansionary trends and the second one (1998-2004) by slightly stabilising trends life expectancy. Overall the decrease in fertility and the increase in life expectancy are the prime factors responsible for the ageing of the population in the EU countries.

Diagram 3 Life Expectancy at Birth in Greece: (1985 - 2004)

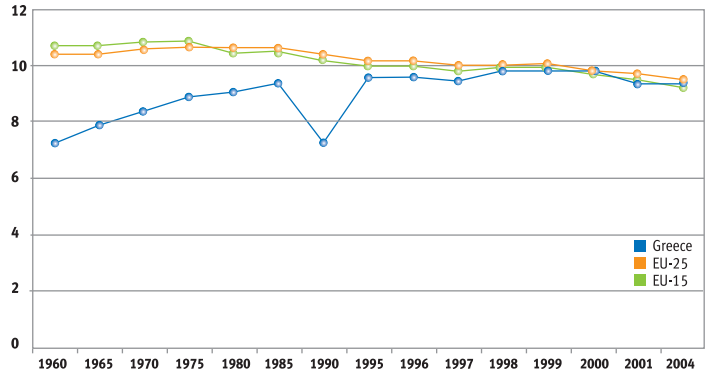


Mortality Trends

One of many purposes for measuring mortality is to enable us to draw inferences about the likelihood of death occurring within a specific period of time (age). A reason for doing this is that the risk of dying varies with a number of factors such as: age, sex, geographical locality of residence, occupation, income, lifestyle, as well as the availability of health services.

Examining the total causes of deaths which have been standardised (direct method) for age and sex, and are expressed in rates per 100,000 individuals, we found that Greece appears to be a country with the lowest death rates among the EU states. Diagram 4 provides a comparative view of the crude death rates in Greece in comparison with EU-15 and EU-25 over the period 1960-2004. Lower death rates were assessed in Greece during 1960s to 1980s followed by converging trends in the 1990s and early 2000s .

Diagram 4 Crude death rates in EU-15, EU-25 and Greee (1960-2004)



	SEX	CAUSES	1994	1995	
GR	MALE	Neoplasms	217.40	217.20	
		Ischemic	123.30	128.10	
		Suicide	5.10	5.50	
		Accidents	31.10	33.80	
	FEMALE	Neoplasms	115.40	114.40	
		Ischemic	54.30	56.90	
		Suicide	1.20	1.10	
		Accidents	9.20	9.80	
EU15	MALE	Neoplasms	266.60	262.80	
		Ischemic	168.60	167.00	
		Suicide	18.50	18.10	
		Accidents	19.1	18.50	
	FEMALE	Neoplasms	147.70	145.20	
		Ischemic	81.10	80.10	
		Suicide	5.80	5.80	
		Accidents	6.10	5.80	

Source: Balourdos D. 2006. National Centre for Social Research.

Table 1 provides an overview of the main causes of death for males and females in EU-15 and Greece.

As far as the rest of causes of death are concerned, we can see in table 1 that neoplasms, ischemic heart diseases,and suicides, in Greece are lower in comparison to the EU-15average The life style, diet, and environment are among the factors contributing to this changes.

Disability Adjusted Life Years

The World Health Organization (WHO) has developed a widely accepted methodology in measuring the health status of different nations across the globe. The main idea was to device an indicator, which is not restricted to the description of death, but to reflect the impact of a wide range of risk factors upon health. Christopher Murray, Executive Director of WHO's Global Programme on Evidence for Health Policy, undertook the responsibility to develop a comparable approach based on the combination of mortality and morbidity. The new indicator was called DALY (Disability, Adjusted Life Years) and it is a composite indicator taking into account the impact of several risk factors upon mortality and morbidity. The loss of one healthy year of life is equal to one DALY.

In diagram 5 we present the relationship between per capita health expenditure and the estimated DALYS for different European and Accession Countries. We witness a positive relationship between DALYS and health expenditure supporting the hypothesis that more economic resources would improve markedly the health of the accession countries. However the effect on the wealthier nations of the European Union is only marginal.

Factors contributing to living standards and Quality of life

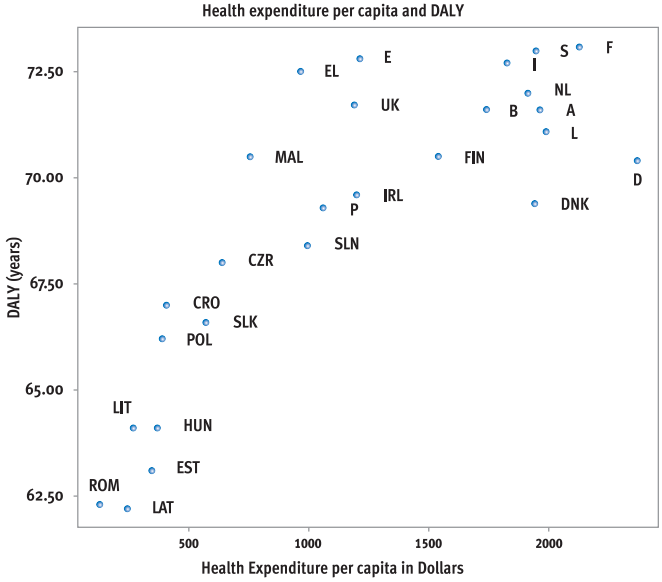
During the last decade it has been a growing interest among politicians, administrators and social policy analysts to investigate the

	1996	1997	1998	1999	2000	2001	2002	2003
	218.20	217.20	211.80	218.30	221.40	223.80	215.10	217.90
	130.10	128.50	119.80	122.20	122.00	124.40	121.30	126.40
	5.20	:	:	:	:	:	4.20	5.10
	34.00	:	:	:	:	:	24.30	24.30
	116.60	115.00	112.40	114.20	114.80	116.50	116.20	113.20
	56.90	56.20	51.80	52.80	53.70	55.60	55.50	58.80
	1.00	:	:	:	:	:	1.00	1.10
	10.60	:	:	:	:	:	6.80	5.60
	259.00	253.70	252.60	233.20	242.10	242.10	:	:
	160.90	153.60	151.20	133.00	135.90	131.70	:	:
	17.40	17.30	16.90	15.70	16.00	15.80	:	:
	17.70	17.70	17.60	17.00	15.70	15.60	:	:
	144.00	141.90	140.60	142.30	137.20	136.80	:	:
	77.50	74.60	73.70	64.60	66.00	64.20	:	:
	5.70	5.60	5.10	4.50	5.00	4.90	:	:
	5.60	5.40	5.50	4.60	4.80	4.70	:	:

quality of life issues and to devise methodologies aiming at its measurement. Several International Organizations like the WHO and the OECD have launched several studies on living conditions promoting quality of life issues as a key concept for assessing subjective valuation of several dimensions of well being in different cultural settings.

In early 1995 the Executive Board of WHO approved a programme on quality of life of the elderly aiming at the investigation of different perspectives related to:

Diagram 5 DALYS and Health Expenditure



- Life Course of the elderly who are not compartmentalized,
- Health promotion for the elderly
- Cultural settings
- Gender differences
- Inter generational cohesion and
- Ethical considerations.

The programme aimed at the collaborative work between various academic and non-governmental organizations in order to create data bases for policy strengthening, advocacy, and implementing community based programmes.

Further to WHO, the OECD initiated several studies on social indicators promoting the measurement of quality of life as a key instrument for assessing subjective well being.

Taking this experience into account the European Commission launched in 1999 the Eurobarometer study EB 52.1 aiming at the measurement of quality of life and the factors influencing it, using a multidimensional set of indicators. The validity and reliability of the obtained results were compared with other studies and it was found that the developed methodology was feasible for comparing quality of life across countries.

The term quality of life is defined here as the European Citizen's subjective perception of happiness or satisfaction with his/her living standards and the consumption of public goods and services. There are many factors influencing quality of life. Health, consumption patterns, income, family relations, housing and social environment and personal security are only a few indicative factors which are discussed at some length below. The term quality of life, despite its multidimensional aspects (i.e. physical, psychological, social participation, cognitive etc.) is used here in a generic form, capturing the widest possible factors that describe personal satisfaction with all conditions of living. As such, the term encompasses all individual's perceptions and attitudes towards the general concepts of quality and living standards which are the core concepts for our analysis here.

Examining the factors influencing the quality of life standards across the European member states it was found that: good health (25%), sufficient income (15%), a caring family, nice home and friendly neigbourhood are among the core factors according to Europeans' subjective evaluation that contribute to their quality of life.

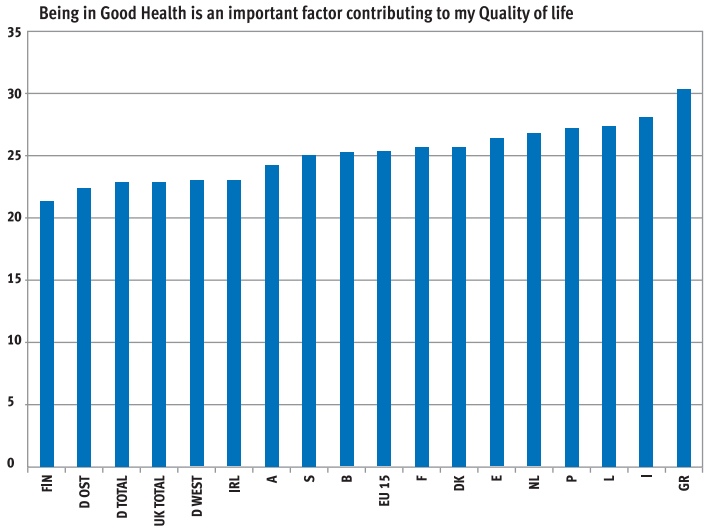
Obviously there are several differences among the European countries in the hierarchical order of listing the factors. However, good health and sufficient income are the most prominent issues which came on the top of the list across all member states. Analysing further the responses on the relationship between quality of life and health we found that among all the European Citizens the Greeks assign the greatest value on their health (Diagram 6). Being in good health is the top priority among the Greek citizens.

GEOGRAPHY AND POPULATION GROWTH IN GREECE

Geography

Greece is geographically characterised by mountains and a scattering of small islands. The total land area amounts to 131,944 km^2, of

Diagram 6 Quality of Life in EU



which 29 per cent is arable, 39 per cent is permanent meadow and pasture and only 12 percent is urban.

Officially Greece is divided into fifty-one counties (nomos) and thirteen regions. There exist one hundred and sixty nine inhabited islands which constitute about 19 per cent of the total land area and they are populated by 17 per cent of the total population. Communications between the islands and the mainland have improved considerably in recent years mainly as a result of tourism, but still certain difficulties remain in comparison with the rest of the European Countries.

Population Growth

The rate of natural increase in a population over time is defined as the difference between the crude birth rate and crude death rate, plus the rate of net migration. In studying the nature of population growth in Greece it suffices to say that natural, ethnical and historical reasons have combined to produce an uneven distribution of the population, so that more than one third of the population now lives in the Athens area, which represents less than 5 per cent of Greece's territory.

Some 56 per cent of the industrial establishments in the country and 48 per cent of the wage earners in manufacturing industries are located in this area.

According to the 2001 population census, there were 10,939,605 inhabitants in Greece of which 49.58 per cent were men and the rest 50.42 per cent women. In the period 1971 - 1991 the proportion of males has remained fairly constant, ranged from 48.9 to 49.0 of the total population.

The population of Greece grew by 4.7% between 1981 and 1991, following an increase of 11.1% during

Table 2 Population of Greece by sex and major age groups

YEAR	TOTAL	MALES	FEMALES	0-14 YEARS	15-64 YEARS	65 & OVER YEARS
1971	8,768,372	4,286,748	4,481,624	2,223,904	5,587,352	957,116
1981	9,739,589	4,779,571	4,960,018	2,307,297	6,192,751	1,239,541
1991	10,252,580	5,051,553	5,201,027	1,880,800	6,866,400	1,452,800
2001	10,939,605	5,424,089	5,515,516			

Source: National Statistic Service of Greece

the previous periods. In the decade 1991-2001 the rate of growth was 6.7%. (See table 2)

During the 1960s and 1970s a substantial migration took place from the rural to the urban areas. The decline in most rural areas (especially the Ionian and Aegean Islands) occurred mainly due to an exodus of the younger generation (from 25 to 45 years of age) from their villages to Athens or Salonica, or alternatively to other developed countries. This movement is responsible for a profound demographic change which has resulted in a skewed distribution towards the aged combined with a negative growth in most of the rural areas.

By studying the reproduction rates of rural and urban populations in Greece, we get the impression that since 1950 live births increased in the urban population and decreased in the rural population. But the number of deaths increased in both segments. The excess of births over deaths increased in the urban areas and decreased precipitously in the rural areas. Evidently the problem of low-natality appeared strongly in the rural population. Depletion of the rural population through migration to large cities and the progressive ageing of the remaining population are the main causes for the low-natality observed in the rural population.

Infant mortality trends

Infant death rates refer to deaths which occur within the first year of life. Neonatal death rates refer to deaths which occur after the first day of birth until the 27th day, and the post-neonatal death rate refers to the period between the 28th day after birth until the 365th day. These death rates are often especially responsive to changing conditions of infectious diseases, nutrition and medical care, and they are widely considered to be more sensitive indicators of the environmental factors affecting the level of health than are death rates at later ages.

By analysing infant, neonatal, and post-neonatal mortality rates according to their cause of death, and by distinguishing between rural and urban populations, the most common causes of death, especially in rural areas, are seen to be due to infectious diseases, injuries incurred at birth, post-natal asphyxia, diseases peculiar to early infancy and immaturity.

Analysing the Greek data we can describe briefly the following facts:

- The rate of infant mortality is

decreasing in the urban areas, but it is rather difficult to identify the rural rates due to statistical deficiencies. It should be noted that infant mortality in the 1950s and 1960s has been systematically under - reported (especially neonatal) in rural areas. The registration of infant deaths in rural areas has shown a little improvement since the early 1960s when the majority of these events occur in maternity clinics or hospitals, however still there exists a lack of completeness in the registration of infant deaths.

- The rate of neonatal mortality showed an upward trend in urban areas until the middle 1960s. After 1966 this rate has been declining constantly. The rural areas has been showing a decreasing rate of neonatal mortality but as it has been reported by the Greek Statistical Office, this is an error attributed to the lack of efficient statistical services in rural areas.
- The rate of post-neonatal mortality is generally decreasing. The rate of decrease appears to be much higher in urban rather than in rural areas, and there has been observed a continuously widening gap between rural and urban post-neonatal mortality rates.

Infant mortality in Greece is reported adequately, with some minor problems in rural regions, particularly with regard to neonatal mortality. Total infant mortality has declined significantly over time (see diagram 6), from 43.52% in 1955 to less than 5 per thousand live births in 2004 (see Diagram 7).

HIV/AIDS

The number of new cases of AIDS per million of population is decreasing in the EU countries. Improvements in the basic level of knowledge and preventing actions implemented by the governments and non-governmental organisations contributed to the decline of AIDS pandemic. Several programmes were launched aiming at behavioural changes of populations at risk such as homosexuals, drug users, migrants and sex work-

Diagram 7 Infant Mortality Trends in Greece (1960-2004)

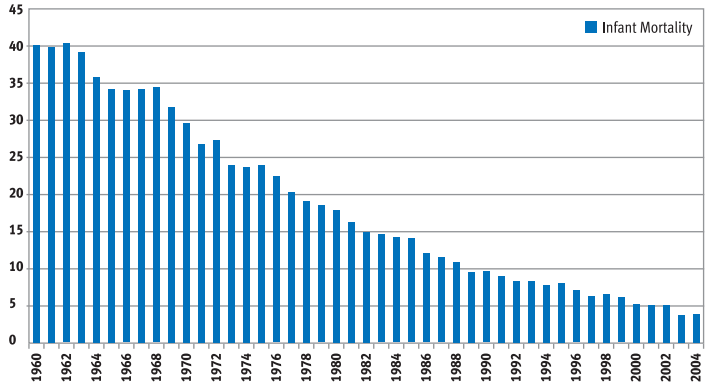
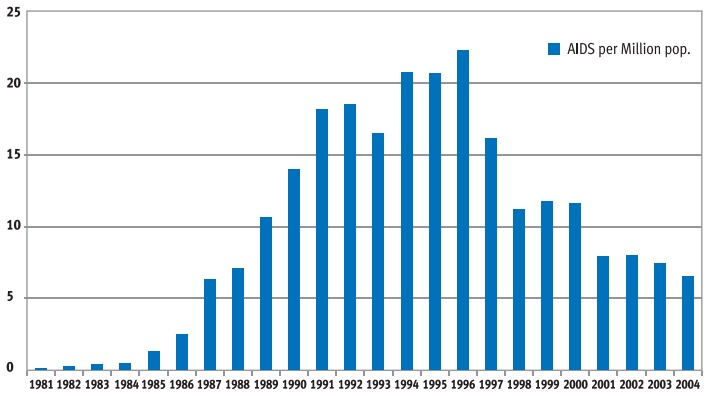


Diagram 8 Aids Incidence per Million Population in Greece (1981-2004)



ers. The Ministry of Health and Social Solidarity in Greece in collaboration with NGOs and other organization stimulate and support preventing actions to control AIDS and to provide practical advice and assistant for promoting HIV testing and counselling to fight against the epidemic. Diagram 8 highlights the AIDS incidence trends in Greece over the period 1981-2004.

On the base of Diagram 8 we may distinguish two periods: the first, 1981-1996 is characterised by increasing trends and then the second 1997 -2004 by declining trends. The monitoring of the epidemic in conjunction with prevention actions contributed to the decline of the epidemic.

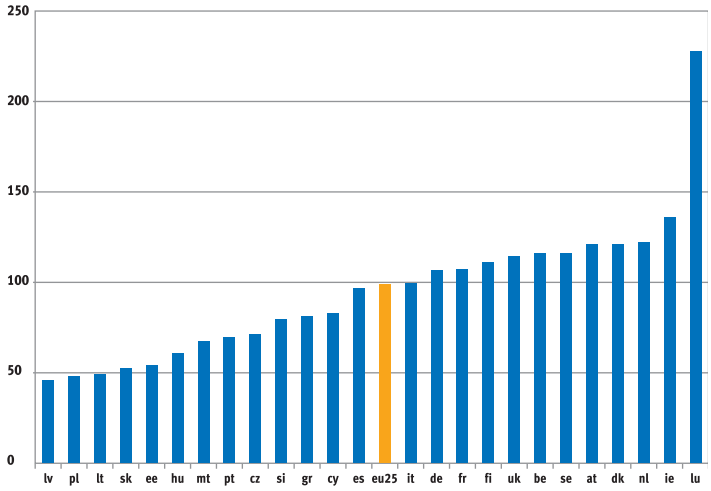
ACCESSION COUNTRIES

In 2005 all the applicant countries had a lower GDP per capita expressed in PPS (Purchasing Power Standards) than the EU-25 average. However the range among the Accession Countries is considerable, going from very low values in Latvia (46.4), Poland (50), and Lithuania (50.9) to higher values in Slovenia (81.2) and Cyprus (84.5). In other terms, GDP per capita in the applicant countries ranges from 46.4% to 84.5% of the EU-25 average.

Diagram 9 provides an overview of the income variation among the EU and the Accession Countries. Excluding Luxembourg, all the rest of EU countries present a variation of their GDP close to the average. The Enlargement countries, after marked declines in their GDP growth rates, during the transition period to a market economy, they present convergent trends with the rest of EU States. However, still they confront considerable lags in the catch up process. In 2005 Slovenia (81.2) and Czech Republic (72.7) had an income per capita higher than Portugal (71.7) and much closer to Greece (83.1) reaching the bottom limit of the EU Countries.

GDP per capita in Purchasing Power Standards (PPS), (EU-25=100)
One of the EU's principal objectives is to strength the economic and social cohesion by ensuring an

Diagram 9 GDP per capita in PPS in 2005



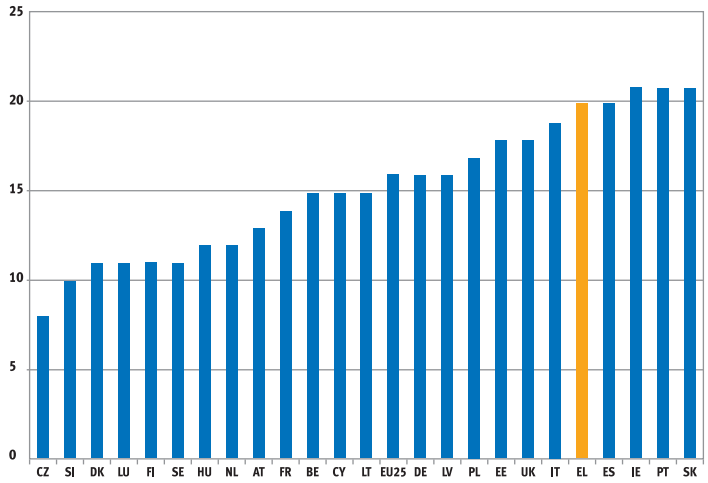
overall harmonious development. As it is stated in the EC Treaty (Art.2) "the Community shall have at its task..." the continuous "rising of the standard of living and quality of life". Social cohesion often implies "greater equality in economic and social opportunities".

Examining social cohesion in the Accession Countries we shall adopt the common methodology which argues that one of the dimensions of social cohesion is the fight against poverty and social exclusion. We should underline here the difficulties in drawing comparisons between Eastern and Western European Countries, as well as within the Eastern countries since the publication of income data under the Communist regimes was extremely restricted. There had been several supporters of the hypothesis that socialism had reduced income differentials and developed effective policies to reduce or even eliminate poverty. Despite the lack of historical income statistics, an effort is made here to provide evidence presented by the Eurostat and the European Commision.

Poverty and Social Exclusion

Poverty and social exclusion is a multidimensional phenomenon. They are close related to income, employment and educational status and to access of high quality health and welfare services. This section provides a brief overview, a snapshot, of the poverty and social inclusion situation in the European Union (EU-25). Although there are several definitions of poverty we will restrict ourselves to a more general approach proposed by the European Commission. The objective is to specify comparable indicators across all the European Member states, which would provide adequate information for shaping policies to combat poverty and social exclusion. According to the Eurostat definition individuals are considered to be at risk of poverty if their household income is below 60% of the national equiv-

Diagram 10 **Poverty Rates in EU-25 in 2003**



alised median income. In 2003 the average poverty rate in the EU was 16% (Diagram 10).

Diagram 10 portrays considerable differences among the EU-25 States ranging from 8% in the Czech Republic to around 21% in Ireland Portugal and Slovakia. Greece is classified among the countries with the highest rates of poverty. Around 20% of the Greek population is living below the poverty line. The main causes of poverty are: low educational status, living in rural areas and lack of work opportunities.

Conclusions

Concluding this chapter, we may argue that there has been a broad acceptance among the European Governments and policy makers to improve longevity, health status and the overall quality of life among the EU Citizens. Despite the noble intentions we found out that there are significant differences not only between the countries but also within the countries among the regions and the rural / urban populations. Greece, a country of 10.9 million, has achieved the longest longevity and the lowest rates in mortality among the European Member States. In addition Greeks believe that the most important factor contributing to their quality of life is to be in good health. This view is also shared with all the rest of EU countries.

The Accession countries present significant differences in GDP per capita and in living standards in comparison to Europe. Income inequalities are much higher in the accession countries and this is attributed to the economic crisis confronted during the liberalization of the prices and the transition from a planned to a market economy. However during the last few years some countries have shown impressive convergence trends.

USEFUL LINKS

General Secretariat of National Statistical Service of Greece
http://www.statistics.gr