OVERVIEW OF THE LABOUR FORCE SURVEY: 1981-2015

Mapping changes in the labour market during the last 35 years as depicted in the Labour Force Survey results

- *Labour force grows older whereas its absolute size decreases following the population evolution trends of the country.*
- *Female labour force participation and employment rate are constantly growing while differences between men and women are constantly shrinking.*
- *Employment shifts from production to the services sector and from manual to non-manual occupations.*
- *Part-time employment has been steadily rising since 2006. This rise is mainly due to the inability to find a full-time job and this is particularly common for younger ages.*
- *Unemployment has been gradually increasing until 1999, subsequently dropping until 2008 and it rises dramatically during the following years of economic crisis, reaching a peak in 2013.*
- *Women and younger ages are mostly affected by unemployment over time. These population groups have been also most severely hit by the economic crisis.*
- *Over time, island regions record the lowest unemployment rate whereas the highest rate is observed in the regions of Northern Greece.*
- *The educational attainment of the labour force is clearly shifting towards higher levels. University degree holders are associated with lower unemployment rates.*

1. Introduction

The Labour Force Survey is the main source of data on employment and unemployment. It is the evolution of the former "Employment Survey" which used to be conducted in the urban and semi urban areas of the country in 1974-1980.

In 1981 the Labour Force Survey was conducted covering the whole of the country for the first time. It followed the same specifications with similar surveys running in the hitherto EEC member countries. Until 1997 the survey was conducted on a yearly basis, in the second quarter of every year. From 1998 onwards the survey is carried out throughout the year and it is designed to produce results on a quarterly basis. Alongside data on employment and unemployment, the survey also collects information on demographic characteristics, level of education and participation in educational activities.

In March 2015, on the occasion of completing 35 years in the conduct of the Labour Force Survey, the Hellenic Statistical Authority published time series that cover the entire period from 1981 to 2015 including a considerable number of variables[1]. A detailed list of the variables can be found in Appendix V.

Time series are grouped into six thematic categories: a) Population, b) Education, c) Employment status, d) Employed, and e) Unemployed. They refer to estimates (in thousands of persons) for the whole country

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[1] http://www.statistics.gr, Statistics > *Population and Social conditions > Labour Market > Employment - Unemployment > Labour Force Survey, 1981-2015*

and by region, sex, age group, while the data on the "employed" are further broken down by sector of economic activity and occupation.

Time series are annotated with comments presenting all changes in the survey questionnaire, as well as updates on definitions and classification systems. It should be noted that several time series do not cover the period 1981-1986 because there are no available data for those years. Furthermore, small discrepancies may be observed between totals and individual figures which are due to the rounding during population adjustments that had been made on the original survey data. Finally, time series are not seasonally adjusted.

2. Changes in survey methodology

Consistency of time series and comparability of the estimates over time are affected by changes in key parameters of the survey, such as sample design, population estimates, the questionnaire, definitions of the surveyed characteristics and classification systems.

The effect of such changes varies significantly: in some cases the changes in a survey parameter are associated with sudden changes in the estimates from one year to another, while in other cases the changes are less visible or even subtle (major or minor series breaks).

The most noticeable effects concern the following:

- Changes in population estimates. Population estimates are revised according to the results of the latest population and housing census, thus leading to revision of survey estimates.
- Changes in the survey sample. The major changes occurred in: 1993, when sampling specifications changed and the sample size increased significantly; 1998, when the survey was redesigned on a quarterly basis; in 2004 when the sample was entirely replaced.
- Changes in the classification systems of economic activities and occupations. Classification systems are revised in order to adjust to the current changes in the economic reality and also to /enhance their flexibility to include new occupation groups, to improve groupings, to become handier, etc. However, the resulting changes in structure, definitions and coding inevitably cause breaks in the time series. In the current analysis, this problem was addressed by creating aggregations of economic activities and occupations. Thereby, normalization of the time series was satisfactorily achieved.
- Changes in definitions or in the questionnaire. Changes in definitions of the survey's key variables (employed, unemployed) occurred in 1983 and 1998. However, the observed changes in the corresponding time series cannot be attributed solely to these changes, as there are also significant changes in the sample size (1983) and the sample design (1998). Regarding changes in the questionnaire, they generally have a little effect on the estimates with the exception of changes in the codification of educational attainment (1987, 1991).

The changes in the survey parameters are described analytically in Appendix II. In the following presentation of time series the most noticeable breaks are highlighted by dotted line in the graphs.

3. Presentation of key time series

3.1 Labour force[2]

From 1981 until 2009 the labour force had been increasing. On the contrary since 2009, it has been decreasing following the decrease of the population aged over 15 years. Furthermore, from 2010 onwards, it is also decreasing as a percentage of the total population (Graph 1).

Graph 1. Evolution of the population aged 15 years and over, labour force, employed and unemployed
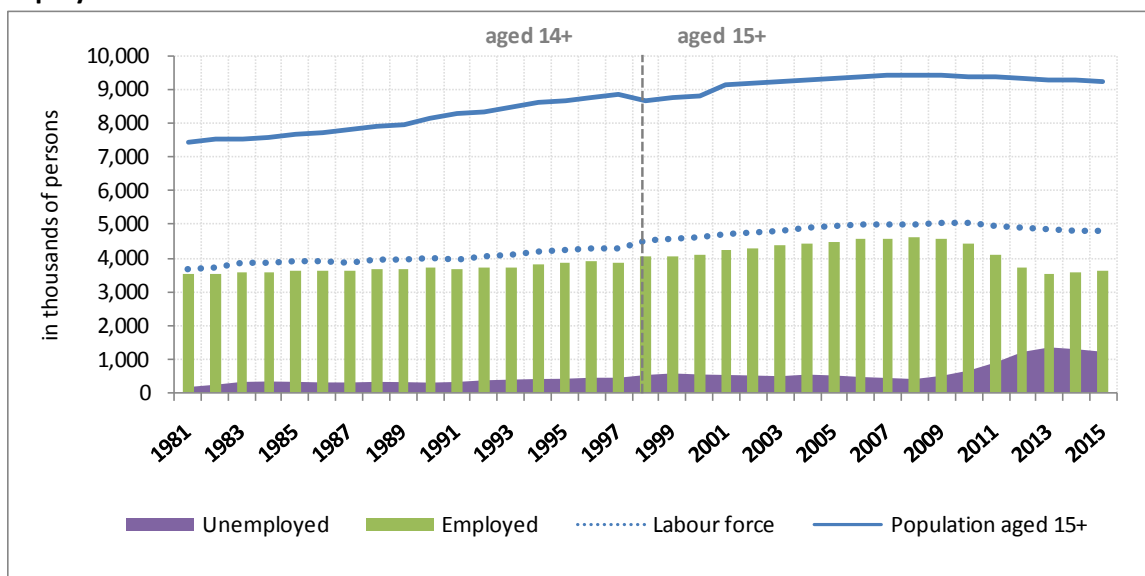
Until 2009, the annual changes in the number of employed and unemployed people vary in levels of less than 100,000 people. The year 1998 is an exception: changes were significantly higher, mainly due to the revision of survey estimates based on the results of 2001 population-housing census (see Appendix II). From 2010 onwards, the changes are bigger, with a strong increase in the unemployed and a corresponding decrease in the employed. This trend culminates in 2013, while during the next two years the situation in the labour market shows a slight improvement.

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[2] *For period 1981-1997 estimates refer to 2nd quarter of current year. For period 1981-1997 persons aged 14 are included.*

Graph 2. Annual changes in labour force, employed and unemployed
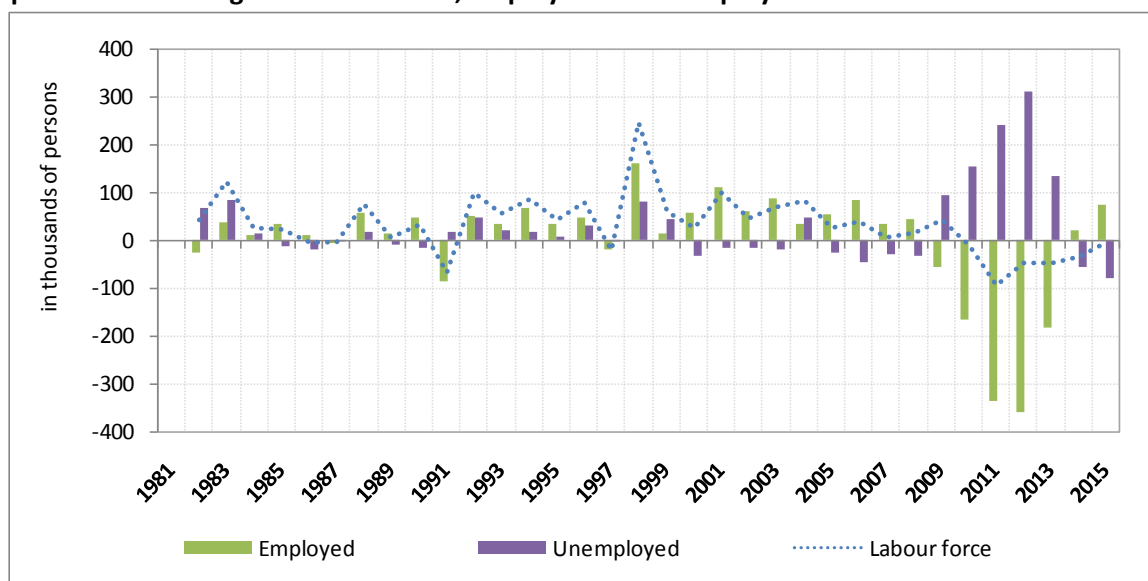
One of the main features of the period 1981-2015 is the growing participation of women in the labour market and the resulting increase in their participation in employment (Figure 3). In contrast, the participation for men has been decreasing, thus resulting in a continuous shrinkage of the differences between them. In this regard, men were more severely affected by the economic crisis, as during the period 2009-2015 the employment rate of men fell by 13% compared to 6% of women.

Graph 3. Participation rates in labour force and employment, by sex
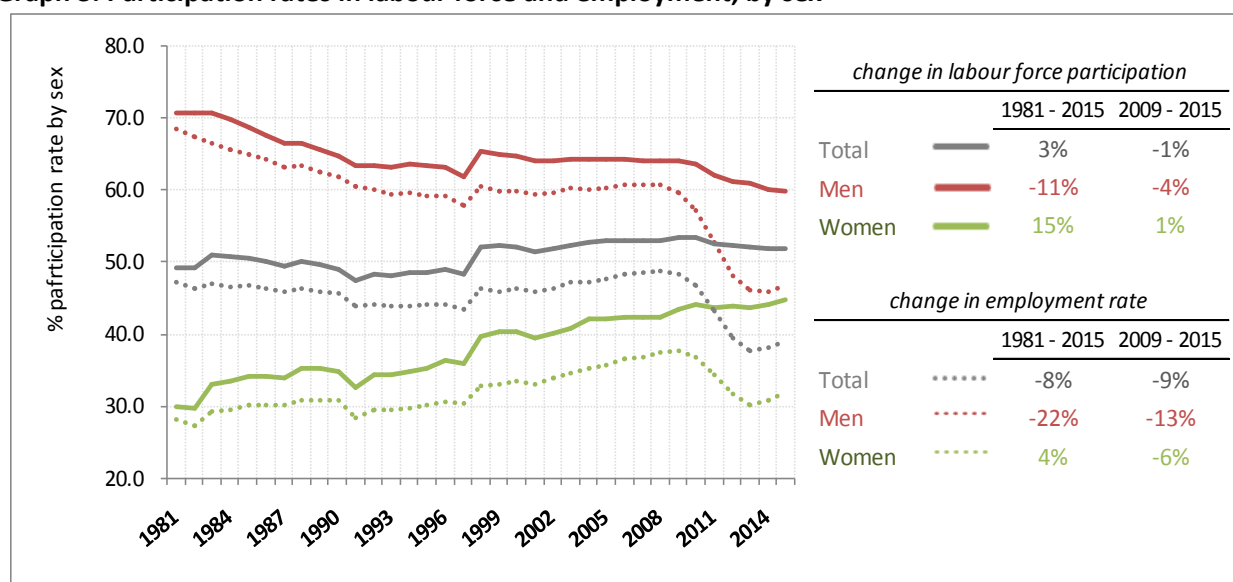
As regards the breakdown of the labour force participation rate by age groups and sex (Graph 4) it is observed that the shrinkage of the difference between men and women is principally due to a strong increase in the labour force participation rate of women aged 25-64 and to the slight decrease in the labour force participation of men of the same age group. Moreover, the participation of men in the age group 65+ is decreasing more rapidly than that of women. A decrease in the labour force participation of younger ages

is observed for both men and women, something which is likely to be linked to the increase in the number of young people who continue their studies after the completion of secondary education.

Graph 4. Labour force participation rates by sex and age group
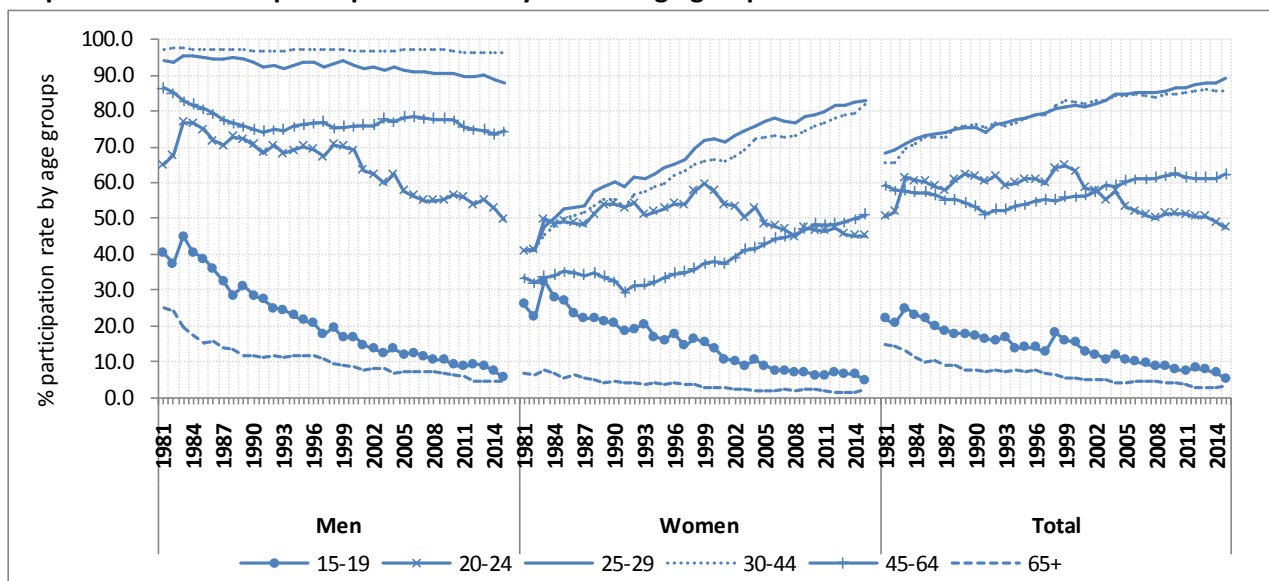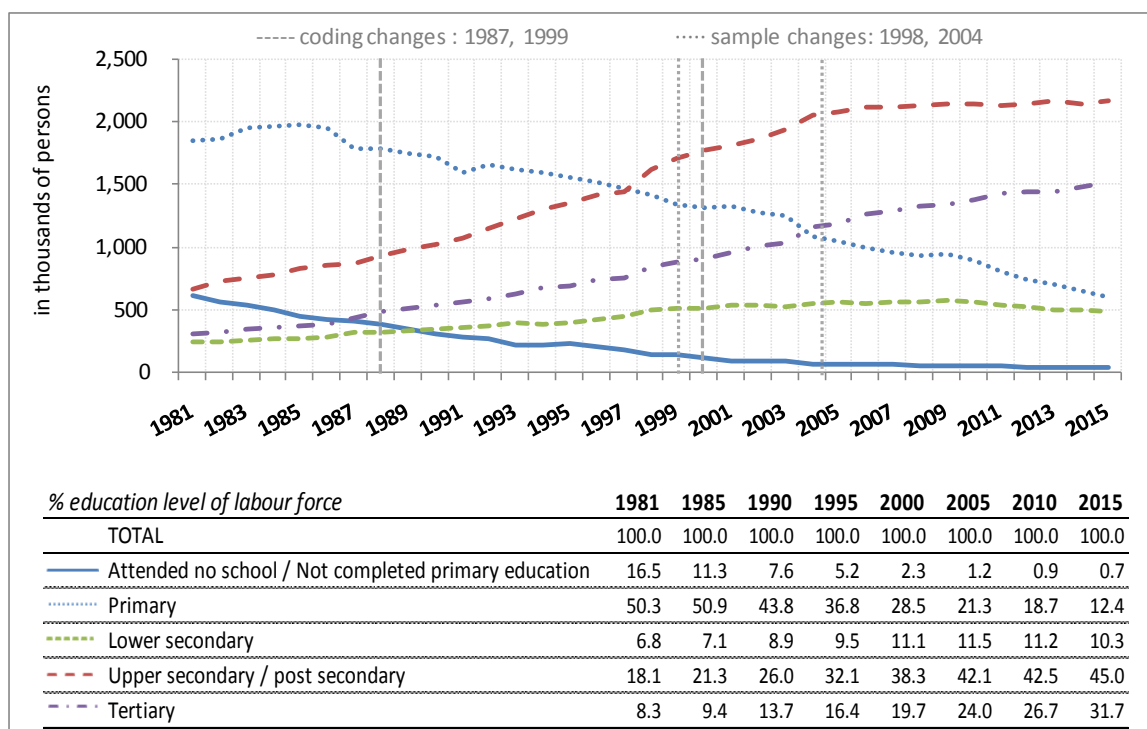

Another important finding is the rise of education level of the labour force (Graph 5). In 1981 primary school was the highest educational attainment level for 67% of the labour force, whereas only 8% held a university degree. In 2015 the situation is reversed and the rates changed to 13% and 32%, respectively, the gap between them is growing bigger. Similarly, the percentage of people who have completed upper secondary or a post-secondary school has been increasing.

The changes in the survey codebook for education in 1987 as well as total sample replacements in 1998 and 2004 had visible effects on time series. However, these effects do not contradict the observed long-term trends.

Graph 6 summarizes the changes in labour force composition by sex, age and education:

- The difference between sexes is gradually decreasing, and male lead has been limited. In 1981, 70% of the labour force were men while in 2015 the corresponding share fell to 55%.

- Labour force's average age increases. This is mainly on account of the increase in the participation rate of persons aged 45-64 and the decrease in the corresponding rate of people aged 15 - 29 .

- The percentage of university degree holders increases steadily and now exceeds 30%.

Graph 5. Labour force by educational attainment[3]
absolute figures and percentage distribution

% education level of labour force	1981	1985	1990	1995	2000	2005	2010	2015
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Attended no school / Not completed primary education	16.5	11.3	7.6	5.2	2.3	1.2	0.9	0.7
Primary	50.3	50.9	43.8	36.8	28.5	21.3	18.7	12.4
Lower secondary	6.8	7.1	8.9	9.5	11.1	11.5	11.2	10.3
Upper secondary / post secondary	18.1	21.3	26.0	32.1	38.3	42.1	42.5	45.0
Tertiary	8.3	9.4	13.7	16.4	19.7	24.0	26.7	31.7

Graph 6. Labour force composition by sex, age and educational attainment

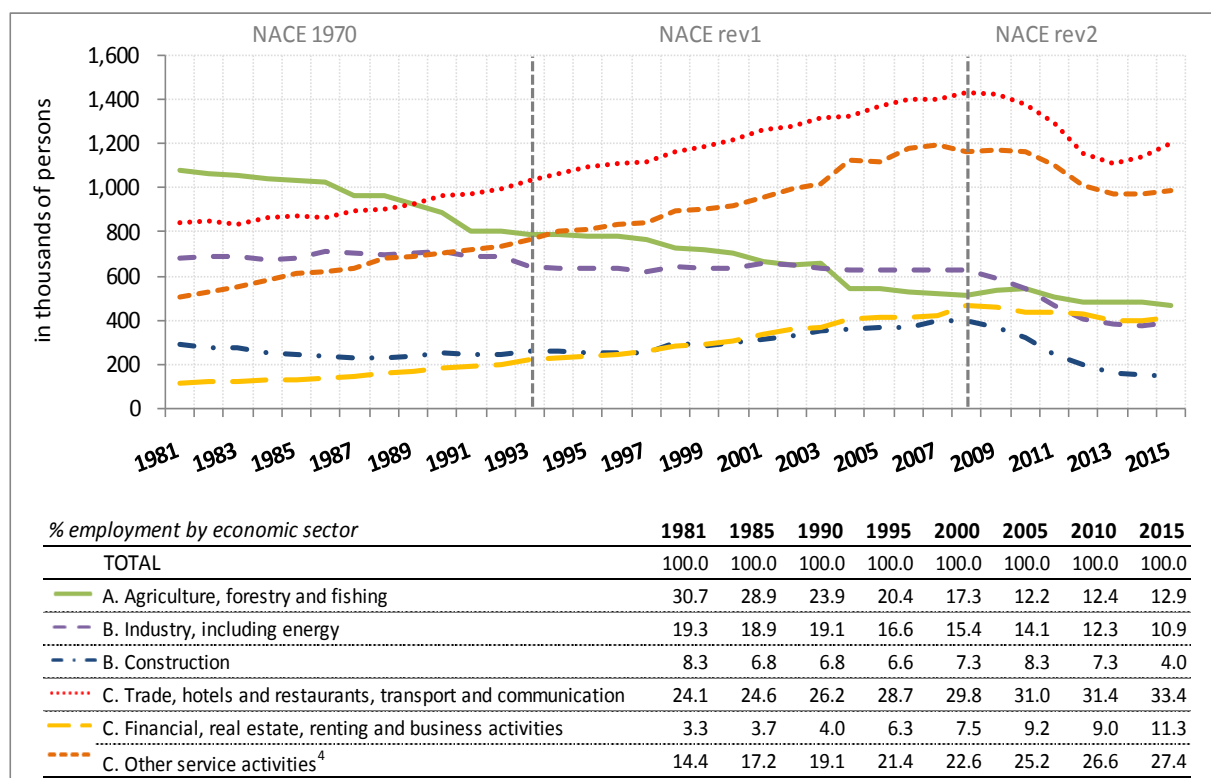** Percentages within sex, age group or educational attainment sum up to 100%.*

3.2 Employment

The share of economic activity sectors in total employment changes significantly, predominantly with the shrinkage of the primary and secondary sectors and the corresponding enlargement of the tertiary sector (Graph 7).

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[3] *Education levels:*

Primary: Less than primary, primary; Secondary: Lower/Upper secondary, post-secondary non-tertiary education; Tertiary: University , Post graduate degree

Graph 7. Employment by main economic activity
absolute figures and percentages of employed by sector

% employment by economic sector	1981	1985	1990	1995	2000	2005	2010	2015
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
A. Agriculture, forestry and fishing	30.7	28.9	23.9	20.4	17.3	12.2	12.4	12.9
B. Industry, including energy	19.3	18.9	19.1	16.6	15.4	14.1	12.3	10.9
B. Construction	8.3	6.8	6.8	6.6	7.3	8.3	7.3	4.0
C. Trade, hotels and restaurants, transport and communication	24.1	24.6	26.2	28.7	29.8	31.0	31.4	33.4
C. Financial, real estate, renting and business activities	3.3	3.7	4.0	6.3	7.5	9.2	9.0	11.3
C. Other service activities[4]	14.4	17.2	19.1	21.4	22.6	25.2	26.6	27.4

The above change occurs gradually over the course of 35 years. The biggest decline is observed in the primary sector, though in the recent years its share has been moderated and in the last year a slight increase is observed. In contrast, the share of the secondary sector in employment, for both Industry-Energy and Construction sectors, has been steadily decreasing. On the other hand, employment in tertiary sector increased: financial and business operations almost quadrupled while "other services", i.e. public administration, education and health, almost doubled. Characteristically, while in 1981 the primary and secondary sectors employed about half of the employed, in 2015 these sectors employed approximately one in four (24%).
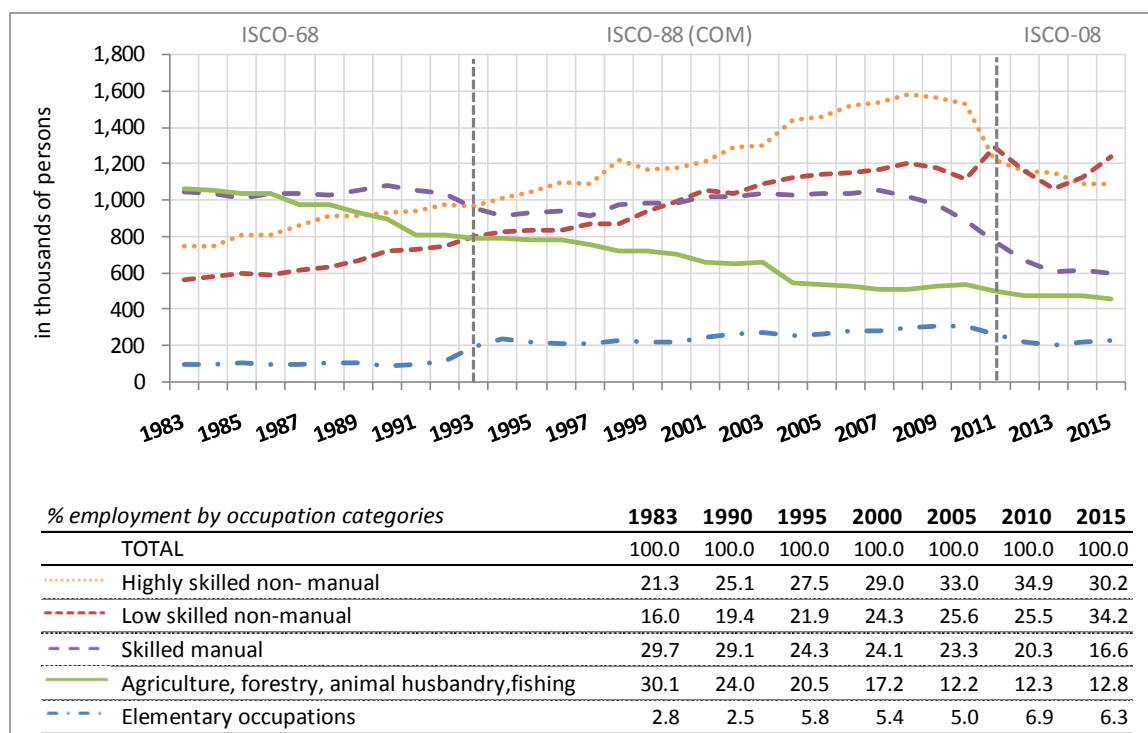
The participation share of occupation groups in total employment has also experienced significant changes (Graph 8). The main characteristic is the shift of employment from manual to non-manual occupations. While in 1983 the first accounted for around 62% of employees, in 2015 the corresponding percentage drops to 34%.

It is obvious that changes in the occupational map are related to those in the production map. Therefore, the decrease of employment in manual occupations reflects a corresponding decrease in the primary and secondary sectors. On the other hand, employment increases in non-manual jobs, especially low-skilled ones.

Changes in the classification system of occupations (ISCO) sometimes cause breaks in time series. Thus, the change from ISCO-68 to ISCO-88 (COM) marks an increase in the share of elementary occupations, whereas the next change to ISCO-08 mainly marks a shift of employment, as regards non-manual occupations, from high to low skill occupations.

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[4] *"Other service activities" comprise mainly public administration, education and health activities. It also includes arts, entertainment and recreation as well as household activities and other minor cases.*
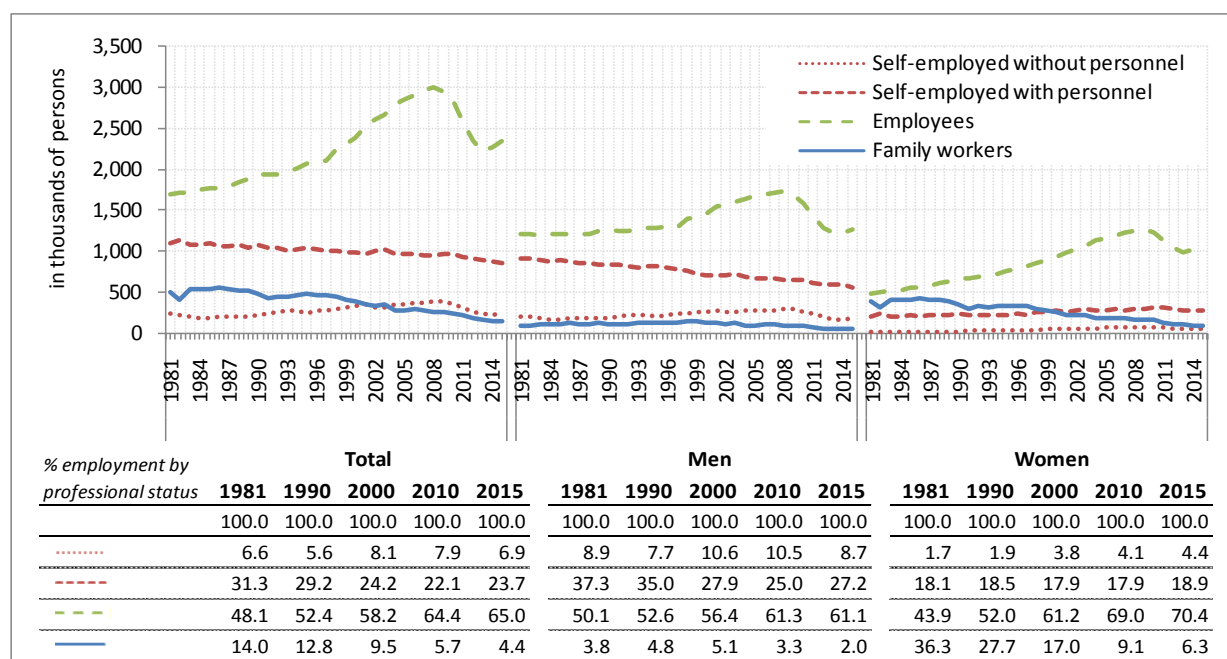
Graph 8. Employment by occupation categories[5]
absolute figures and percentages of employed persons by category

% employment by occupation categories	1983	1990	1995	2000	2005	2010	2015
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Highly skilled non- manual	21.3	25.1	27.5	29.0	33.0	34.9	30.2
Low skilled non-manual	16.0	19.4	21.9	24.3	25.6	25.5	34.2
Skilled manual	29.7	29.1	24.3	24.1	23.3	20.3	16.6
Agriculture, forestry, animal husbandry,fishing	30.1	24.0	20.5	17.2	12.2	12.3	12.8
Elementary occupations	2.8	2.5	5.8	5.4	5.0	6.9	6.3

Professional status is another feature showing significant changes (Graph 9). The period 1981 - 2015 is characterized by the increase of employees and the reduction of self-employed and family workers.

The above changes vary with sex a) the number of self-employed men has been reducing while the corresponding number for women has been slightly increasing, b) the growth rate of female employees is higher than that of male, and c) the percentage of female family workers has been dramatically decreasing.

Graph 9. Professional status
*absolute figures and percentages of employed persons by professional status and sex*

% employment by professional status	Total					Men					Women				
	1981	1990	2000	2010	2015	1981	1990	2000	2010	2015	1981	1990	2000	2010	2015
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	6.6	5.6	8.1	7.9	6.9	8.9	7.7	10.6	10.5	8.7	1.7	1.9	3.8	4.1	4.4
	31.3	29.2	24.2	22.1	23.7	37.3	35.0	27.9	25.0	27.2	18.1	18.5	17.9	17.9	18.9
	48.1	52.4	58.2	64.4	65.0	50.1	52.6	56.4	61.3	61.1	43.9	52.0	61.2	69.0	70.4
	14.0	12.8	9.5	5.7	4.4	3.8	4.8	5.1	3.3	2.0	36.3	27.7	17.0	9.1	6.3

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[5] *For the definition of occupation categories refer to Annex IV, **Table IV.2 Occupation typology.***

Part-time employment[6] is an increasing trend during recent years. While the percentage of employed persons working in part-time jobs fluctuated around 5% until 2005, from 2006 onwards it is growing steadily eventually reaching 9.5% in 2015 (Graph 10[a]). More specifically:

- Part-time employment is more common for women and the difference between the rates for men vary, generally, between 5% and 7%.
- Employed persons aged 30-64 generally have lower part-time employment rate compared with the total rate. On the contrary, persons aged 15-24 years have the highest part-time employment rate and especially from 2004 onwards, the difference from the total rate is increasing. In 2015 the rate for this age group hits 23% (compared to total rate of 9.5%). Similar pattern, though less intense, occurs for employed persons aged 25-29. Finally, persons older than 65 years differentiate from the rest having generally higher rates characterized by sharp fluctuations.
- Finally, during the recent years, the main reason for part-time work is reported to be inability to find a full-time job. "Other reasons" include personal or family reasons, work in parallel after retirement (for the older persons) etc (Graph 10[b]).

Graph 10. Part-time employment rates and reasons for part-time employment

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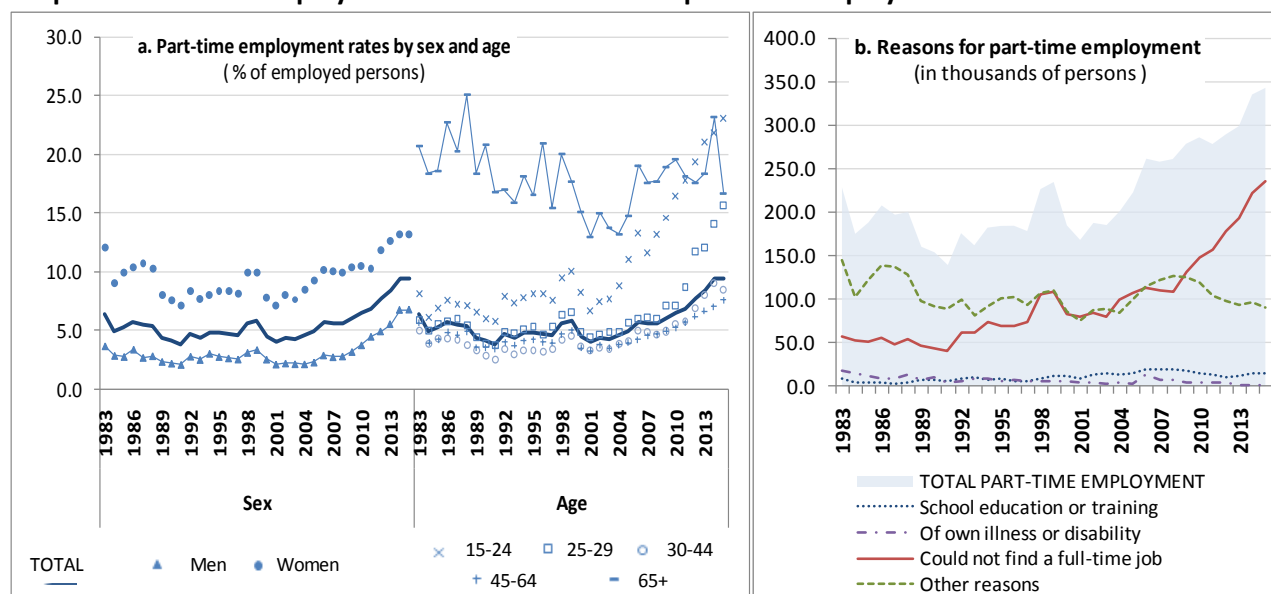
[6] *Part-time employment is registered on the basis of a spontaneous answer given by the respondent on the question "Your job is full-time, i.e. you work as many hours as provided by the regular work schedule, or part-time, i.e. you work less hours?"*

3.3 Unemployment[7]

After a relatively sharp rise from 1981 to 1983, unemployment rate has been slightly fluctuating around single digit levels throughout the 1980 decade. The next decade is, however, different: unemployment rate begins to increase steadily, surpassing 10% in 1998 for the first time. In 2001, the trend is reversed and unemployment slowly decreases until 2008. The following years mark a dramatic rise in unemployment, as a consequence of the economic crisis, which culminates in 2013 reaching 27.5%, followed by a slight downward trend thereafter (Graph 11).

Graph 11. Unemployment rate

Furthermore, the duration of job search of the unemployed varies over time (Graph 12). The percentage of long-term unemployed, i.e. the unemployed whose period of unemployment exceeds 12 months, had been increasing since the early 1980s reaching, eventually, 50% just before the end of the decade and fluctuating around that level up to 2007. The subsequent two-year downward trend will be reversed, followed by a tremendous escalation of the long-term unemployment rate: two out three unemployed are long-term unemployed.

On the contrary, the number of "new" unemployed, i.e. persons who have never worked in the past, has been steadily decreasing since the beginning of the 1990s.

From 2009 onwards, there has been an inverse relationship between the percentage of long-term unemployed and the percentage of "new" unemployed. This is explained by the fact that since more and more people who lose their jobs, as a result of the economic crisis, and enter into unemployment, the percentage of "new" unemployed decreases.

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[7] *Small changes in the definition of the unemployed occurred in 1983, 1999 and 2002 in accordance with Eurostat regulations.*

Graph 12. "New" and "long-term" unemployed

Population groups mostly affected by unemployment are women and younger age-groups (Graph 13). As regards age, it seems to have an inverse relation with unemployment. The highest unemployment rates are observed in the youngest age-group, 15-24, and are significantly different from those of the next age-group, 25-29. These two age-groups have been mostly affected by the economic crisis: it is obvious that their corresponding percentages deviate significantly from the total. It should be noted that over time the age-group 30-44 accounts for the largest number of unemployed persons.

As regards the education level, it is observed that the lowest unemployment rates are recorded for university degree holders. The rates for this group are always lower than the total. On the other hand, low education attainment groups record the highest unemployment rates.

Graph 13. Unemployment rate by sex, age and level of education
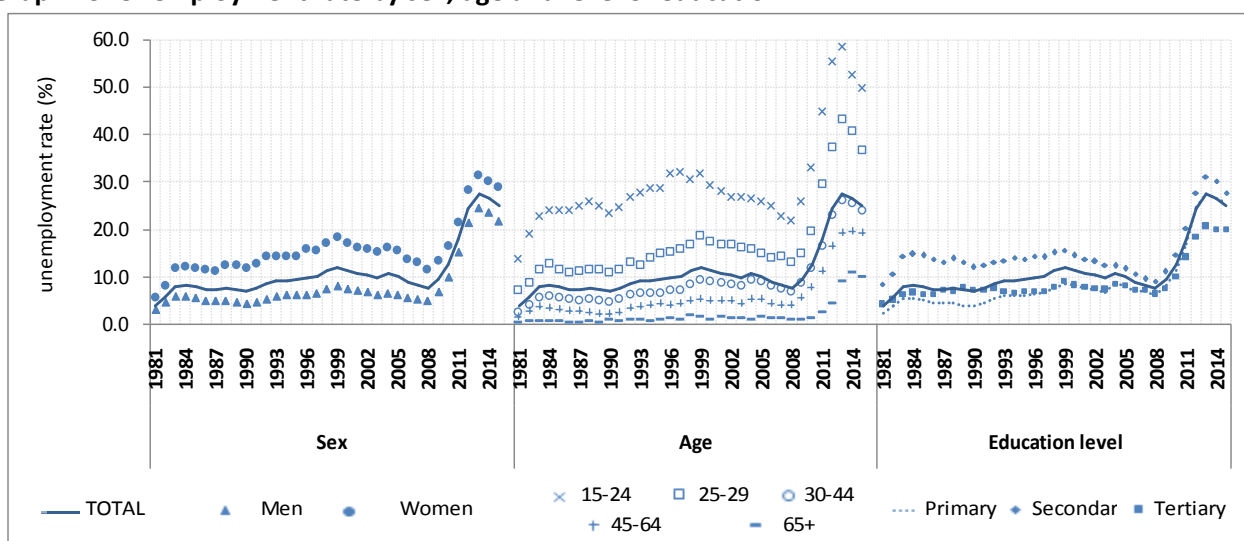
Finally, as regards the breakdown of data on the evolution of unemployment rate by Region, the following can be observed: due to changes in the administrative division of the country into regions for the period 1981-1987, time series are available only from 1988 onwards, i.e. when the current NUTS-2 classification is used[8]. It should also be noted that that unemployment estimates by Region changed significantly in 1998 when the survey was carried out throughout the year (Graph 14). Such changes are particularly marked in island regions, highlighting the importance of tourism for the local economy. Indeed, from 1998 onwards the annual unemployment rate in those regions increases sharply as the survey also covers non-tourist season when unemployment is obviously higher. However, island regions present the lowest, over time, unemployment rates and, except from Crete, they are those least affected by the economic crisis from 2008 onwards.

On the other hand, the highest unemployment rates are observed in the northern regions of Greece and especially in Dytiki Makedonia.

Graph 14. Unemployment rate by region (NUTS-2)

	COUNTRY TOTAL	Anatoliki Makedonia-Thraki	Kentriki Makedonia	Dytiki Makedonia	Ipeiros	Thessalia	Ionia Nissia	Dytiki Ellada	Sterea Ellada	Attiki	Peloponnisos	Voreio Aigaio	Notio Aigaio	Kriti
1988	7.7	9.0	6.8	5.9	5.0	6.9	3.4	7.2	6.9	10.0	5.8	5.4	5.2	3.5
1989	7.5	7.4	7.4	6.4	4.4	7.2	3.2	8.0	6.6	9.4	5.3	6.6	4.9	2.6
1990	7.0	5.7	6.4	10.0	3.2	7.8	3.4	7.7	6.5	8.8	5.8	4.7	4.7	2.5
1991	7.7	5.4	6.1	8.0	9.8	6.8	3.7	8.6	6.9	9.9	5.6	8.8	3.6	4.0
1992	8.7	7.7	7.4	9.0	8.4	8.3	2.6	9.5	12.0	10.5	8.3	5.2	3.9	3.7
1993	9.1	6.9	8.4	10.8	8.2	7.4	3.9	10.2	9.7	11.5	6.4	4.5	4.8	3.9
1994	9.3	8.1	8.8	9.5	8.6	7.1	3.5	11.1	11.2	11.5	6.8	7.3	3.8	4.2
1995	9.4	9.6	9.2	13.6	7.9	7.8	5.3	9.3	9.8	11.2	6.5	5.2	5.1	4.4
1996	9.9	10.0	9.1	17.3	12.2	7.8	5.8	8.9	10.8	12.0	6.8	7.5	5.0	3.5
1997	10.0	8.7	9.6	15.0	11.5	8.0	6.2	8.7	12.6	11.8	8.2	7.2	4.4	4.4
1998	11.2	10.0	10.4	13.0	14.0	11.9	6.9	11.9	12.9	12.3	8.0	11.2	10.0	8.6
1999	12.1	12.6	11.9	14.6	14.1	13.4	9.0	11.7	14.2	12.7	8.2	11.6	11.7	8.5
2000	11.4	9.0	11.1	15.1	11.7	12.9	9.8	10.7	14.7	12.0	9.7	7.4	11.6	7.4
2001	10.8	9.6	11.0	16.5	12.7	12.8	10.9	10.7	14.0	10.5	8.9	6.9	12.1	7.3
2002	10.4	10.4	11.5	14.9	11.2	11.2	10.0	10.7	10.6	9.5	7.7	9.8	15.0	8.8
2003	9.8	10.5	10.4	16.5	11.6	10.6	11.8	9.5	9.6	9.1	8.4	8.2	12.1	7.6
2004	10.6	13.2	12.3	16.5	11.1	9.8	11.4	12.6	12.8	9.3	9.0	9.6	8.9	7.8
2005	10.0	11.9	11.2	18.1	11.5	9.4	8.6	10.7	11.0	9.1	8.6	10.6	9.5	7.2
2006	9.0	11.1	9.5	14.2	9.8	8.2	11.2	9.7	9.2	8.5	7.5	9.6	9.0	7.2
2007	8.4	9.8	9.1	12.1	10.0	7.8	9.0	9.9	9.4	7.8	7.3	8.1	9.4	5.4
2008	7.8	8.8	8.4	12.5	9.9	8.3	8.3	9.9	8.5	6.7	7.0	4.7	8.3	6.4
2009	9.6	11.1	10.1	12.4	11.2	9.2	9.5	9.7	10.5	9.1	7.9	6.6	12.3	9.0
2010	12.7	14.5	13.7	15.4	12.6	12.1	14.6	11.9	12.5	12.6	9.6	9.4	14.6	12.0
2011	17.9	20.2	19.7	23.1	16.5	16.8	14.1	17.6	19.0	18.0	13.8	15.0	15.2	15.8
2012	24.4	22.8	26.2	29.7	22.5	22.6	14.7	25.6	27.9	25.8	19.2	21.8	15.4	22.3
2013	27.5	26.8	30.2	31.6	27.4	25.4	18.1	28.4	28.2	28.7	21.9	22.0	21.3	24.9
2014	26.5	24.2	28.7	27.6	26.8	25.4	21.4	28.7	26.8	27.3	23.4	22.3	20.1	24.0
2015	24.9	23.4	26.0	30.7	24.5	26.9	19.0	28.5	25.8	25.2	22.3	18.0	14.9	24.2
average rate 1998-2015	14.2	14.4	15.1	18.6	14.9	14.2	12.1	14.9	15.4	14.1	11.6	11.8	12.9	11.9
rate growth 1998-2015	13.7	13.4	15.6	17.8	10.5	15.1	12.0	16.6	12.9	12.9	14.3	6.8	4.8	15.6
rate growth 2008-2015	17.1	14.5	17.5	18.2	14.7	18.6	10.6	18.6	17.3	18.5	15.3	13.2	6.5	17.8

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[8] *Changes in the administrative division of Greece are described in* Appendix II.

APPENDIX I. DEFINITIONS

Coverage	The population of private households residing or intends to reside at least one year in Greece. The following cases are excluded from Labour Force Survey (LFS): a) members of collective households (e.g., nurseries, orphanages, aged care homes, monasteries, barracks, prisons, sanatoriums, psychiatric hospitals etc), b) permanent hotel clients, c) members of foreign households working in Embassies, Consulates, in Commercial or Economic or Military missions as well as in the armed forces of foreign countries, d) conscripts (reserve officers and draftees) even if they reside alone or with their family in a house outside the camp, and e) members of households located outside settlements that live in houses that are more than 200 meters away from the last building of the settlement.
Dwelling	As dwelling is considered a separate and independent structure which was built or converted to cover the habitation needs of a household, or every space neither constructed nor converted for purpose of habitation, it is used, however, as a dwelling during the reference period (shop, factory, etc.). A space initially serving the housing needs of a household, but it is used entirely for other purposes (e.g. office) during the survey is not considered as a dwelling.
Household	For the survey purposes as "household" is defined: a) Two or more persons, irrespective whether related or not, sharing the same dwelling and usually having common arrangements for the provisions of meals and sharing them (multi-person household). b) A single person living on his own, in a dwelling, or living with other persons, but having no common arrangements for the provision of housing needs or even sharing meals with them (one-person household). Each person constituting the household is considered as a household member. These persons are considered as household members even if they were temporarily absent from dwelling during the survey time for the following reasons: a) tourism, recreation trip or for a visit to relatives or friends or work (i.e. railway employees, pedlars etc), b) admission in a hospital or temporally detained, and c) sailors or fishermen, in or out territorial waters, irrespective of the duration of their absence. As household members are not considered: a) persons residing abroad for work or studies, b) guests, if their residence time is less than six months, c) external assistants (charwomen), d) persons doing compulsory military service, e) persons found in specialized institutions (psychiatric clinics, asylums, sanatoriums, homes for the aged, etc.) where their stay is, usually, of long duration, and f) persons in imprisonment, irrespective of the duration of their imprisonment. Follows from the above that the concepts of household and family are not always identical.
Labour force	The following definitions are applicable since 2006. For changes in definitions over time see Appendix II . **Employed:** persons aged 15 years or older, who worked during the reference week, even for just one hour, for pay or profit or they were working in the family business, or they were not at work but had a job or business from which they were temporarily absent. **Unemployed:** persons aged 15-74, who were without work during the reference week (they were not classified as employed), were currently available for work and were either actively seeking work in the past four weeks or had already found a job to start within the next three months. **Inactive:** persons who are neither classified as employed nor as unemployed.

	Economically active population (labour force): persons either employed or unemployed.
	Employment rate: the ratio of employed divided by total population aged 15 years and more
	Unemployment rate: the ratio of unemployed divided by total labour force**.**
Reference period	The Labour Force Survey's sample is spread uniformly in the 13 (or 14) weeks of the quarter. Every sampled household corresponds to a particular week, namely the reference week (from Monday to Sunday). • For employment, the reference period is the reference week. • For job search, working time arrangements, and participation in education, the reference period is the four- week period, ending with the reference week. • For availability to start, or resume, a job the reference period is the two-week period after the reference week.
Legal framework	Labour Force Survey is completely harmonized with European legislation. The principal legal act is the Council Regulation (EC) No. 577/98 that stipulates the provisions on design, survey characteristics and decision-making processes. The survey framework was amended by successive Commission Regulations (Regulation (EC) No 1372/2007, Regulation (EC) No 2257/2003, Regulation (EC) No 1991/2002).
References	More details (tabulations and methodology) on the Labour Force Survey can be found at ELSTAT's website, http://www.statistics.gr/el/statistics/pop, ("Population and social conditions" section), on the path *Labour market > Employment - Unemployment*.

APPENDIX II. CHANGES IN THE PARAMETERS OF THE SURVEY

Parameter	Description of changes in parameter

Sample design	• From 1981 to 1997, the survey was conducted in the second quarter of each year. Since 1998 the survey sample is designed to produce quarterly estimates in compliance with Eurostat accuracy specifications (maximum standard error of estimation).
	• Changes in sampling fractions result in changes of the sample size for the years 1993, 1998, 2004 (see "Reduction and population adjustment of the survey data").
	• The sampling frame is based on the most recent census data:
	   ○ 1981, 1982: 1971 census
	   ○ 1983-1992: 1981 census
	   ○ 1993-2003: 1991 census
	   ○ 2004-2014: 2001 census
	   ○ 2015: 2011 census
	• Total sample replacement was made in 1983, 1993, 1998 and 2004. Also, the sample was gradually replaced during the 2009-2010 period as well as of 2014-2015.

Sample selection	• Since 1983 a selection of the dwellings is made by means of lists of dwellings whereas before the selection was made by the researcher. • Since 2004 the practice of replacements for the treatment of non-response (non-response) is no longer used.

Reduction and population adjustment of the survey data	• From 1981 to 1997 the survey estimations were derived by applying a reducing factor equal to the product of the inverse of the sampling fraction for a population adjustment factor, uniform for the whole country.
	   ○ For 1981, 1982 and from 1984 to 1992 the sampling fraction is the same for the whole country (equals 1.5/100).
	   ○ For 1983 a separate sampling fraction is applied for Greater Athens area (1/100). For the rest of the country the sampling fraction of (1.5/100) is applied.
	   ○ From 1993 to 1997 different sampling fraction is used for each of the 13 Regions (NUTS-2).
	• From 1998 to 2003 the reducing factor is based on the estimated population distribution by sex and age groups in every NUTS-2 level.
	• Since 2004 a correction factor adjusting for non-response is applied.
	• The population adjustment factors are calculated using the current population estimates, which in turn are based on the results of the latest census. Once disclosed the results of a census, the population estimates are reviewed and so the results of the survey. The results of the survey have been revised:
	a) in June 2004, when the results of the period from 1998 to 2003 were revised in accordance with the results of the 2001 census, and b) in June 2014, when the results of the period from 2001-2013 were revised in accordance with the results of the 2011 census[9]. Initially, results for the period from 1998 to 2003 were based on the 1991 census, whereas results for the period from 2004 to 2013 were based on the 2001 census.

Definitions of employment and unemployment definitions	<u>Labour force</u> From 1981 to 1997 employment status comprised persons aged 14 years and more. Since 1998 persons aged 14 are no longer included in labour force . <u>Employed</u> - For years 1981, 1982, unpaid family workers were classified as employed only if they had worked at least 14 hours during the reference week; if less than 14 hours they should usually work in the family business the rest of time. - Since 1983 as employed considered all persons aged 14 years and more over who have worked at least one hour during the reference week (or they were temporarily absent from work) regardless of professional status (self-employed, employees or family workers). - Since 1998, employment comprises persons aged 15 years and more. <u>Unemployed</u> -For years 1981, 1982, a) persons who were not working and had taken steps to start their own business were classified as inactive whereas since 1983 as unemployed and b) persons without

Parameter	Description of changes in parameter
	work and seeking work without having taken any action, were classified as unemployed whereas since 1983 as inactive. - Since 1998, a) unemployment comprise persons aged 15 years and more, and b) unemployed persons include those who are available to start working within the next two weeks - if work has been found (while until then only persons available to start work immediately were included). - Since 1999, job search refers to the last four weeks prior to the reference week while until 1998 was referring to last week only. - Until 2000 persons who had already found a job which would start later, were classified as unemployed. Since 2001, persons who do not work but have already found a job are classified as unemployed only if they will start working within 3 months. - Since 2006, unemployed comprise persons aged 15-74.
Regions	Changes in the country's administrative division in regions (Regional Development Services) occurred in 1985, 1987 and 1988. Since 1988, the country is divided into 13 regions equivalently to European Union's NUTS-2 classification.

Prefectures	Regions			
	1988 +	1986-1987	1985	1981-1984
Evros, Xanthi, Rodopi	Anatoliki Makedonia & Thraki	Thraki		
Drama, Kavala		Anatoliki Makedonia		
Serres	Kentriki Makedonia			
Thessaloniki, Imathia, Kilkis, Pella, Pieria, Chalkidiki		Kentriki Makedonia	Kentriki & Dytiki Makedonia	
Grevena, Kastoria, Kozani, Florina	Dytiki Makedonia			
Arta, Thesprotia, Ioannina, Preveza	Ipeiros			
Karditsa, Larissa, Magnissia, Trikala	Thessalia			
Kerkyra, Lefkada	Ionia Nissia	Ipeiros		
Zakynthos, Kefallonia		Peloponissos & Dytiki Sterea		
Etolia &Acarnania	Dytiki Ellada			
Achaea				
Ilieia				
Voiotia, Evia, Evritania, Fthiotida, Fokida	Sterea Ellada	Anatoliki Sterea Ellada	Anatoliki Sterea Ellada & Nissoi	
Attiki	Attiki			
Argolida, Arkadia, Korinthia, Lakonia, Messinia	Peloponissos	Peloponissos & Dytiki Sterea		
Lesvos, Samos, Chios	Voreio Aigaio	Nissoi Anatolikou Aigaiou		
Kyklades	Notio Aigaio		Kyklades	Anatoliki Sterea Ellada & Nissoi
Dodekanissos		Dodekanissa		Nissoi Anatolikou Aigaiou
Irakleio, Lasithi, Rethymno, Chania	Kriti			

Parameter	Description of changes in parameter

Classification of occupation	• Changes in the classification system of occupations (STEP) occurred:
	   o In 1993 when STEP-81 is replaced by STEP-92. The national classification system, STEP, is based on the ILO's International Standard Classification of Occupations (ISCO) so that changes in the former are in line with changes in the latter (ISCO-68 and ISCO-88 (COM), respectively).
	   o Since 2011, ISCO-08 is in use.
	• From 1981 to 1992 occupation is coded at 2-digit level while since 1993 is coded at 3-digit level.

Classification of economic activity	• Changes in the Greek Statistical Classification of Economic activities (STAKOD) occurred a) in 1993 when STAKOD-80 is replaced by STAKOD-91 and b) in 2008, since when the current STAKOD-08 is in use. STAKOD-80 is based on the United Nations ISIC Rev2 classification while is also related to EEC's NACE70 classification. Since 1993, STAKOD is in line with NACE such as STAKOD-91 and STAKOD-08 correspond to NACE Rev. 1 and NACE Rev. 2, respectively. • From 1981 to 2005 economic activity is coded at 2-digit level while since 2006 is coded at 3-digit level.
Classification of education level	Education level refers to the highest level of education completed. Registration is done by means of a special codebook, which was gradually enriched in 1987, 1992 and 1999 (see Appendix IV.3). The above changes cause various breaks in time series for education, mainly in the estimates of the number of people who have completed primary education.
Changes in questionnaire	Changes in the survey questionnaire occur almost every year with major changes in 1992, 1998 and 2006. Some minor changes occurred in 1983, 1987, 1999, and 2003.

APPENDIX III. SURVEY METHODOLOGY

1. Sample design

The survey is a sample one with the sampling fraction by region (since 1993). The sample is spread uniformly in the 13 (or 14) weeks of the quarter. Every sampled household corresponds to a particular week, namely the reference week (from Monday to Sunday) based on the meaning that data on the employment status of household members is collected for this single reference week.

Sample selection is done by means of multistage stratification as follows:

Initially, the country is divided into major strata as follows:

- Athens agglomeration

- Thessaloniki agglomeration

- Rest of the country: a) from 1981 to 1997, based on the population of Municipalities and Communes according to the recent census, and b) since 1998, according to regions (NUTS-2).

A further division into minor (final) strata as follows:

- Athens and Thessaloniki agglomerations are divided into minor strata on the basis of similar socioeconomic characteristics.

- For the rest of the country stratification is decided on the level of urbanization of Municipalities and Communes which is determined by their population according to the recent census.

Table III.1 Major and final strata			1981-1997	1998-2003	2004-2015
			Criteria for division into final strata		
Major strata		Athens agglomeration	40 strata	40 strata	31 strata
		Thessaloniki agglomerations	10 strata	10 strata	9 strata
	Rest of country	Municipalities	50,000 and more	50,000 and more	10,000 and more
			from 30,000 to 49,000	from 30,000 to 49,000	
		Municipalities or Communes	from 10,000 to 29,999	from 10,000 to 29,999	
			from 5,000 to 9,999	from 5,000 to 9,999	From 2,000 to 9,999
			from 2,000 to 4,999	from 2,000 to 4,999	
		Communes	from 1,000 to 1,999	from 1,000 to 1,999	up to 1,999
			from 500 to 999	from 500 to 999	
			up to 499	up to 499	
	Total number of major strata		*10 (as above)*	*15 (13 Regions, Athens and Thessaloniki agglomerations)*	

Since 2004, total country is stratified in 182 strata. Athens and Thessaloniki agglomerations are divided into 31 and 9 strata, respectively. For the rest of the country municipalities and communes of every NUTS 3 area are allocated in three different groups (Agglomerations and Municipalities with 10.000 inhabitants or more, Municipalities and Communes with 2.000 to 9.999 inhabitants, and Communes up to 1.999 inhabitants).

The number of sampling stages varies as follows:

- 1981 - 1997:

  o Two-stage: Refers to the first five major strata (Athens and Thessaloniki agglomerations, Municipalities or Communes of 10,000 inhabitants and more). Sampling units: Primary (city block or enumeration district), Secondary (dwelling).

  o Three-stage: Refers to the rest major strata. Sampling units: Primary (Municipalities or Communes), Secondary (city block or enumeration district), Tertiary (dwelling).

- 1998 - 2015: Two-stage sampling

o First stage: A random sample of primary sampling units-PSU (blocks or groups of dwellings) is selected in every final stratum. PSUs are selected by probability proportional to their "size" that is the number of households residing in at recent census.

o Second stage: Within each PSU a systematic sample of dwellings is selected in every primary sampling unit. All households residing in selected dwellings are asked to participate in the survey. All the individuals who are members of the selected households are interviewed.

The changes in the sample size (number of households) for the period 1981-2015 are presented in the table below. In 1993, following Eurostat requirements, LFS was redesigned with a significant increase of the sample overall size in order that regional level (NUTS-2) estimates of population characteristics, whose size exceed 5% of the working age population, alternatively 3.5% of the total population of the region, should have a relative standard error of less than 8%.

Since 1998, when the survey was conducted for the first time on a quarterly basis, the quarterly sample size was made up of approximately 30,000 households such that a) every unit area is to be surveyed in 6 successive waves (quarters), and therefore the selected households are interviewed every quarter for six consecutive quarters and b) every quarter the sample is replaced by 1/6 thereof, and thus it is repeated at 5/6 of.

Table III.2 Changes in sample size during 1981-2015						
Yearly LFS		Quarterly LFS				
Year	2nd quarter	*Year*	1st quarter	2nd quarter	3d quarter	4th quarter
1981	44,816	*1998*	31,239	31,219	31,203	31,141
1982	30,363	*1999*	30,877	30,772	30,758	30,737
1983	40,285	*2000*	30,628	30,549	30,661	30,553
1984	46,713	*2001*	30,709	30,863	31,019	31,235
1985	46,981	*2002*	30,173	30,057	29,825	29,656
1986	47,385	*2003*	29,075	28,770	28,855	28,819
1987	48,419	*2004*	31,735	32,072	32,097	32,047
1988	49,187	*2005*	31,858	31,619	31,620	31,357
1989	48,638	*2006*	31,167	30,951	30,791	30,809
1990	48,971	*2007*	30,755	30,651	30,613	30,702
1991	48,737	*2008*	30,791	30,665	30,473	30,460
1992	48,776	*2009*	30,887	30,910	30,946	31,152
1993	61,026	*2010*	31,475	31,678	31,206	30,934
1994	60,512	*2011*	28,908	29,349	27,599	27,320
1995	60,359	*2012*	26,506	25,442	25,116	24,780
1996	61,331	*2013*	25,885	25,726	25,976	26,161
1997	61,679	*2014*	26,312	25,336	25,242	25,185
		2015	25,025	25,231	25,439	25,923

More on sample design and changes over years can be found at Appendix II.

2. Data collection

Data are collected by means of personal interview. Interviewers are specially trained for this purpose. Since 2004, the method of replacements for the treating of non-response (non-response) has been abandoned.

The following forms are used to carry out the survey:

a) Map or sketch

For the recognition of the sample surface units, maps and sketches of the localities selected were used by the interviewers.

b) Lists of dwellings in the sampling unit

A list of dwellings is made for each selected sampling unit. The final sample of dwellings is determined by the number of dwellings in the sampling unit.

The following forms are filled during the survey:

Form A: Labour Force Survey questionnaire

LFS questionnaire is filled in for every household that is interviewed. Demographic data is collected for all household members whereas questions on the labour status are made only to persons aged 15 years and older. Since 2015, the method of data collection also includes Computer Assisted Personal Interview (CAPI). The latter method is continuously expanded in order to cover the whole sample.

Form C: Selected dwellings (households) of the sampling unit

Includes data for all selected dwellings: whether or not surveyed, reasons for non-response, dwellings found vacant, etc.

3. Survey results

To derive survey results, weighting factors are applied to the data obtained from the survey.

To obtain estimations from 1981 to 1997, the survey data were multiplied by a factor inverse to the sampling fraction per NUTS-2 (see Appendix II). Also, plug-population adjustment was applied in 1981 (0.999), 1982 (1.003), 1984 (1.015).

Since 1998 employment parameters (number of employed, unemployed, etc) are produced by means of a population adjustor, which was calculated for each respondent on: a) the estimated probability of selection of the particular household where the person lives, b) a non response correction factor is computed, at primary unit level, and c) the estimated population distribution by sex and age groups for each NUTS-2 level. The estimation of population distribution was based on population trends by sex and group ages and on the number of births, deaths and immigrants.

The results of the survey are subject to sampling and non-sampling errors. Sampling errors are subject to Eurostat precision requirements. Non-sampling errors concern frame errors, errors, non-response and response errors. ELSTAT attempts to limit the extent of non-sampling errors using qualified personnel to update lists of dwellings, data collection and processing. Systematic checks are also performed.

More on sampling and non-sampling errors can be found on LFS quality report, http://www.statistics.gr/en/statistics/-/publication/SJO01/2015-Q4.

APPENDIX IV. TYPOLOGIES FOR ECONOMIC ACTIVITY, OCCUPATION AND EDUCATION

1. Typology for economic activities

In order to monitor long-term changes in employment across economic activities, as well as to address the problems of comparability due to changes in classification systems, the typology of the fortnightly publication of ELSTAT "The Greek Economy"[10], Table 16, is used. This typology allocates economic activities into six broad categories, which are subdivisions of the three key sectors of the economy (primary, secondary, tertiary). The correspondences between the typology and NACE 1970, NACE Rev. 1 (STAKOD-91) and NACE Rev. 2 (STAKOD-08) are shown in table IV.1.

Table IV.1 Construction of economic sector typology				
Economic sector	*Economic sector typology*	**NACE 1970** *1981-1992*	**NACE Rev. 1 (STAKOD-91)** *1993-2007*	**NACE Rev. 2 (STAKOD-08)** *2008-2015*
Primary	*Agriculture, forestry and fishing*	0	A,B	A
Secondary	*Industry, including energy*	1,2,3,4	C,D,E	B,C,D,E
	Construction	5	F	F
Tertiary	*Trade, hotels and restaurants, transport and communication*	6,7	G,H,I	G H I 58,59 60,61
	Financial, real estate, renting and business activities	8	J,K	62,63 K,L,M,N
	Other service activities	9	L,M,N,O,P,Q	O,P,Q,R,S,T,U

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[10] http://www.statistics.gr/en/the-greek-economy

2. Typology for Occupation

In order to monitor long-term changes in employment across occupations, as well as to address the problems of comparability due to changes in classification of occupation systems a typology of occupations was established. This typology groups occupations on the basis of a) the nature of the occupation, i.e. the extent to which its' exercise involves manual or non-manual activities and b) the level of knowledge and skills required to practice the occupation.

For years after 1993, when the STEP-92 (ISCO-88 (COM)) and ISCO-08 classifications are used, the typology is based significantly on Eurostat model on the distinction of occupations into manual and non-manual[11], as well as the concept of "skill"[12] of the International Labour Organization (ILO).

For years 1981-1992, when ISCO-68 was in use, neither Eurostat nor ILO provide such model. Furthermore, occupations recorded at two-digit level up to 1992. For cases in which there is an exact match with ISCO-88 (COM) codes, i.e. when there is one-to-many relationship between ISCO-68 and ISCO-88 (COM) at two-digit level, the classification method of that occupation in a distinct "skill" and "nature" combination is as follows:

> a) three-digit codes (occupations) are examined within that particular all ISCO-68 code[13],
> b) if all three-digit codes belong to the same "nature" and "skill" combination, then (a) is classified in that combination,
> c) if not, then classification of (a) is decided upon three-digit ISCO-68 codes with the most dominant frequencies for years 1993-1997

The majority of cases (two-digit codes of ISCO-68) involved (b), i.e. one-to-one correspondence of a two-digit ISCO-68 and a distinct "nature" and "skill" combination. However, there were some cases in which (c) had to be implemented. Finally, the typology classifies occupations into five categories as follows:

- Highly skilled non- manual
- Low skilled non-manual
- Skilled manual
- Agriculture, forestry, animal husbandry and fishing occupations
- Elementary occupations

The soundness of this approach was tested by examining the derived time series. With the exception of the category "Elementary occupations" no abrupt changes from 1992 to 1993 have been observed. The correspondences between the typology and ISCO-68, ISCO-88 (COM) and ISCO-08 are shown in table IV.2.

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[11]

http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=CL_ISCO08&StrLanguageCode=EN&IntPcKey=&StrLayoutCode=HIERARCHIC

[12] *Skill* is defined as the ability to carry out the tasks and duties of a given job. See
http://www.ilo.org/public/english/bureau/stat/isco/isco88/publ2.htm

[13] According to «Statistical classification of occupations" manual, 1981 (in Greek)

Occupation typology	ISCO-68 (STEP-81) (1981-1992)	ISCO-88(COM) (STEP-92) (1993-2010)	ISCO-08 (2011-2015)
Table IV.2 Occupation typology			
Highly skilled non-manual *(senior executives and officials, professionals, technicians and associate professionals, artists)*	0/1 2 31 40-44 50-51 60 86	1 2 3	1 2 3
Low skilled non-manual *(clerical support workers, service and sales workers)*	3 except 31 45, 49 52-59	4 5	4 5
Skilled manual *(craftsmen, machine operators, assemblers)*	7 8 except 86 9 except 99	7 8	7 8
Agriculture, forestry, animal husbandry and fishing occupations *(skilled workers and labourers)*	6 except 60	6 92	6 92
Elementary occupations *(elementary workers except in agriculture etc)*	55,56,99	9 except 92	9 except 92

3. Typology for education

1981-1986	1987-1991		1992-1998	1999-2015	LEVEL OF EDUCATION	
	Have completed	Currently attending				
Attended no school at all	Attended no school at all		Attended no school at all	Illiterate / Attended no school at all	*Attended no school at all*	*Attended no school / Did not complete primary education*
Completed at least one grade of primary education	Not completed primary education	Not completed primary education	Not completed primary education	Not completed primary education	*Not completed primary education*	
Completed primary education	Completed primary education	Student at lower secondary education (gymnasio)	- Completed primary education (demotiko) -Have completed some grades of lower secondary education (gymnasio) -School Units for Education of handicapped/Demotiko-primary	-School Units for Education of handicapped/Demotiko-primary -Have completed some grades of lower secondary education (gymnasio) -Completed primary education	*Completed primary education*	*Primary education*
Completed lower secondary education (3 years-gymnasio or 3rd grade of former 6-grade gymnasio)	-Lower level Technical-Vocational Schools -Completed lower secondary education (3 years-gymnasio) -Completed some grades of upper secondary education (lykeio)	-Student at upper secondary education (lykeio) -Student of vocational / technical / ecclesiastical secondary school (lykeio) -Student of Multibranch lyceum -Student at other vocational / technical school for persons who completed lower secondary education (gymnasio)	-Have completed lower secondary education (3 years-gymnasio) - Lower level Technical-Vocational Schools) -Completed 3rd grade of former 6-grade gymnasio -School Units for Education of handicapped/Gymnasio-secondary	-Have completed lower secondary education (3 years-gymnasio) -School Units for Education of handicapped/Gymnasium) -Lower level Technical-Vocational Schools -Former 6-grade Gymnasio/ Lyceum (Upper Secondary education)	*Completed lower secondary education*	*Lower secondary education*
Completed secondary education	-Completed former 6-grade Gymnasio or Lyceum (Upper Secondary education) -Completed vocational/ technical / ecclesiastical Lyceum -Middle schools of foremen or middle schools of merchant marine -Completed vocational / technical school for 3-grade Gymnasium graduates -Attended university but did not receive a degree	-Undergraduate student -Security forces student -Third-level vocational institution degree (TEI) student -Other vocational or technical school student (arts, merchant navy, ecclesiastical, various services, technical aircraft engineering, electronics etc) -College (non-tertiary) student -Completed secondary education-preparing for University entrance exams	-Attended university but did not get a degree -Completed former 6-grade Gymnasio or Lyceum (Upper Secondary education) -Completed vocational/ technical / ecclesiastical Lyceum -Multibranch lyceum (3years) -Multibranch lyceum (4 years) -School Units for Education of handicapped/Lyceum -Middle schools of foremen or middle schools of merchant navy -Technical /Vocational Schools (for graduates of lower secondary education)	-Attended university but did not get a degree -Completed former 6-grade Gymnasio or Lyceum (Upper Secondary education) -Completed vocational/ technical Lyceum -Technical Vocational Lyceum (TEL) -Multibranch lyceum (3years) -Multibranch lyceum (4 years) -School Units for Education of handicapped/Lyceum -Middle schools of foremen or middle schools of merchant navy -Technical /Vocational Schools (for graduates of lower secondary education) -Technical-Vocational Schools for graduates of lower secondary education (abolished TES school, less than 3 years)) -Technical-Vocational Schools for graduates of lower secondary education (TEE-less than 3 years) -Technical-Vocational Schools for graduates of lower secondary education (TEE-3 years or more)	*Completed secondary education*	*Upper secondary / post secondary*
-Attended university but did not receive a degree -Currently attending University	Completed post-secondary vocational / technical education		- Public vocational or technical school student (arts, merchant navy etc) -Private vocational training institutes (IEK)	-Institutes of Vocational training (IEK)-private or public ,post-upper secondary training -Private colleges (DEREE, foundation courses etc) -Private schools of foreign languages (degree that allows teaching in private institutes)	*Post secondary*	
University degree holders	-University degree -Pedagogical or educational academy degree -Physical education academy degree -Home-economics school degree -Have completed Security Forces school -Third-level vocational institution degree (TE()	-Post graduate student	-University degree (Pedagogical field and Education Science) 2 year attendance -University degree (Pedagogical field and Education Science) 4 year attendance- -University degree (home economics) -Military schools (by university entrance exams) - Other military schools -Merchant navy school -SELETE pedagogical school -Higher School of Educational Technologists Engineering (SELETE) -Polytechnic school (Architecture, Civil engineering, Topografhy) -Other polytechnic schools -Mathematics or Physics degree -Agrcultural university -School of forestry -Medical science degree -Paramedical studies degree -Veterinary degree -School of Pharmacy degree -Law school degree -Economic and business degree Social sciences degree -Accounting , Administration degree -Philosophy, Literature,Theology degree -Physical education academy (TEFAA) - -Other university degree	-Technological Education Institurions (tertiary technical-vocational education non-university --topography, civil engineering, mechanical --electrical, ship-building, industry-production, mineral resources, etc --agricultural technology, food and drink processing technology, economics and management, health related sciences --applied arts, library science, informatics --social care, social work -Open University (Technological Education) -Extended Univeristy Programs (Technological direction) -Military schools for permanent non-commisioned officers (airforce-army techinicians and administrative personnel, navy personnel, policemen) -Military schools/University level (army-airforce-navy cadets combatants and engineers, police officers, military medicine personnel, nurses, economists -Academy of merchant navy, Higher school of touristic profession, other technical-vocational-professional schools (tertiary non-university education) -University degree (Pedagogical field and Education Science) --2 year attendance-abolished --4 year attendance -PATES-SELETE(Teachers training schools--6 months to 1 year duration) -ASETEM-SELETE (Higher school of Education of teachers of engineering/Pedagogical field and Education science) -University degree --computer sciences, home economics, natural, physical Sciences, mathematics, Statistics --medical Sciences, veterinary, medical biology, nurses, dietology -law, humanities, sociology, anthropology, psychology, economics, Mass communication and Documentation, fine arts -Physical Education and Athletics -architecture, town planning, civil engineering, topography -agricultural and Environmental and Physical Resourses Sciences -engineering (mechanical, computing, electrical, ship and aircraft-building, industry-production, mineral resources) -Open University (General Direction) -Extended University Programs/General direction)	*University degree*	*Tertiary education*
	- Post graduate studies (Master or Phd degree)		-Post Graduate studies (Master course) -Phd	-Post Graduate studies (Master course) -Phd	*Post graduate degree*	

APPENDIX V. FULL LIST OF TIME SERIES

Time series	Starting year
1. Population	
Sex	1981
Age	1981
Nationality	1987
Marital status	1983
Region - NUTS II	1981
Urbanization	1981
2. Education	
Education level of persons aged 15 and more	1981
Education level of employed persons	1981
Education level of unemployed persons	1981
Tertiary educational attainment aged 30-34	1987
Attended formal or informal education in the 4 last weeks	1983
Persons 15-29 years old neither in Employment nor in Education and Training (NEETs)	2006
Early leavers from education and training (persons aged 18-24)	2006
Lifelong learning for persons aged 20-64	1983
3. Employment status	
Labour Force	1981
Employed	1981
Unemployed	1981
Inactive	1981
Reasons for not seeking employment (inactive)	2003
Population living in jobless households	
- Persons aged 0-17 years old	2003
- Persons aged 18-59 years old	2003
4. Employment	
Number of persons working at the local unit	1992
Business ownership	1987
Sector of economic activity	1983
Type of occupation	1993
Status in employment	1981
Employment distinction	1983
Reasons for the part - time work	1983
Permanency of the job	1983
Reasons for having a temporary job	1983
Hours actually worked durIng the reference week	1981
Hours actually worked in reference week related to usual hours	1981
Underemployed part-time workers	2006
Wish to work usually more than the current number of hours	1999
Available to work more than the current number of hours	2006
Atypical work	
- Shift-work (employees only)	1992
- Evening work	1992
- Night work	1992
- Saturday work	1992

Time series	Starting year
- Sunday work	1992
- Work at home	1992
Looking for another job and reasons for doing so	1981
Have more than one job or business	1981
Uninsured workers	1999
1-digit economic activity	1981
2-digit economic activity	1981
1-digit occupation	1983
2-digit occupation	1983
5. Unemployment	
Duration of unemployment	1981
New unemployed (no previous employment experience)	1981
Professional status in last job	1983
Reason for leaving last job or business	1983
Economic activity of last job	1983
Type of occupation	1993
Type of employment sought (or found)	1983
Situation immediately before person started to seek employment	1983