Deliverable report for

YOUNG_ADULLLT

Grant Agreement Number 693167

Deliverable 4.1
National Briefing Papers with national and regional data sets

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Dissemination Level:		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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1. Description of task

Task 4.1: Develop a framework for the collection and analyses of quantitative data (months 9-13):
Developing a framework for the collection and analyses of quantitative data involves identifying and selecting relevant sources and dimensions of the labour market and education/training at international/national (macro) and regional levels. The framework will also address issues of data quality, reliability and validity necessary for its implementation and for analysing the results. To create synergies, this task will draw from insights and experiences of previous research and methodological guides (e.g., COE, 2005; Iacovou et al., 2012; ISS, 2008) and focus on the following dimensions:

- The socio-economic dimension (indicators: national youth work structures, youth work in the regional settings, qualification, no formal qualification, migrants, and types of occupation);
- The labour dimension (indicators: employment/ unemployment rate, youth unemployment rate, job quality levels, precarious forms of employment level; temporary or involuntary part-time contract levels);
- The education, training and learning dimension (indicators: access to education, schooling form, drop-out rates, early school leavers, literacy levels, level of official language teaching, access to communication technologies education, young population having completed compulsory education, population having completed high education level, access to participation in lifelong learning);
- The Social dimension (indicator: national LLL policies for young adults)

The data collection will be gathered according to gender, age, and other relevant differentiation criteria. Role of participants: WP leader (UGR) and core teams (GU, UNIVIE) develop and circulate the research framework and provide a grid for the reporting to national participants, who read, review and give feedback on the framework developed by the WP leader.

Task 4.2: Obtaining specific information and data collection (months 13-17):
The purpose is to obtain and analyse comparable information and data compiled by international organisations such as the EU (Eurostat general and regional indicators, and surveys: Labour Force Survey, EU-SILC, European Social Survey, Adult Education Survey) and the OECD (Education at a Glance, OECD Skills Outlook with results of the S urvey of Adult Skills - PIAAC, OECD Employment Outlook 2013). The analyses will allow for contextualised comparison of the different national cases. Role of participants: National partners use the framework developed by the WP leader and core teams to collect and prepare all relevant data for analyses.

Task 4.3: Conduct analyses of statistical data on the specific living conditions of young adults in the regional settings (months: 17-19):
This task involves the analysis of statistical data on the specific living conditions of young adults in the regional settings about LLL. It also includes interpreting data according to standards of living conditions of young adults in the countries. Each national research team will be guided by the question as to the meaning of data on youth unemployment/employment, educational levels, and qualification formal/non-formal, in the specific contexts. Role of participants: Each partner conducts the analyses at the national and regional level according to the WP framework, producing national briefing papers with national and regional data sets, brief descriptive analysis and contextualisation of data.

2. Description of work & main achievements

2.1 Activities

The overall objective of the WP4 focuses on the interplay at macro, meso and local level between Life Long Learning (LLL) policies, young people's living conditions and country and region specific contexts in promoting or deterring growth and social inclusion. Research concerning this WP involves: 1) developing a framework for analysing quantitative data on the specific living conditions of young adults in regional contexts; 2) collating and analysing the data from international data sources 3) conduct the analysis and writing the national reports.

To attain these objectives the work involving WP4 for the first year concentrated on developing a working paper proposal with the theoretical approach and work to be developed by national partners. Different versions of the working paper were first discussed with the core partners (UNIVIE & UG) and the Coordinator (WWU) and later with the rest of partners. After taking into account, the feedback received from all partners, the final version of WP4 proposal has been used as the guidelines.

To facilitate the attainment of the different objectives of the WP4 national reports two milestone activities were set. All partners had to conduct them and upload their pieces of work on the internal project server used by the Consortium. UGR and UNIVIE teams were providing a work-in-progress example of the work to be done for each milestone activity and providing individual and general feedback to all partners for each activity. The three milestone activities

referred to the three objectives mentioned above: 1) interpretating and solving doubts about the data collation; 2) evaluating the young adults living conditions across different regional units and country, and, 3) assess and complement the data quality provided by international data sources.

These milestone activities were used as a starting point to write the first draft of the national reports. All partners submitted a first draft of the national reports at the end of July 2017. The UGR team provided feedback by mid-August. Each national partner introduced the feedback as deemed appropriate and submitted the final submission of the national report by mid-October, so that the UGR team could work on Deliverable 4.1.

Presentations and further discussions on the work to be done and the organisation by milestone activities took place during the consortium meetings in Porto (November 2016) and in Granada (June 2017), as well as in the coordination meeting with all empirical WPs within the project in Barcelona (January 2017).

2.2 Executive Summary

Theoretical framework

WP4 conducts a quantitative analysis of young adults' social and living conditions, by analysing socio-economic data (macro data) aggregated at the national and local level on different dimensions in participating countries. YA living conditions are defined as resulting from young people's position in the education systems, or in the transition from education to employment, but their risk profile requires a refined methodological operation. In WP4, we consider these risk profiles and analyse country/region specific settings of young people's living conditions (see **Figure 1**) to set the stage for the investigation of LLL policies implications, which are addressed in the subsequent WPs (from WP5 to WP7). This approach informs about the contextual dimensions that correlate with the production of different risk profiles. We aim at identifying different profiles of young people at risk, to gain understanding of the contextual configurations of risks affecting young people in different countries and regions.

The complexity and multidimensionality of the phenomena analysed require an integration of different methods of research. To set the stage for further investigation of how LLL policies affect young adults six basic dimensions are selected. Definitions and descriptions of these dimensions, as well as a list of indicators and data for each of them, is given in section 1.The data collected by the core team from official and comparable statistical sources are aggregated at three different levels: national (the more widely comparable); regional (NUTS2). For a complete discussion of the approach used, see the introduction section which precedes the national reports.

Below it follows a summary of the main findings:

Austria: The national briefing paper will provide a short overview of the living conditions of young people in Austria and, more specifically, in the two functional regions selected, namely the region of Vienna and Upper Austria. The two regions share some characteristics within the same federal regulatory framework, but they present differences in the socio-economic structure, political tradition and degree of urbanization, as well as in the way they react to common challenges like youth unemployment.

Population: Austria has an increasing old-dependency rate and a decreasing young-age dependency. Values for Upper Austria are close to the country average while in Vienna the weight of young people is stronger because of migration inflows.

Economy: Vienna has a leading role in the Austrian economy, confirmed by the high GDP per capita. Also, the industrial region of Upper Austria shows a remarkable

economic performance, as the GDP per inhabitant is above the national average.

Education: in Upper Austria young people heavily participate especially in upper secondary education, while higher education is more widespread in Vienna. The percentage of low-educated young adults increased after 2014. The link between education and the labour market still appears to be stronger in Austria if compared to the European average. However, the rate of young people out of education and work is higher in the Vienna region, while extremely low in Upper Austria.

Labour market: Employment in Austria has been increasing especially in temporary and part-time jobs. However, the economy cannot fully absorb the growth in the labour force: this has led to recent increases in unemployment, especially for young low-skilled people. In Vienna, young people face a higher unemployment risk, while youth unemployment rates in Upper Austria are lower than the country average.

Social protection: Austrian expenditure for social protection benefits to protect people in need is above EU average. Social welfare standards are still high overall, as the proportion of the population at risk of poverty or social exclusion is one of the lowest among EU Member States, but some groups must face greater risks, in particular, older women and children of foreign-born parents.

Bulgaria: The quantitative characteristics describing living conditions, education, structure of the economy and labor market in Bulgarian conditions are very important for understanding the transitions of young adults from education to employment and the opportunities for lifelong learning. The report focuses on two functional regions: Blagoevgrad and Plovdiv.

Bulgaria has very high shares of people with higher education compared to European partners, and in 2014 two thirds (66.5%) of the 20-24 age group are students. This is a sign that education is still perceived as a value-added, being also a result of the higher education active policy towards young adults. The proportion of people aged between 30 and 34 with upper secondary education (ISCED 3-4) is higher than in the UK, and is comparable to Germany. When it comes to adult education, the share of learners (24-34 years) is much lower than the EU27 average. After having completed their education qualification, people tend to interrupt their formation, which requires a more active involvement of the training organizations in formal and non-formal education and lifelong learning.

Important differences emerge in education characteristics between Blagoevgrad and Plovdiv region. Apart from education, In Bulgaria, almost all other dimensions examined in the report show poorer conditions compared to EU average. Social protection expenditure per capita increased from 2005 to 2014 but remains much lower than that of other EU countries. The Households disposable income in 2013 is

much lower than in other EU countries. The share of people at risk of poverty and social exclusion in Bulgaria decreased in the period 2006-2015, and from 2008 to 2015 it is relatively stable between 40% and 50%. These values describe Bulgaria as the poorest European country with low standard and poor living conditions. The overall satisfaction for those aged 18-30 years in Bulgaria (-1.161) is much lower than the average for EU28 (-0.014) as men (-1.211) are more satisfied than women (-1.109). The overall conditions are characterized by a process of slow economic stabilization, income growth, poverty reduction, increasing youth employment, growth in disposable household income and high educational attainment. However, there is still a lot to be done to reach the average values describing the quantitative characteristics of the quality of life in the other EU countries.

Croatia: This paper provides a short overview of the living conditions of young people in Croatia, focusing on two Croatian functional regions (Istria County and Osijek-Baranja County). Based on the obtained data, young people in Croatia live in conditions are less favourable in comparison with the EU28 average. This concerns youth in both functional regions, even though the Istria County is more developed than the Osijek-Baranja County.

The main demographic characteristic is a decline of the rate of natural population (including increasing the average age of the population and low fertility rate). Croatian economic conditions are significantly below the EU28 average (the Croatian GDP is significantly lower than the EU28 average, and the Croatian labour productivity is significantly under the EU28 and Euro area countries average). Comparing Croatia with other EU countries, the share of youth living with their parents is very high. The main strengths of the Croatian education system are a very low early school leaving rate and the high proportion of secondary vocational school graduates entering higher education. The main weaknesses are low results in international studies of numeracy, literacy and reading skills of youth, as well as extremely low participation in early childhood education and care and adult education. The economic activity rate of youth (age 15-24) has decreased in the last ten years. Croatia is one of the three EU28 countries with the highest youth unemployment. The key issues faced by young people when entering the labour market in Croatia are the lack of previous work experience and mismatch between their qualifications and the skill demand. Moreover, economic active youth in the labour market shows a great gender gap. Characteristics of the Croatian social welfare system show that the social protection expenditures in the national GDP are behind the expenditures in the GDP of EU 28 average, while the material deprivation rate is much higher. However, the living conditions for young people in Croatia and the Gini index have a tendency to be similar to the European average. The best aspect of healthcare in Croatia is the broadness that encompasses the population

with free healthcare including persons in the regular system of education and persons with low income. However, Croatian people are less satisfied than the average European citizens in the field of satisfaction with the financial situation, overall life, recreational and green areas and living environment. Moreover, the availability of health services is not uniform in all regions of Croatia and it is significantly weaker about other EU countries. All analysed data show that the living conditions of young people are better in Istria than in the functional region Osijek-Baranja.

Germany: This report analyses young adults living conditions in Germany by focusing on two functional regions as Rhein-Main and Bremen. The German society is undergoing demographic changes due to an ageing society and an inflow of migrants. However, the growth of the two regions differs largely, as the FR Rhein-Main is constantly growing due to worker inflow, whereas the population in FR Bremen is shrinking. While in FR Bremen young adults are more likely to be responsible in a young age for children, interrupting training and work in early career stages, in the FR Frankfurt, especially in the metropolitan core, young people are more prone to postponing life projects of family and own children. The data shows that today's young adults grow up under different circumstances and dealing with different limitations (high living costs, uncertain career path, prolonged educational trajectories, etc.), which hinders them to move out of their parents' home and achieve financial independent lives. Specifically, young adults under 25 – who are recipients of welfare benefits (Harz IV) – are further prevented from gaining autonomy by the legal regulations of social programs and labour market policies.

Wealth and economic productivity are unevenly distributed in the researched locales: While the core of both regions is rather wealthy, its periphery hardly participates from the economic turnover. At the same time, the high living costs in the core areas hinder young adults to live and work in the more profitable core areas. As a result, a mismatch of economic opportunities and financial limitations arises, especially concerning young adults living in FR Rhein-Main. Simultaneously, the regions face structural changes creating risks for career paths, particularly affecting young adults in FR Bremen. While traditionally dominant sectors are on the decline (such as logistics), other low-wage sectors are growing, which could lead to a rethinking of young adults' career choices.

The German education system is characterised by a tight coupling of certificates and occupational biographies. With the increasing trend towards academisation, young adults face a prolongation of formal education. However, this follows a peculiar institutional fragmentation due to the multi-tiered school system, which caters to labour markets with substantially different needs. The opportunities for education,

and thus occupation, are largely determined by the region the young adults grow up: Growing up in the neighbouring parts of Frankfurt am Main as, for instance, the city of Offenbach or Aschaffenburg (the Bavarian part of the FR) or in the rural areas of FR Bremen exponentially increases the odds of achieving at most the lower secondary education certificate (Haupschule). Young adults living there are especially at risk of exclusion, as this school track is continuously reduced in Germany thus also diminishing their chances in the transition into the labour market.

Although youth unemployment rates are under the EU average, for young adults living in the FR Bremen, the risk is higher than in the FR Rhein-Main. Particular regional differences in contrasting labour markets promote and foster the need for specific jobs as consequence of the regional structural changes. Especially the FR Bremen has a highly dynamic and contrasting labour market, however still offers a large number of jobs in production plants. As a result, the labour markets are highly polarised, with focus on high and low skilled worker constantly reducing the medium-skilled workers. In contrast, the FR Rhein-Main offers a broader variety of jobs in finance, air transportation, service and media, however, attract workers all over Germany and worldwide who compete with the potential workers on site. Particularly as both Functional Regions attract high skilled worker in the core spreading the remaining skilled jobs in its periphery causing precarious situations for NEETs and early school leavers.

Being at risk of social exclusion and poverty varies remarkably within and across both Functional Regions. Living in the core of both regions enhances the risk of receiving benefits for long term-unemployment. However, the risk varies with the regions.

The above-mentioned poverty risk profiles are similar regarding health, as growing up in poor families leads to a decreased health status. This risk enhances for young adults living in more rural areas, as the access to health care is limited. As detailed local data is missing, we concluded based on data on poverty and unemployment, that the health risk is also high in the cities of Bremerhaven and Wilhelmshaven (both FR Bremen) and Worms and Offenbach (both FR Rhein-Main).

Finland: The Finnish education system, especially the comprehensive school, is characteristically intertwined with the Scandinavian notion of the welfare state, which entails a strong emphasis on equal educational opportunities. As one of the key elements of the Scandinavian welfare model, the comprehensive school system is identified by universal, non-selective, and free basic education provided by the public sector. PISA results from the early 2000's on have shown that not only is the average level in reading, mathematics, and sciences high in Finland, but also the share of low achievers is comparatively small. The other important sign is that the

Finnish school system has been successful in compensating for the poor socioeconomic background of pupils. Also, the between school variation in learning outcomes is one of the smallest in the OECD world. The school system has proved to be homogeneous in quality. Young people have relatively good educational opportunities at the upper secondary and tertiary level. However, about 10 percent in each age cohort young people do not continue in education or training after basic education. Their situation is getting worse while the competition in the labour market gets tighter. The other phenomenon is the decreasing level of average learning outcomes tested in PISA, TIMSS, and PIRLS. The share of low performers has been growing.

Finnish economy has suffered two severe crises since the 1980's, first in the early 1990's and then as an effect of the global financial crisis from 2008 onwards, which have had drastic effects on youth employment. After the financial crisis, unemployment for young people has increased, more heavily for males than for females. Long-term unemployment of 20-29 aged males was seven times higher and females eight times higher in 2016 than in 2008. Uncertain employment prospects have also discouraging effects on educational motivation especially of young people in the low end of the achievement curve. In certain regions of the country getting a job without work experience and vocational training is practically non-existent. The number of NEET young has been slightly increasing during the past decade or so. Actually, young adults living in the two functional regions, FR Southwest Finland and FR Kainuu, live in quite different realities what comes to their prospects. People born in northern and eastern parts of the country tend to move to southern cities after completing compulsory or upper secondary education. The overall employment in FR Kainuu has decreased quite dramatically within the past decades: the number of employed in FR Kainuu is only about 70 percent of the level it was at the beginning of the 1990's. However, Finnish young people are clearly more satisfied with several areas of their life than their peers in Europe on average. Especially large differences between Finnish youth and European average are in accommodation, job satisfaction, and overall life satisfaction.

Being at risk of poverty and social exclusion is lower in Finland than it is in EU27 countries on average. About 17 % of the population has been at risk of poverty or exclusion between 2005 and 2015. The gap between different parts of the country has been growing during the past decade. The risk of poverty and social exclusion has grown bigger especially in northern and eastern regions of Finland.

The number of children born in Finland will be lower than ever since the last famine years 1866-68, although the size of the population has more than doubled. According to the projection, the share of people aged under 15 in the population would decrease to 14 per cent by 2060. The share of people with foreign

background has been very low compared to other European countries. Hostility towards people with foreign background has increased during recent years among the native population. These developments will have severe consequences for the dependence ratio in the future.

Italy: The contextual living conditions of young adults are analysed by looking at available indicators at national and regional (NUTS 2) level, focusing on two functional regions Liguria and Lombardia and integrated with NUTS 3 data when available. Italy is one of the oldest countries with the lowest replacement rate. This makes the demographic stability and the same system of social security more and more dependent on migrations, which, however, are today one of the most serious challenges. The old dependency ratio confirms a worst demographic dynamic in Liguria in comparison with Lombardy. Productivity growth remains weak, slowing the correction of Italy's macroeconomic imbalances. It has been a problem for years. Making the labour market more flexible and reducing the indirect costs have been considered a pivotal part of a wider strategy aimed at reducing high structural Italian unemployment. Lombardy and Liguria remain around the EU average with regards to the GDP, but while the first one is firmly above Italian and EU average, the second is much closer to the average.

Participation in adult learning remains a persistent concern, in particular for those needing it most. Italy lacks of short degrees (EQF 5) makes the average rate of young with tertiary education level lower than EU average (and far from the Lisboa 2020 target), but at the same time the absence of technical short degrees causes the overqualification of workforce, because the rate of degrees that do not use enough their qualification in the job is high (more in Liguria than in Lombardy), and the rate of highly educated youngs that migrates is growing. Despite the gradual improvement of the labour market, long-term and youth unemployment remain high. The implementation of the active labour market policies reform, including the reinforcement of public employment services, is still at an early stage. Also, in the public debate, mismatch prevails over the lacking capacity of productive context to absorb skilled workers. In the last 15 years, profits have risen, and wages have fallen, but companies did not devote their highest profits to greater investments. The potential of female labour market participation remains largely underutilised. Access to affordable childcare remains limited with wide regional disparities, paternity leave is among the lowest in EU, and the effectiveness of cash allowances for childcare has not been assessed. Young people and women are confirmed the less protected and needy strata of society, even if the female employment has developed over time (if less than the strong EU countries). The structure of the economy explains a large part of the different internal outcomes. For examples, about our functional regions, the data shows that in Liguria the risk of poverty and

social exclusion is higher than in Lombardy.

Significant barriers to competition remain in important sectors, including professional services, local public services, concessions and the transport sector. The public sector is being reformed to tackle longstanding inefficiencies. New social policies have been put forward to respond to the rising poverty rate. It is unclear whether the financial resources will be sufficient to address Italy's poverty challenge. Activation policies are not yet widespread enough. The rate of people at risk of poverty or social exclusion is well above the EU average and is particularly high for children, temporary workers and individuals with a migrant background. In general living conditions in Lombardy are better, and this evaluation emerges both from objective data, both from perceptions of citizens. We must consider that Liguria is the region with the oldest population, as said heavily affected by the economic and demographic crisis, caused serious disturbance in educational and social sectors. Less young people in an ageing context with fewer opportunities and a greater part of the population at risk of social exclusion also contribute to lower levels of subjective well-being and lower expectations for the future.

To summarise, the current problems of the Italian economic and social context (low productivity, high public debt, inefficiencies in some sectors, poor innovation, population ageing, overcrowded social policy costs, often passive) do not favor the condition of Young Adults, who to a large extent continue to live in the family (78% of people aged 20-29, vs a EU average of 55,4%). In a time of crisis such as this, families are the main safety valve, reducing the autonomy of young people.

Portugal: The contextual living conditions of young people are analysed by looking at available indicators at the national and regional (NUTS 2) level, integrated with NUTS 3 data when available or provided by the Portuguese National Statistics Institute (INE) and the Database of Contemporary Portugal (PORDATA), as well as by other institutional sources. Two of the main demographic characteristic are the growing ageing of the Portuguese population both at national and regional levels, and the high percentage of young adults aged 20-29 living with their parents. During the time span, and in spite of the financial crisis and Troika's intervention the GDP and the GVA increased at national and regional levels. However, the performance of the Portuguese economy measured by GDP per inhabitant and labour productivity is still considerably lower than the EU28 average.

Between 2005 and 2016, the structure of academic qualifications of the Portuguese population has improved significantly both nationally and regionally. The rates of school attainment increased in all age groups, the ratio of early school leavers and the rate of NEET declined significantly. However, when compared to other European partner countries, Portugal still reveals the lowest rates of school attainment even

among the younger generations.

In spite of an important skills upgrading during the decade, the occupational structure of the Portuguese labour market is less qualified than the EU27 average. The Portuguese youth employment rate (15-24 years old) is one of the lowest in EU27 and decreased consistently during the time span 2005-2015, showing important differences at regional level. Unemployment is mainly a youth problem, particularly after 2011. In 2015, the Portuguese youth unemployment rate was more than the double the rate of people aged between 20 and 64 years and higher than the EU28 average. Once again, significant regional differences can be found. Generally, the Norte labour market seems to be more youth-friendly than the Alentejo one.

In Portugal, resources spent for social protection benefits, provided to households and individuals affected by a specific set of social risks and needs is one of the lowest in EU27. In spite of the financial crisis and the growth of unemployment rate, the expenditure per inhabitant did not rise significantly, and the expenditure with family and children and social exclusion are those were the underfunding is more severe when compared with EU27. The income inequality started to increase strongly after 2011, transforming Portugal in one of the most unequal countries in EU.

During the time span 2005-2015, self-perceived health in Portugal has always been lower than the EU27 average. Portugal was also the country participating in YOUNG ADULLLT project with the lowest self-perceived health. In general, Portuguese people aged between 25-34 years are comparatively less satisfied with their lives.

The data show that the living conditions of young people in Portugal are worse than the EU28 average. They also reveal some regional differences which point to the fact that the living conditions are slightly better in Norte, where Vale do Ave is located than in Alentejo where Litoral Alentejano's young people live.

Scotland: This report analyses the contextual living conditions of young adults in two functional regions within Scotland, the Glasgow City Region and Aberdeenshire. It is will well-known in Scotland that risk profiles of young adults correlate with socioeconomic background, as for instance manifested in the education attainment gradient and access to universities, issues that are the subject of an ongoing public debate. The analysis presented here, also illustrates regional differences across several domains.

Fortuitously, the four NUTS2 statistical regions in Scotland represent an approximate fit with major metropolitan areas of Glasgow, Edinburgh and Aberdeen, in addition to the Highland and Islands. Therefore, useful insights can be

gained from using harmonised indicators. However, many policies operate at a smaller spatial scale and therefore such aggregate data is often unsatisfactory. There are good examples of rich datasets maintained at a UK-level, but also specifically for Scotland. However, these are limited in terms of timeliness and ability to regionalise results. Efforts are being made to rationalise, link and exploit administrative data sources in Scotland more effectively, but this is still at an early stage.

Population: Scotland has a rising dependency ration, albeit from a lower level than the UK. Greater Glasgow is in line with Scottish average, but Aberdeenshire is starting from a lower base. Economy: GDP per capita in Scotland is slightly below the UK average. Whilst greater Glasgow is further below this average, Aberdeenshire, with its oil and gas industry, is one of the UK's most affluent regions. Youth employment in Scotland on average is slightly stronger than in the UK as a whole and markedly so in Aberdeenshire. On the whole, the UK compares favourably to an EU average. Education and labour market: In terms of the share of tertiary education in the working age population, Scotland is the most educated country in Europe. Overall, the UK compares favourably on this metric. However, this claim is doubtful when the share of less qualified workers is examined. In this regards Scotland, and the UK, compare unfavourably with Eastern Europe and German-speaking countries. Social protection: Average household disposable income (GDHI) in Scotland was just over EUR 16,000 in 2013, which is about EUR500 below the UK average. Great Glasgow trails the Scottish average by about EUR1000, when Aberdeenshire is approximately EUR3,000 above the average.

Overall, regional variation in GDHI is stark across the UK and the range of spatial inequality is far higher than in any other European country. This casts doubt on the analytical merit of benchmarking Scotland against a UK average, as the UK average masks a stark contrast between the South East of England and the rest. Gross disposable household income in Inner London, where it is highest, is nearly three times that of the West Midlands, where it is lowest.

Spain: The contextual living conditions of Spanish young people are analysed by looking at national and regional (NUTS 2) indicators, integrated with NUTS 3 data when available or provided by local sources. Limitations in the availability of data produce a scattered overview of the young adults living conditions. In this sense, the present report raises awareness of huge challenges for further research and policy evaluation. Limited information constrains the scope of academic debates, but also the partnership between the local administrative units both in Andalusia and Catalonia represents a huge challenge ahead. Although this briefing paper, unfortunately, cannot provide details at the levels of autonomous communities and NUTS3, a brief glance at data for the whole of Spain inspires a few general conclusions on the social conditions of young adults. The main results from available

data are summarized below.

The impact of the economic crisis seems to have hit the general conditions of Spanish economy, although some signs of recovery seem to be emerging together with growing socio-economic disparities within the country. Spanish demographic dependency ratio is lower compared to EU partners, although a fast increase in the share of dependent among the population is registered since 2009 onwards.

Spain still lags behind its European partners iregarding educational attainment. This is in part due to a highly unequal distribution of education across the age cohorts. A third of the population (34.7%) aged between 25 and 64 years have at least attained ISCED 5 with an increase of 22% from 2005. The stock of tertiary educated people is lower compared to other European partners, and it has strongly increased. However, there is important and increasing variation between regions. When considering young adults education attainment, (people aged between 30 and 34 years), their tertiary educational attainment is higher than other European partners; in 2005 almost 2 out of 5 people aged 30-34 have attained tertiary education, while in 2014 the proportion increased by roughly 6%. In 2005, in Andalusia, 31% of the population aged between 30 and 34 had tertiary education, and this remained almost stable over the past decade (the increase was 0.9%), while for Catalonia the attainment was 41.2% and it increased to 47% in 2014. However, there is a high unequal territorial distribution. The ratio of early school leavers (ESL) was equal to 19% in 2016, compared to the EU28 rate of 10.7%. Marked gender differences emerged; the prevalence of early school leavers among women was 15.1% in 2016, while for men it was 22.7%. Similarly to ESL, the proportion of young people neither in employment nor education and training aged between 15 and 24 years (NEET) diminished from 18.6% (13.1% in the EU27) in 2005 to 14.6% in 2016 (11.5% in the EU27), although important territorial differences emerge.

The labour market has traditionally suffered from very high unemployment, but this was gradually reduced in the 20-year period up to 2009. Youth unemployment has been especially high during the recent years as the economic crisis has lowered the access to the labour market, and the transition between education and the first job became especially precarious. Additionally, employment is more concentrated in low skilled occupations, while high skilled white-collar occupation represents only 19% vs 27% compared to EU27 of the population employed in 2015. This feature of the Spanish labour market and skills level of the overall population play a central role in explaining the divergence in labour market access across European countries. Many young adults are foreign-born, these cohorts are divided by polarised educational inequalities, and a growing share of young adults have been exposed to income poverty since the financial crisis. These trends highlight both the crucial relevance of the policies addressed to this age-based target group and the

huge challenges that these policies have to overcome.

3. Deviations from the Workplan

There has been one variation from the work plan:

WP4 feeded was supposed to make an in depth triangulation and use of the empirical material produced in WP5 and WP6. However, the overlap of the fieldwork of the data collection WPs made it challenging to use the emerging evidence to refine and feed the analyses of WP4.

4. Performance of the partners

All partners have fulfilled their tasks satisfactorily. There was an intense collaboration with UNIVIE during the elaboration of the proposal and the data collation that was crucial to meet the challenging deadlines. The partners have provided good quality outputs and have met the important deadlines.

5. Conclusions

The Full Assembly deems this deliverable to be fulfilled satisfactory.

6. Annex – all national reports and introduction to the reports

Overview

Introduction to the National Reports

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Work Package 4
Quantitative Analysis Young Adults' Data

National Reports Overview

Introduction to the National Reports

WP4 conducts a quantitative analysis of young adults' social and living conditions, by analysing socio-economic data (macro data) aggregated at the national and local level on different dimensions in participating countries. The research questions that derive could be summarized into two main type: what are the data availability and gaps at regional level about the living conditions of young adults? And what data could tell about the living conditions of young adults and the identification of risks profiles at the regional level?

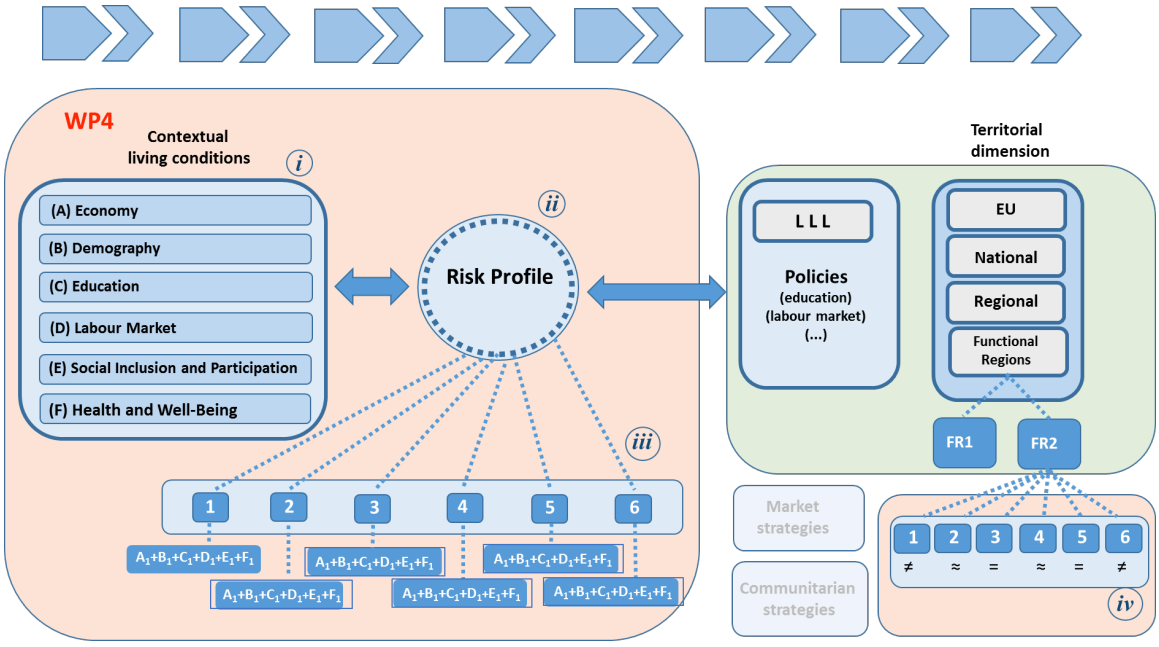
The specific target groups for data collection are young adults aged between 18 and 29 years, the indicators are disaggregated by gender, when suitable. However, different age range are considered in the data collection when suitable for the validity of the indicators. As target group of LLL policies, young adults represent a highly dynamic and heterogeneous group concerning of living conditions including socio-economic stratification, life projects and perspectives (cf. Weiler et al, 2016). This group varies substantially regarding the different realities of young people in the participating countries, i.e. specific living conditions, levels of participation, individual perceptions and life projects are, for instance, different in Bulgaria, Finland, Germany, Italy, Spain and Scotland (cf. Weiler et al., 2017, p. 73ff). They are affected by structural developments, such as economic trends, demographic change and life-course de-standardization processes, common trends that are however mediated by the institutional frames in which individuals' lives are embedded: institutions build the set of opportunities and constraints for individual's choices. On the one hand, the interactions among labour market, welfare, education and training systems define different political economies of skills, as a result of negotiation processes of skills supply and demand (cf. also Parreira et al., 2017). On the other hand, the role of the welfare state also has to be specifically considered, as varieties of welfare states perform differently at different stages of the life and social groups (Anxo et al., 2010). As noted by Esping-Andersen (1999), existing welfare regimes differentiate by the ways they socialize risks: depending on the range of risks that are addressed and on the groups to be protected, the welfare state can assume a minimal-residual or, on the contrary, an inclusive and institutional role with respect to other sources of welfare (family/community and market).

The undergoing changes in contemporary societies are transforming the characteristics and dimensions of social problems, causing a spreading situation of social vulnerability in the population (Ranci, 2010). Structural changes have generated a new configuration of social risks, strongly affecting young people, which are less predictable and therefore difficult to address by traditional welfare systems and policy interventions based on social insurances (Morel et al., 2012; Palier 2010).

The diffusion and intensity of those risks seem to show a considerable degree of variation among countries and regions, as well as different reactions by European welfare states (Hemerijck, 2013). In some countries, this led to a recalibration of the welfare system to render it better able to protect people against these changing difficulties affecting the life course. In other countries, as in Italy, this did not happen (Ranci & Migliavacca, 2015). Therefore, to pursue the aim of the project by analysing how LLL policies define, target and affect young people life courses in Europe, we need first to assess young adults' living conditions, their vulnerability and their connected risks profiles in national and regional contexts.

How do we define YA's living conditions? YA living conditions are defined as resulting from young people's position in the education systems, or in the transition from education to employment, but their risk profile requires a refined methodological operation. It is WP4 task to define these profiles. In WP4, we consider these risk profiles and analyse country/region specific settings of young people's living conditions (see **Figure 1**) to set the stage for the investigation of LLL policies implications, which are addressed in the subsequent WPs (from WP5 to WP7). This approach informs about the contextual dimensions that correlate with the production of different risk profiles. We aim at identifying different profiles of young people at risk, to gain understanding of the contextual configurations of risks affecting young people in different countries and regions.

Figure 1: Living conditions and risk profiles



The complexity and multidimensionality of the phenomena analysed requires an

integration of different methods of research. The quantitative analysis carried out in WP4 integrates with the other WPs to triangulate and inform each step of the research. In developing a research design appropriate for answering the project's questions, WP4 develop research hypotheses that are grounded in the scientific literature and will draw on the full breadth of available data. To set the stage for further investigation of how LLL policies affect young adults six basic dimensions are selected. Definitions and descriptions of these dimensions, as well as a list of indicators and data for each of them is given in section 1.The data collected by the core team from official and comparable statistical sources are aggregated at three different levels: national (the more widely comparable); regional (NUTS2). An essential part of the research is to develop a complementary set of indicators at regional level. This set of indicators was complemented by each team through the collection of specific indicators available at local level that could be relevant for shedding light on context specificity. These indicators are in line with the dimensions identified in the framework of the analysis. Moreover, an important step is to assess the quality and comparability of the indicators across the European regions. In this line, every national briefing provides a quality assessment on the availability and quality of the data in relation to the objectives of the WP4.

1. Definition of the dimensions of contextual living conditions

We identified six dimensions of contextual living conditions which represent different aspects of young adults' experience and are strongly correlated one another. To identify these dimensions, we extensively relied on literature on composite indicators on social justice and quality of life (Mazziotta & Pareto, 2016; Schraad & Tischler, 2016; Noll, 2016; UrBes, 2015; European Commission, 2015; Eurostat, 2015; Schepelmann *et al.*, 2010; OECD, 2008, 2013), as well as on welfare policies (Kazepov & Ranci, 2016; Morel *et al.*, 2012; Esping-Andersen *et al.*, 2002; Esping-Andersen, 1999), life course (Walther, 2006; Verdier, 2012) and school to work transition (Raffe, 2014; Ryan, 2008). The dimensions we consider are the following:

A= Demographic structure

B= General state of the economy

C= Education

D= Labour market

E= Welfare and social inclusion

F= Health and well-being

1.1 Demographic structure (A)

The dimension *Demographic structure* (A) refers to demographic characteristics that can be used to describe the population and its subgroups. Living conditions of young people are shaped by the demographic context, as the structure of a population deeply affects the characteristics and intensity of social needs of its various subgroups. Population ageing and the dynamics of migration are commonly identified as drivers of transformation within European societies and social protection systems (Castles *et al.*, 2010; Brandolini *et al.*, 2009; UNHCR, 2015). Moreover, the role of the households with respect to living conditions of young people is widely recognised (Esping-Andersen et al., 2002; Saraceno, 2015): the family is considered as a source of welfare and redistribution of resources, according to the principle of reciprocity (Esping-Andersen, 1999); and it also strongly contributes in shaping educational paths, labour market participation and poverty risks. However, the organization of family life and the relationship between the family, the state and the market vary within and across national settings (Daly, 2010; Bahle, 2009). Accordingly, this dimension analyses the structure of the population by looking at its composition, as well at the fields of gender relationships, households' characteristics (type and size), fertility and degree of urbanisation (OECD, 2013; Rhodes, 2005).

The demographic dimension includes four sub-dimensions. Sub-dimensions on *population structure* and *population density, urbanization and territory* include indicators related to the population structure (including migration and ethnical diversity of societies), its characteristics regarding density, urbanization and territory. The sub-dimension *household structure* focuses on the households' structure and size. Finally, the sub-dimension *birth and life expectancy* covers issues related to fertility and life expectancy.

1.2 General state of the economy (B)

The dimension *General state of the economy* (B) refers to the economic context and the structure of the productive system, as elements framing living conditions of young people in different national and local contexts. It can be broadly defined as the network of connections and interactions among economic actors involved in the production and exchange of goods and services within the market. This dimension is related to the impact of economic trends related to technological innovation, terziarization, economic and financial globalization (Ferrera, 1996), on the structure of European national and local economies. Here, we mainly look at the market as source of welfare, where the allocation of resources follows market relationships (Esping-Andersen, 1999). In the light of the YA project, a correct understanding of the characteristics of the economy, as embedded within various forms of social

organization (Mingione, 1997), helps explain the preconditions for policies promoting both economic growth and social development (OECD, 2001; Morel *et al.*, 2012). The current phase of capitalism has been variously described as "knowledge-based economy" or " globalising learning economy" (Brown et al., 2001; Lundvall & Lorenz, 2011; Jensen *et al.*, 2007), thus stressing the relevance of innovation, research and skills for the competitiveness of firms. Accordingly, a competitive productive systems can result in an improvement of the quality of goods and services, creating jobs and addressing societal challenges (European Commission, 2015). As an example, labour productivity is regarded as a measure of economic growth and living standards within an economy (OECD, 2014b), strongly affecting young people's opportunities in different contexts.

The Economy dimension includes three sub-dimensions. First, the sub-dimension *structure of the economy* considers indicators related to the general structure of the economic system. Second, the sub-dimension *innovation* captures the specialization of enterprises as well as the investment in innovative and high-technology sectors. Finally, the sub-dimension *labour productivity* relates to the efficient use of resources in terms of labour productivity.

1.3 Education (C)

The *Education* dimension (C), refers to access, process and outputs of education (Checchi et al., 2014; Pawson & Tilley 1997). The comparative education literature shows how the institutional design of education and training has a variety of effects on the acquisition and distribution of educational attainments and achievements (Dupriez, Dumay, & Vause, 2008; Green, Green, & Pensiero, 2015; Hanushek, Woessmann, & Zhang, 2011; Heisig & Solga, 2015; Mons, 2007). This stream of literature has essentially focused on what is an effective institutional architecture in education provision focusing on macro institutional differentiation. It has used different dimensions such as the levels of stratification and standardisation, the degrees of access and accessibility, the levels of state control and expenditure (Allmendinger & Leibfried 2003; Green 2007; West & Nikolai 2013; Biggart, Järvinen & Parreira do Amaral 2015). These studies identify a range of different educational and training systems that are closely associated with a country's specific history and culture, which have in turn shaped the development of the respective nation-state (Busemeyer & Trampusch, 2012; Green, 2013; Mayer & Solga, 2008).

Moreover, the literature on school-to-work transitions and skills mismatch assesses how the nexus between education outputs and labour market varies among countries, thus affecting youth living conditions and shaping life trajectories (Gambetta 1987; Allmendinger, 1989; Raffe, 2014; Pastore, 2011; Quintini & Martin,

2006). In this field, VET systems and dual education experiences are gaining increasing attention, as bridges potentially smoothing the passage from education to employment (Eichhorst *et al.*, 2015; Popiunik & Ryan, 2011). Accordingly, this dimension covers the available indicators on education and training, with a specific attention directed to VET. We integrate them with diverse young adults' skills measures. In detail, we consider indicators related to input and outputs of the education systems (OECD, 2014a).

The education and training dimension includes four sub-dimensions. The first sub-dimension on *education access* considers indicators related to the access to the education system in different national and local contexts. The second sub-dimension covers indicators related to *educational attainments* (qualifications).The third sub-dimension looks at *education outputs*, concerning skills' achievement, drop outs and lack of participation. Finally, in the sub-dimension *education policy,* we consider available indicators on the institutional setting, expenditure and policies in the field of education.

1.4 Labour market (D)

The *Labour market* dimension (D) focuses on the interaction among labour market, welfare state and education structures, by looking specifically at the demand and supply side of labour and young adults skills (Busemeyer & Trampusch, 2012; Hall & Soskice, 2001). The participation of young people in the labour market deeply affects their life opportunities and social identities. Moreover, it is seen as a key objective of policy strategies trying to connect economic growth and social inclusion (Morel *et al.*, 2012). However, young people in contemporary societies must face increasing disadvantages in the labour market: on the one hand, they often lack working experience and related skills that are highly valued by employers (Ryan, 2008); on the other hand, economic and labour developments within post-industrial societies deteriorate employment prospects for low-qualified people (Bonoli & Mouline, 2012). As a result, young people are often depicted as a group of *outsiders* regarding labour market access and outputs (Lindbeck & Snower, 2001), but such outcomes strongly vary across countries (Emmenegger *et al.*, 2012). This reflects the interaction between different contextual and institutional conditions at stake. In the social science, scholars have written extensively on the association between occupational attainment, education, skills, showing positive relationships between those dimensions (Abrassart, 2013; Bol & van de Werfhorst, 2013; Heckman, Stixrud, & Urzua, 2006; Psacharopoulos & Patrinos, 2004; van de Werfhorst, 2011). The increasing complexity of labour markets requires selection and allocation based on education attainment associated with cognitive and non-cognitive skills (Heckman et al., 2006). Against this background, the human capital theory argues that education provides individual with enhancing skills which make them more

productive. On the other hand, good positional approaches contend that education acts as a screening device for employers and establish a proxy for the marginal productivity of the employees. Thus, we consider the available empirical evidence related to the labour market, employment dynamics.

The labour market dimension includes four sub-dimensions. The first sub-dimension on *labour market access* considers indicators related to access and participation. The second sub-dimensions on *labour market demand* looks at indicators measuring the characteristics of the demand for labour. With the third sub-dimension on *labour market output,* we examine indicators related to the type of participation (contractual arrangements) and the matching of skills demand and supply. Finally, the sub-dimension on *labour market policy* considers available indicators on the institutional setting, expenditure and policies.

1.5 Redistribution and social inclusion (E)

The dimension *Redistribution and social inclusion* (E) focuses on the material living conditions of young people, on social policy interventions and theparticipation of citizens to the political and civic life. Participation fosters cooperation and social cohesion.Thus it stimulates social trust, as well as a stronger attention to efficiency and efficacy of public policies, including LLL policies (UrBes, 2015). However, under conditions of poverty and social exclusion, social participation becomes harder, and a-self determined life is possible only with great difficulty (European Union, 2015). This is why measuring material conditions and their degrees of participation is of utmost relevance in the investigation of contextual living conditions of young people. Poverty and deprived material conditions harm individual lives by affecting their health and wellbeing and lowering educational outcomes. This limits young people's chances to achieve their full potential, that is, according to a capability approach, their real opportunities to do and be what they have reason to value (Sen, 1992; Deneulin, 2009; Venkatapuram, 2011). This dimension examines the extent to which trends towards social exclusion and polarization have an impact on young adults' living conditions, also considering to what degree they are counteracted by policy interventions. Thus, we look at the available empirical evidence related to poverty and social exclusion; at the role of social policy in the redistribution and re-allocation of resources; at the general participation of young people within their belonging society.

The Social inclusion and participation dimension includes three sub-dimensions. The first sub-dimension on *material conditions* gathers indicators related to material conditions of young people, incorporating indicators on monetary poverty, material deprivation and low work intensity. The second sub-dimension on *social policy and redistribution* includes available indicators on income inequalities and expenditure

on redistributive policy interventions. The third sub-dimension covers measures of political and civic participation, measuring individual attitudes towards engagement.

1.6 Health and well-being (F)

This dimension combines health and individual well-being. Health has consequences on all dimensions and all different phases of people's life, modifying their life conditions and influencing their behaviour, social relationships, opportunities and prospects. Further, health is a multidimensional feature (World Health Organization, 1948) and it comprises to enjoy a "complete physical, mental and social well-being" and cannot be intended only as the absence of disease. Moreover, the concept of well-being is here used regarding perceptions and opinions expressed by the individuals in their own life. Here, elements of the individuals' well-being through the life course are seen from the perspective of their welfare (Sen, 1992). For these reasons, we integrate into this broad dimension the well-being as perceived by people. This subjective perspective gives additional information to that provided by objective data, which are useful to measure the general quality of life of individuals and to enrich the analysis of contextual living conditions of young people.

The Health and well-being dimension includes three sub-dimensions. The first sub-dimension on deals with *health access* within different national and local context. The second sub-dimension on *health status and subjective well-being* covers health conditions and more subjective-driven information about young adult conditions over a range of topics. Finally, the third sub-dimension on *social expenditure* looks at expenditure and policies within this field.

2. Process of data collation

The data collation is constrained by the availability of pre-existing data which are mainly produced by Eurostat. Within the EU, the official statistical approach of gathering data on structural information is using a hierarchical categorisation of EU territories and regions. As a geographical system, a division was developed by Eurostat to structure and classify the regional statistics resulting into the nomenclature of territorial units for statistics (Nomenclature des Unités territoriales statistiques – NUTS). The aim is to provide a single as well as a coherent system for "comparable and harmonised data for the European Union to use in the definition, implementation and analysis of Community policies." (Eurostat, 2007, p. 3). Therefore, the EU vastly uses a national state driven concept for producing, describing and implementing regional statistics. However, due to changing realities, such as internationalisation, Europeanisation and globalisation processes, as well as to trends towards rescaling and subsidiarization (Kazepov, 2010), the concept of the

national entities using administrative units is increasingly questioned being a useful tool to describe social realities (cf. D2.3, State of the Art Report, p. 10).

The project YOUNG_ADULLLT derives from the assumption that the implementation of LLL policies is best studied at the regional/local level to understand the context-specificity of young adult life courses beyond the national level. Therefore, the concept of Functional Regions which was adopted within the project sharpens the focus on regional differences and variations. However, it also raises challenges for the validity of quantitative research based on available indicators on young people living conditions, as the different FRs can match/mismatch with the territorial and/or administrative regions that are vastly used within established statistics, as well as creating challenges in data availability of different sources. For instance, statistical data on socioeconomic and socio-demographic aspects, education and training, labour market and welfare is not limited to given administrative units (countries, states, districts, provinces, or cities).

Departing form the tension between official descriptions of communities, changing realities and data availability, WP 4 deals with this in two ways: the development of a practical approach to data collection as well as an assessment of the data production process of the EU. In the case of the latter, the data gaps in the European Statistical Systems also imply how data is collected within the EU regarding our Functional Regions. This provides insight to the question, how data is used to steer political processes on LLL policies and thus in the process of definition, coordination and implementation of policy. In the case of the data gathering process, the WP 4 collects data as close as possible to the regional level using pre-existing datasets. In this way, the pre-existing data on the NUTS Level is used, however, enriched and specified by local/regional information. This is relevant, as subdivisions in some levels do not necessarily correspond to administrative divisions within the country.

The data availability on NUTS-3 level is not exhaustive for all FRs. Therefore, the analysis combines these levels of analysis regarding the availability of the data and will reach NUTS2 whenever it is possible, which is derived from the system of division of European territory from EUROSTAT[1]. The level of analysis of WP4 in this sense is constrained from the existing territorial division which reflects the data available.

The functional regions are shown in **Table 2**, with the corresponding information about the functional regions and territorial division. It should be borne in mind that data will be provided at NUTS2. Having established the objectives and the essential

[1] Detailed information about territorial division of the European territory could be found at http://ec.europa.eu/eurostat/web/nuts/overview. In the EUROSTAT division, NUTS 1 corresponds to major socio-economic regions; NUTS 2 are the basic regions for the application of regional policies and; NUTS 3 are the small regions for specific diagnoses, which are generally metropolitan area.

dimensions and sub-dimensions that need to be covered, the indicators are chosen based on their analytical soundness, measurability, country coverage (comparability), and relevance to the phenomena being measured.

Table 2. Description of the Functional regions with the corresponding codes at NUTS2 level.

Country	Territory name in the proposal	Name in the corresponding language	NUTS2 name in the corresponding language	Code 2016 at NUTS2	Territory is NUTS3
Finland	Kainuu	Pohjois- ja Itä-Suomi	Pohjois- ja Itä-Suomi	FI1D	x
	Southwest Finland Region	Etelä-Suomi	Varsinais-Suomi'	FI1C	x
UK	Aberdeen City & Aberdeenshire	Aberdeen City & Aberdeenshire	North Eastern Scotland	UKM5	
	Glasgow City Region	Glasgow City	West Central Scotland	UKM8	x
Germany	Bremen	Bremen	Bremen	DE50	
	Frankfurt Rhein-Main Area	Frankfurt Rhein-Main Area	Darmstadt	DE71	x
Austria	Upper Austria	Oberösterreich		AT31	
	Vienna	Wien		AT13	
Portugal	Vale do Ave	Ave	Norte	PT11	x
	Litoral Alentejano	Alentejo Litoral	Alentejo	PT18	x
Spain	Girona	Girona	Catalunya	ES51	x
	Malaga	Málaga	Andalucia	ES61	x
Italy	Milan	Milano	Lombardia	ITC4	x
	Genoa	Genova	Liguria	ITC3	x
Croatia	Istria-County	Istarska županija	Jadranska Hrvatska	HR03	x
	Osijek-Baranja County	Osječko-baranjska županija	Kontinentalna Hrvatska	HR04	x
Bulgaria	Blagoevgrad	Благоевград	Югозападен	BG41	x
	Plovdiv	Пловдив	Южен централен	BG42	x

Like all concepts in the social sciences and all discipline in general, the act of constructing measures implies a selection of the dimensions (in Ancient Greek *κατηγορια* or Latin *categoria*), which have to be operationalized and thus, leads to a simplification of the object of study. This means a transformation of some qualities into a metric which is not just a technical process, but an important feature of social life (Desrosières, 2008; Hacking, 1999). This process is called commensuration and has been largely examined by different historians, statisticians, sociologist and philosophers (Espeland & Stevens, 1998). From Plato and Aristotle to Marx, Weber,

Simmel and Foucault, the implications of commensuration have been analysed as a process that influences our valuation and the way we invest in goods and services.

The research of WP4 could not escape the process of commensuration. First, the establishment, recognition, and use of a statistical object are very appealing. Second, the interpretation and political use of each measure is a very powerful way to push forward a specific approach or even a political agenda (Meyer & Benavot, 2013). In this sense, the research objectives are constrained from existing and available sources, their comparability and statistical issues such as representativeness. Therefore, we considered the **European Labour Force Survey** and the **European Social and Income Living Conditions** as the most relevant survey data sources which have important information for the research objectives of WP4. These are the few surveys available and comparable at the NUTS2 level which collect information on living conditions of young adults.

3. Operationalization

This section describes the operationalization process carried out in conducting the quantitative research on young adults' contextual living conditions and lifelong learning policies. The process consisted of 5 phases.

First, the core team designed a framework of analysis and selected the dimensions and sub-dimensions of interest for the overall research, finally the indicators connected to the sub-dimensions were selected.

Second, the team leader identified administrative sources and comparative surveys and assessed the data quality at national and regional level. To explore young adults' conditions on the different dimensions in the participating countries, it was necessary to establish and delimit a target group based on different characteristics. Considering the heterogeneous target groups of the young adults in terms of their socio-economic stratification and living conditions, WP3 analysis and data availability constraints, ad-hoc indicators could be included in the data collection for each functional region.

Third, the core group produced a set of indicators at national and regional level. The WP4 offered a critical review of the data limitations and gaps at the European level and proposed possible ways to solve it, by integrating international and local data through the data collection process of each partner.

Fourth, as a first milestone in the data collection and analysis, the core team produced a reduced set of indicators that were used for the country report.

As a final stage the core team produces an international report with a comprehensive list of indicators.

To have a clear overview, the WP4 process is outlined below and comprises the following steps:

1) *Definition and selection of the research questions*

Based on a first proposal, the core team together with the other teams working on data collection established a list of research questions. The research questions were

discussed in small groups and if needed redefined and clarified. At this stage, some of the research questions were redirected to the other working packages if they were likely to address more specifically throughout their research.

2) *Selection of dimensions and sub-dimensions*

The UGR team together with the core team made a first proposal of dimensions, including their definition and their theoretical relationship. This step was coordinated through in an online meeting held in February.

3) *Selection criteria and indicators proposal*

The core team discussed the indicators criteria which included validity, reliability for the overall research questions of the WP and comparability and simplicity of the data. The core team proposed and discussed a first selection of the indicators for the sub-dimensions of the data collection, which was discussed online. This work was then integrated in the working package proposal and circulated among the partners. A template for data collection was provided.

4) *Provision of specific indicators by each partner*

In addition to the list of indicators provided by the core team, every partner were asked to provide specific-context indicators at the local level.

5) *Development of indicator description sheets*

Construction of a detailed description for each indicator selected in the initial screening round.

6) *Refinement of final indicators based on feedback*

The indicators were refined based on the internal feedbacks.

7) *Dissemination of final indicator set*

The set of indicators was disseminated among all the partners. A first release with a short list of indicators was sent to the partners at the end of May. The full list of indicators was released through the platform of the project. Context-specific indicators not collected through harmonized data sets were collated via a template circulated among the partners.

8) *Indicators development*

Development of the set of indicators together with their description.

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Work Package 4

Quantitative Analysis Young Adults' Data

Austria – National Briefing Paper with national and regional data sets

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Date: 31-08-2017

Work Package 4 – Quantitative Analysis of Young Adults' Data

Deliverable D 4.1

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Figures

Executive Summary

This national briefing paper provides a short overview of the living conditions of young adults in Austria by analyzing the functional regions of Vienna and Upper Austria, selected as case studies for the YOUNG_ADULLLT project.

The contextual living conditions of young people are analyzed by looking at available indicators at NUTS 0 and NUTS 2 level, collected by the working package leaders and integrated with local data (when available), along the following dimensions: demographic structure of the population

and its subgroups; general state of the economy; education; labour market; redistribution and social inclusion; health and individual well-being.

Introduction

This national briefing paper will provide a short overview of the living conditions of young people in Austria and, more specifically, in the two functional regions selected for the YOUNG_ADULLLT project, namely the region of Vienna and Upper Austria. The two regions share some characteristics within the same federal regulatory framework, but they present differences in the socio-economic structure, political tradition and degree of urbanization, as well as in the way they react to common challenges like youth unemployment. Data was collected at national (NUTS 0) and regional (NUTS 2) level according to six dimension of contextual living conditions agreed upon in the WP4 guidelines[1]. Eurostat online databases at aggregated national and regional level and micro data from different surveys (LFS, EU-SILC, PISA, PIAAC) were used as sources. The main corpus of international, harmonized and consequently comparable data was successively complemented by data collated at the local level. Contextual living conditions of young people in Austria are analyzed by looking at the demographic characteristics of the population and its subgroups; at the structure of the economy; at the inputs and outputs of the education system; at the labour market situation; at the material living conditions of young people and at their participation as citizens to the political and civic life; at health conditions and individual well-being.

Description of the data collated and quality data assessment

Eurostat and OECD provide a vast amount of data that can be used to comparatively assess living conditions of young people in different domains and in various countries/regions. However, most of the data are provided at national level, while data availability at the regional/local level is limited at NUTS 2 level and strongly limited at NUTS 3 level. This restrains the opportunity of comparability among regions to limited range of indicators. Moreover, harmonized data are hard to complement with local data, often suffering from a fragmented landscape of sources, as they are collected for more or less specific purposes and usually not with the objective of interaction with other data sources. In addition, local data are usually already aggregated and it isn't possible to further elaborate them. This makes difficult the comparability among regions and at the EU level. As for the available data published by Eurostat, data cover several fields and are complemented with metadata and information about time series. However, accessibility of data may be a problematic issue, as databases on Eurostat are not completely combined and flexible

[1] The data collection was carried on in a working group of which also the following students were part: Georg Bayerl, Paul Marius Benjes, Philipp Gschnitzer, Alesja Kicaj, Hannes Kofler, Philipp Molitor, Tatjana Neuhuber, Niklas Pernhaupt.

so that the collection is at times difficult: as an example, the same information on two different age groups may be available only looking at two different databases in different sections of the website (the NEET rate for 15-24 is available among labour market statistics while the NEET rate 15-29 is available among youth statistics). Of course, the complexity and variety of the data published make a comprehensive integration difficult to achieve. In the case of Austria, the selected functional regions match with administrative boundaries of the federal states and of the NUTS 2 regions, so that a good compromise between the existing data and the research objective can be established. Notwithstanding, it is important to be aware that the data can only approximately grasp the complexity of the contextual conditions and interdependencies young adult are embedded in.

For the reasons we reported, the national briefing paper makes limited use of local data from Austrian sources, as international sources provide a wide amount of valuable information for our purpose. Local data on topic like demography, economic system, education and labour market, redistribution, health and well-being are mainly made available by Statistik Austria, the national statistical agency. Some additional information was retrieved by official websites and reports of Austrian Institutions (Ministers, Criminal Police Office, Chambers of Labour and Economic Chambers). The role of Statistik Austria is to provide reliably collected and expertly analyzed political, social and economic information on Austria and its regions. The agency is committed to create statistics for administrative purposes and political decision-making, but it also offers reports and information to general-public and research users.

1. Findings

1.1 Demographic structure

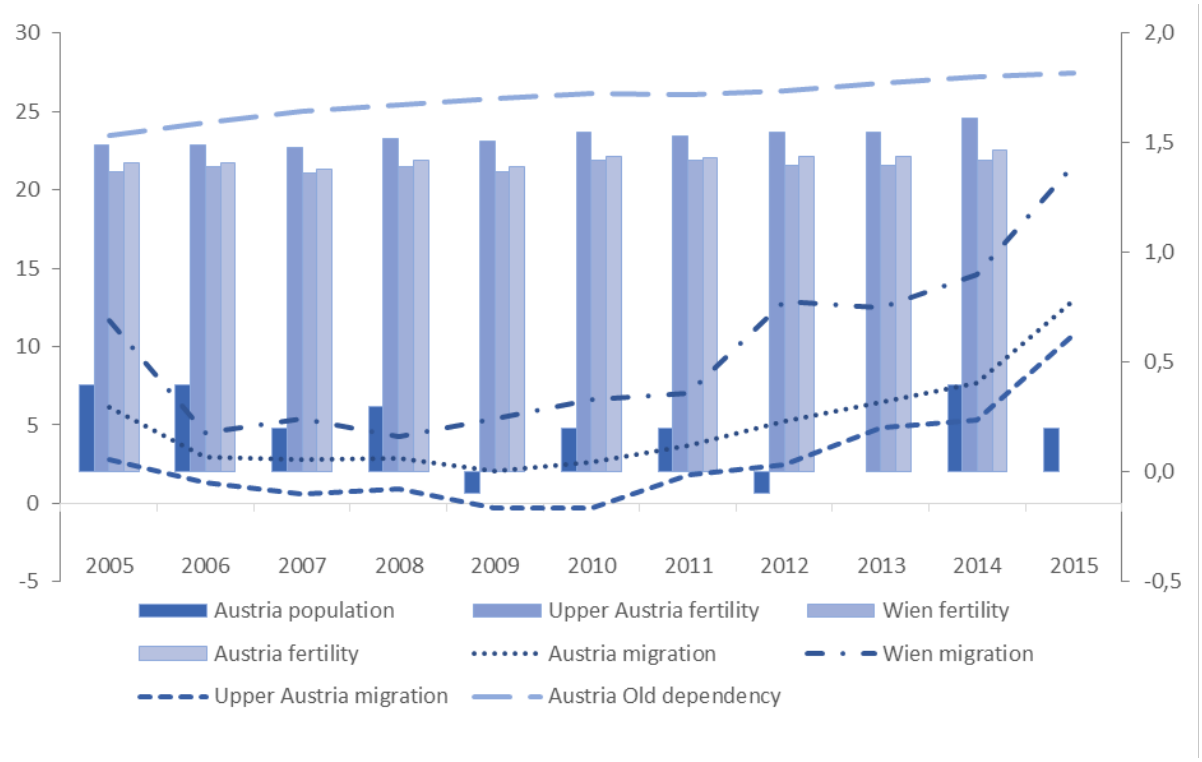
Austria is a relatively small country, covering a total area of 83,879 square kilometers, the area of the region of Vienna is 415 square kilometers, while Upper Austria is 11,980 square kilometers. The population increased gradually in the last ten years, going from 8.2 million in 2005 to 8.7 million inhabitants in 2016 (equal to 1.7% of the total EU28 population), but it is unevenly distributed over the country: the population density is equal to 104 individuals per square kilometer (122 in Upper Austria), but in the relatively small area of the region of Vienna live 4,507 inhabitants per square kilometer. Migration is increasingly affecting the demographic structure of the country, as the crude rate of net migration rose up from 2.9 per 1,000 in 2008 to 7.7 in 2013, and jumped to 13 per 1,000 in 2015 (in the same year, the rate was 14.3% for Germany and 5.1% for the UK): the peak was in Vienna (21.6%, see **Figure 1**). The largest share of migrants comes from Germany, Bosnia-Herzegovina, Turkey, Serbia and Romania.

Vienna is the capital of Austria and at the same time one of the nine federal states (Bundesländer) of Austria. It is the 7th largest city within the European Union and by far the largest city in Austria. Vienna is at the same time the most populated and the smallest federal state. More than 20% of Austrians lives in Vienna, and the population in the region is also increasing at a faster pace than the country's average (1.8% against 0.4% in Austria and 0.7% in Upper Austria in 2015), reaching 1.8 million inhabitants in 2014 (with 107.7 women every 100 men), around 20% of total Austrian population. The city is supposed to grow up to 2 million inhabitants until 2025, due to migration flows. Currently, 42% of the population has a migration background, while more than 20% of the Viennese inhabitants are non-Austrians, having mainly Serbia and Turkey as country of origin (Stadt Wien, 2015). Moreover, in June 2016 approximately 21,000 refugees were living in Vienna and seeking for asylum.

Upper Austria is located in the North of Austria, it is the third largest Austrian federal state in terms of its population: the number of inhabitants in 2014 was 1.4 million (102.9 women every 100 men). The regional capital of Linz is the third largest city of Austria, with little less than 200,000 inhabitants. In Upper Austria 17.1% of the population has a migration background and 9.3% has a citizenship other than Austrian. The largest share of migrants come from Bosnia-Herzegovina and Germany.

Looking at available demographic data, general living conditions in Austria are comparatively good with respect to other European countries. Infant mortality in the first year after birth is medium-low, and it touched a minimum of 3.1 deaths per thousand in 2015. In the same year, the median age was 43 years and the life expectancy 81.6 years, at the level of the European average. The latter overall value is the result of relevant gender differences: an Austrian female in 2015 could expect to live 83.7 years, while a male had a life expectancy of 78.8 years. Austria shares with other advanced EU countries a condition of low fertility and gradual ageing. As for the first point, the fertility rate was 1.47 in 2015. Again, the national value results from regional variations: the region of Vienna is more affected than Upper Austria by low fertility, as the respective rate were 1.42 and 1.61 in 2014. During the past two decades, fertility fell mostly among women in their twenties and increased for women in their thirties. As for the second point, the demographic structure of the Austrian population has been ageing in the last ten years. This is shown by the increase of the old-dependency rate (ratio between population aged 65 and over to population 15-64), that went from 23.5% to 27.5% in the time-span 2005-2016. In parallel, the young-age dependency is going down (from 23.8% in 2005 to 21.3% in 2016). Youth population aged 20-24 and 25-29 accounted respectively for 6.4% and 6.7% of total inhabitants in 2015. While the values for Upper Austria are close to the country average (respectively 6.3% and 6.5%), in the region of Vienna the weight of young people on the overall population is stronger and increasing in the last years (respectively 7.3% and 8.5%), mostly because of the increase of migration flows (**Figure 1**).

Figure 1: Migration rates (left axe, ‰), old dependency and fertility rates (right axe), natural population change (right axe, ‰ change over previous year), Austria, Upper Austria and Vienna, 2005-2015



Source: Eurostat Demography and migration database

Among young people, in 2013 52.7% of those aged 20-29 lived with the parents. This percentage has shown a certain stability, fluctuating between 50 and 54% in the last ten years. Comparing Austria with other EU countries, the share of youth still living with the family is slightly lower than the EU average, but it is higher than other Central European countries like France and the Netherlands, as well as than Northern countries like UK and Finland. However, the average values covers strong gender differences. The percentage of young males living with parents is 62.1% against 41.8% for females, and it is worth to note that this 20-percentage-points difference is wider than the EU27 average difference of 15 points, recalling the persistence of gender differences related to traditional family structures.

1.2 General state of the Economy

Austria's economy is leaving behind some years of slow growth in the aftermath of the financial crisis. GDP measures show that, generally speaking, the Austrian context is marked by positive

economic conditions. The impact of the crisis was evident between 2008 and 2009, as shown by the drop in GDP for inhabitant (from 32,500 to 30,900, see **Figure 2**). Also the real growth rate of regional gross value added (GVA) showed a negative sign in 2009 (-4.2%). However, after 2010 the economy of the country began to recover: the GDP, the GVA and the labour productivity measured in GDP per hour worked started increasing, even if at a slower pace with respect to the pre-crisis years. After a stagnation in 2012-2013, the gross domestic product has been growing again since then (OECD, 2017a). In 2015 the GDP in Euro per inhabitant (PPS) was 36,900, which is up to 128% of the EU average.

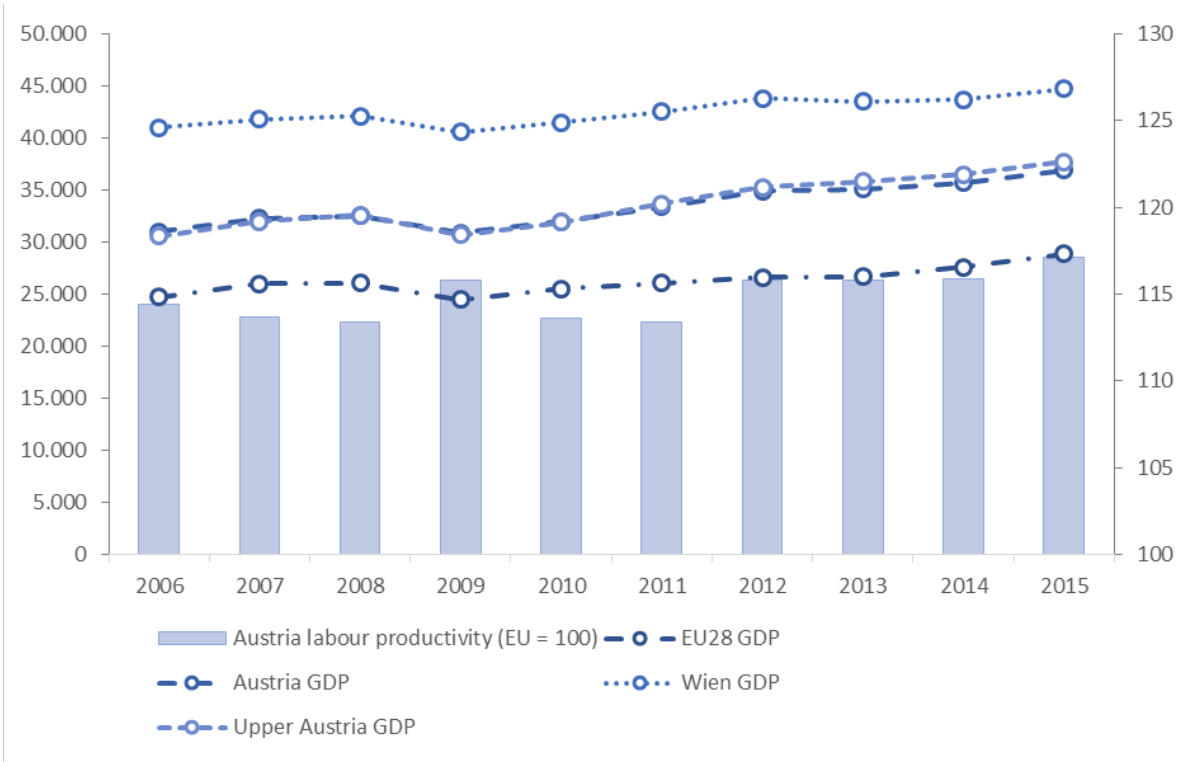
All in all labour productivity growth has slowed over the past decade, especially in services (OECD, 2017b), but it's higher and developing at a faster pace than the European average: in 2015, the GDP per hour worked was equal to 117.1% of the EU28. Productivity per hour worked has grown constantly since 2000 and, unlike the EU average, did not drop even during the crisis years, but productivity per employee remained flat after 2008-2009. The explanation is that the increase in employment since the crisis has created more part-time jobs and fewer full-time ones, so that productivity is shared among a rising number of employees (European Commission, 2017).

The leading role of Vienna in the Austrian economy is confirmed by the high GDP per capita (44,700 euro per inhabitant, as opposed to 36,900 in Austria), closer to some of the richest European regions and equal to 155% of the EU average. However this distance is shrinking, as the same value was up to 165% in 2012. The region of Vienna accounts for more than 25% of value creation in the country. Real GVA at the NUTS 2 level is continuously growing in the last years, at a faster pace than the Austrian average. Approximately 86% of the Viennese gross product is created in the tertiary sector, while approximately 14% in the secondary sector. The Viennese economy has gone through structural changes during the last decades. This is especially reflected in the growing amount of people employed in the service sector (currently around 85%). In the sub-sectors of the service sector, like accommodation and gastronomy, finance and insurance services, knowledge-intense corporate services, education and teaching as well as health and social services, an increase in employment of 25% could be witnessed in the last decade. Apart from that, the city functions as a hub for business with Eastern European countries and is still a major tourist destination. Relevant role in the economic structure of the region is also played by the growing creation of green and by the further development of Vienna as a center for higher education and services in the fields of ICT, Life Sciences, and R&D (Eichmann & Nocker, 2015).

The economic performance of Upper Austria appears also remarkable, as the GDP per inhabitants is over the national average (37,700). Unlike the case of Vienna, the distance from the EU average has shrunken only slightly (from 134% in 2013 to 131% in 2015), following the general trend of the country. Upper Austria is one of the main centers of industrial production in

the country, accounting for around 25% of Austrian industrial production. Especially steel production and automotive supply represent two important branches. Approximately 5% of the gross product is created in the primary sector, 30% in the secondary, and 64 % in the tertiary sector.

Figure 2: GDP in euro per inhabitants in PPS (left axe) and labour productivity per hour worked (right axe, EU=100), Austria, Upper Austria and Vienna, 2006-2015



Source: Eurostat Economy and finance database

The economic structure of the country is mainly made up by small firms: enterprises with less than 10 employees cover 87.3% of the total (93% in the region of Vienna and 94% in Upper Austria), enterprises with 10-19 employees are equal to 7.1%, enterprises with 20-49 employees to 3.7%, while big enterprises with more than 50 employees represent less than 2% of the business population. Austrian business enterprises spend much more in R&D than the EU average (in purchasing power standard per inhabitant at constant 2005 prices: 676.5 against 307.4 euro in 2014), while more than half of the total country's expenditure in R&D in the government sector is concentrated in the capital (205 millions in PPS on a total of 390 millions in 2013). All in all, total expenditure on research and development accounted for 3.06% of Austrian GDP in 2014, which is a very high value in comparative perspective (EU28 average was 2.14 in the same year). The percentage of researchers in all the sectors of the economy is comparatively high (1.53% in 2013), with the highly notable peak of 2.33% in the region of Vienna. However, Upper Austria performs above the national average as well (1.59% of researchers). The share of people employed in the public sector is roughly stable after 2008 and

equal to 6.8% of total employment in 2014, with a strong concentration in Vienna (7.5% in Vienna, only 5.4% in Upper Austria), while employment in education is continuously growing and was equal to 6.9% in 2014 with, again, a peak in the region of Vienna (8.7%). Being the capital of Austria and a strongly attractive higher education center, these high values for employment in public and education sectors are easily explainable. Finally, people employed in the health sector and in social work make up almost 10% of total employment (8.9% Upper Austria, 10.8% in Vienna).

1.3 Education

Education plays a key role in providing individuals with the knowledge, skills and competences needed to participate effectively in society and in the economy. Likewise Germany, the Austrian education system is characterized by the early tracking of pupils. The first division into tracks takes place when they are 10 years old, at the beginning of lower secondary education. At the beginning of upper secondary education, the system is made up of 4 tracks.

Roughly 80% of young cohorts after lower secondary education enters a vocational education and training (VET) course, 37% in dual apprenticeship and 43% in a vocational school (BMS) or college (BHS) (Bliem et al., 2016). The expenditure per student in vocational programmes is much higher than for general programmes (16,554 against 13,260 US dollars). The VET system is characterized by the competition between apprenticeship and school-based vocational courses (Lassnig, 2011). However, it is highly diverse with many different programmes and institutions offering access to different social groups, and with range of options for students to access higher education. Social partners are also included in the management of the VET system, through the Economic Chamber and the Chamber of Labour.

The higher education system (HE) combines post-secondary and short-cycle vocational courses with bachelor and master courses offered by universities and universities of applied sciences. In particular, Vienna hosts 9 public universities, 4 private universities and a teacher training college, 6 universities of applied sciences. Upper Austria has one university (Linz) and two universities of applied sciences.

In 2013 the public expenditure on the education system in Austria was equivalent to 5.6% of the national GDP. Expenditure in HE (mainly university of applied science and university) makes up to almost 24% of total expenditure in education, while the resources directed to VET are equal to 14% of the total amount. As for the expenditure which is broken down by federal states, the largest share is spent in Vienna (20%), while Upper Austria ranks third, with 12%.

International variation in the structure of education systems brings the necessity to compare not only participation and graduation rates (in the following paragraphs), but also the quality of contents and skills achieved by students and pupils during their educational careers. Education

results in Austria are still in the middle of the range compared to other countries, but weaknesses in some basic skills (like reading) were confirmed by their deterioration in the last 2015 OECD Programme for International Student Assessment (PISA) test, collected on 15 years old pupils at the beginning of upper secondary education. In 2015 Austrian pupils gained a mean score of 497 points in numeracy and 484 in literacy (EU average were respectively 491 and 492). On average girls outperformed boys by 2 points. However, the coefficients of variation were 0.19 and 0.21, in line with the European average and stable between 2003 and 2015, pointing out persisting differences according to gender and social background in educational achievement. Parents' socioeconomic status and their eventual migrant background continue to have a major influence on their children's education results. In 2015, first generation immigrant students are 3 times more likely than native born students to leave school early before completing upper secondary education (European Commission, 2017).

Looking at skills of young people aged 20-30 (PIAAC data), the advantage of young Austrian adults with respect to their European peers increases: in 2012 the mean score of Austrians in numeracy was 286 against the EU average of 262; in literacy the mean score was 284 against the EU average of 272. However, in both the domains the variation among respondent was lower than EU average (respectively 0.16 and 0.15 against 0.20 and 0.18), pointing out the coexistence of a good level of skill attainment together with a relatively even skill distribution among young people.

Participation in childcare and early education is relevant in developing cognitive abilities and buffering the influence of the familiar background. This has impact on opportunities in education and on the labour market later in life. In Austria, the participation of children in childcare and pre-school education is increasing: in 2012, 90.9% of 4-years-olds were in education (82.5% in 2005), but the rate was still slightly lower than the European average (91.9% in 2012 for EU27). With respect to the national average, in the region of Vienna the rate is lower (86.5% in 2015), while participation is much higher in Upper Austria (89.5%), but both the regions show a slightly decreasing trend in the last 2-3 years.

Looking at the following stages of the education system, participation in upper-secondary and post-secondary non-tertiary education (ISCED 3-4) is comparatively quite high especially in Upper Austria, as it is connected to the regional structure of the labour market and to the job demand expressed by a strong industrial production. In 2012 the participation rate of individuals 15-24 was equal to 42.9%, 4 points above the EU27 average. In Vienna, the percentage of students in upper-secondary education and post-secondary non-tertiary education on the population dropped from 44.7% in 2005 to 39.8% in 2012. In Upper Austria the same indicator remained quite stable (45.9% in 2012). Moreover, young people in Upper Austria tend to enroll more in vocational programmes (76.2% of all the pupils in upper secondary education), while in Vienna only 58.4% of pupils enroll in vocational programmes.

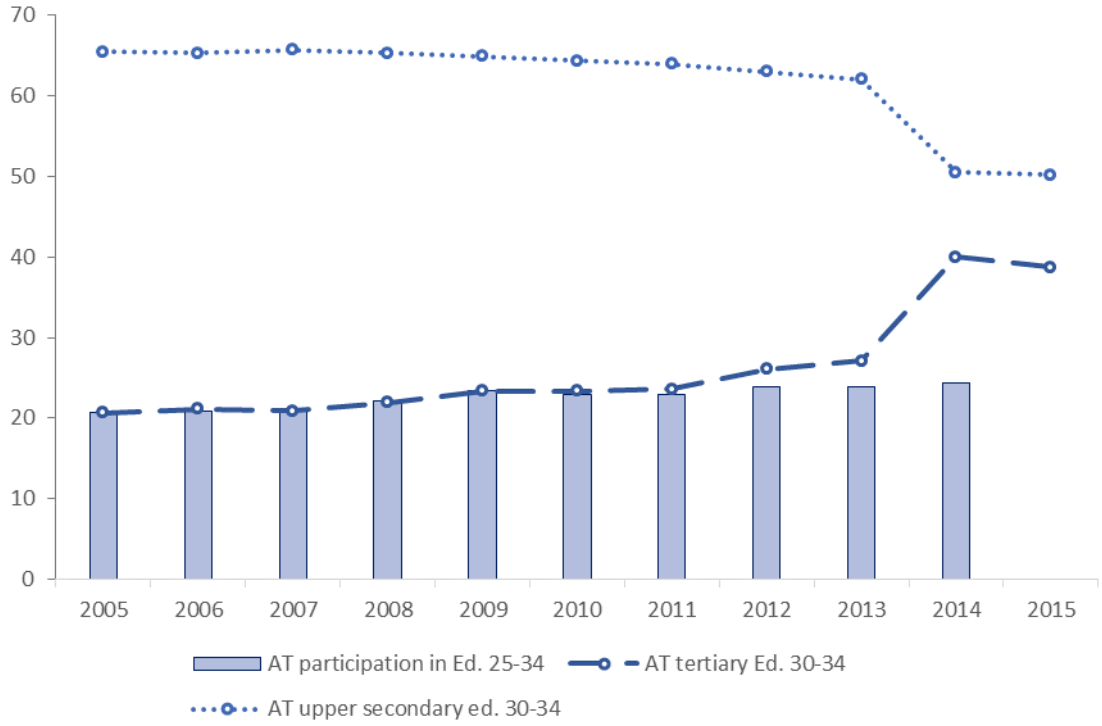
As for tertiary education, participation in Austria is strongly increasing in the last ten years. At the national level, the rate of students in tertiary education as percentage of the population of 20-24 years old, jumped from 46.6% in 2005 to 70.8% in 2012 (the EU27 average is 64.2%). In the Vienna region the same rate increased to 151.4% in 2012, due to the fact that the University of Vienna attracts many Austrian and international students. In Upper Austria, the participation is much lower but it is also increasing: in 2012, students in tertiary education covered 40.4% of the population aged 20-24 years, 18.5 percentage points more than in 2005.

Finally, by looking at lifelong learning education at a later age, after having usually completed initial education, young Austrians still show relevant commitment in training: all in all, 24.6% of young people aged 25-34 stated that they participated in some forms of education and training activities in 2016 (the EU28 average is 17.4%), 25.7% for women and 23.6% for men.

Good education and skills are important requisites for finding a job. In Austria, 84.5% of adults aged 25-64 had completed at least upper secondary education (ISCED 3-8) in 2015, well above the EU27 average of 76.5%. This is true especially for males, as 88% of men have successfully completed high-school compared with 80% of women. Looking at education attainment of young people, i.e. at the level and type of the qualifications obtained, the main trend in Austria is the upgrading of the qualification of youth potential workforce: the data (**Figure 3**) show a drop in the share of low-educated (from 16.5% in 2005 to 13.2% in 2016) and upper-secondary educated (from 63.1 to 44.8%), and a steady increase of tertiary educated (from 20.4% to 42%). The drop in participation in upper secondary education and the jump in participation in tertiary education after 2013 is mainly related to a change in the classification of Austrian qualifications, according to the ISCED 2011 standards: in detail, qualifications attained after 4 and 5 years in BHS or vocational colleges, have been classified as short-cycle tertiary education[2], thus accounting for the strong shifts in participation rates.

[2] For information on the application of ISCED 2011 standards at the Austrian education system, see: http://www.bildungssystem.at/en/footer-boxen/isced/international-standard-classification-of-education/

Figure 3: Educational attainment (30-34, %) and participation in education and training (25-34, %), Austria, 2005-2015



Source: Eurostat Education and training database, LFS microdata

The data show relevant differences at the regional level and some signs of a recent decline in educational attainments. Overall, the percentage of low-educated young adults of 30-34 years old (ISCED 0-2) is decreasing in the last ten years, but this comes together with an increase after 2014 (from 11.6% to 13.2% in 2016, the EU28 average is 15.3%), reaching a worsening peak of 17.3% in 2016 in Vienna, 6.4 percentage points higher than in Upper Austria. Coherently, the rate of early school leavers (the percentage of the population aged 18 to 24 having attained at most lower secondary education and not being involved in further education or training) slightly increased 7.8% in 2015 (**Figure 4**). The trend towards a shrinking share of low educated is common both for males and females, but seems to interrupt after 2014. Moreover, a characteristic of the Austrian context that did not emerged by data on participation, is the educational disadvantage of women, which is shrinking but still existing: in 2005 the share of low-educated women was 16.5% against 11.2% of men, while the EU average was respectively 21.6% against 23.9%; in 2016 the share of low-educated women was 13.2% against 10.8% of men, while the EU average was respectively 15.3% against 19%.

Secondary education attainment (ISCED 3-4) for those aged 30-34 is higher in Austria than EU27 average (50.2% and 44% respectively), and higher for men, 52.7%, than for women, 47.6%. However, looking at upper secondary vocational education attainment the difference is striking: 47.2% against 39.5%[3]. Here it is worth to notice that vocational programmes at upper secondary level are more effective in bridging the transitions to the labour market than general programmes. This is strongly confirmed by the data regarding Austria, as the difference in unemployment rates between VET and general secondary educated is wider than the averages of other EU countries (OECD, 2016a). Tertiary education attainment (ISCED 5-8) provide considerable earning advantages for both genders later in the labour market, but men graduates especially in the field of engineering, manufacturing and construction for men, while women mainly in teacher training and education sciences.

All in all, the percentage of higher educated aged 30-34 was 38.7% in 2015, very close to the EU27 average (38.8%). Following the European trend, women are more tertiary educated than men (40% against 37.5%), but the divide is closer than the EU average (43.4% against 34%). A relevant share of graduates in higher education attain a short-cycle tertiary degree as a maximum qualification, while the share of Bachelor graduates is comparatively low. This is due to the diffusion of vocational colleges, on the one hand, and to the fact that Bachelor programmes were introduced only recently in the Austrian education system, on the other (OECD, 2016a).

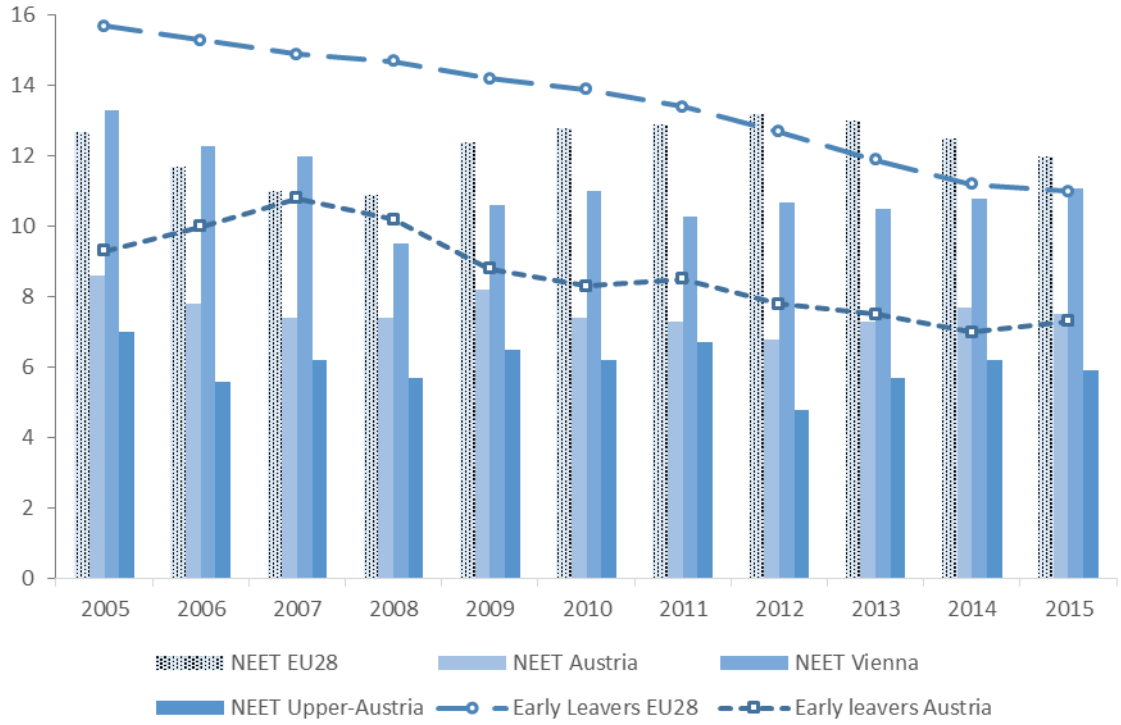
Data on educational attainment cover relevant regional variations. As we saw, in Upper Austria young people heavily participate especially in upper secondary education (ISCED 3-4), while the rate of higher education students is quite low. With respect to Vienna, in Upper Austria vocational education and the dual apprenticeship system play a more prominent role in structuring the transition from school to work. Coherently, having an upper-secondary non-tertiary degree as maximum qualification is the most common situation among young people aged 30-34 in Upper Austria (57.6% in 2015), especially among men (59.9% against 57,6% of women). Secondary education is quite comprehensive among young adults, as only 7.8% of the population 30-34 in 2014 was made up by low-educated youth. On the other hand, only 33.1% of those aged 30-34 had a HE degree in 2015, and women tend to be more educated than men (34.6% against 30.4%).

In the Vienna region, due to tertiarization and development in the service sectors of the economy, upper-secondary non-tertiary degree as maximum qualification goes down to 37.2%, being more common for women (37.9%). Higher education is way more widespread in Vienna, with no gender difference (48.8% for males and females). This is coherent with the data on participation, confirming the strength of HE in the Vienna region.

[3] On the contrary, looking at general upper secondary education as maximum attainment, Austrian women have a rate 8.1% against 5.5% of men.

The link between education and the labour market still appears to be stronger in Austria if compared to Europe, even if slightly deteriorating after 2012 (**Figure 4**): only a limited share of young people is excluded both from working and training activities, going together with the aforementioned on average or above-average attainment rates. The Austrian NEET rate, measuring the percentage of young people aged 15-24 out of education and not employed, was 7.5% in 2015, increasing after 2012. In the EU28 the rate was 12% but it is constantly decreasing, so that the gap with Austria is reducing in the last 3 years. However, the rate of young people out of education and work is higher in the Vienna region (11.1% in 2015), while extremely low in Upper Austria (5.9% in 2015).

Figure 4: NEET rate (15-24, %) and early school leaving rate (18-24, %), Austria, Upper Austria and Vienna, 2005-2015



Source: Eurostat Education and training database, LFS microdata

1.4 Labour market

Austria remains an attractive destination for foreign workers and is experiencing a continuous inflow from EU and non-EU countries alike. This, together with the longer working lives of elder workers (due to restrictions on early retirement) and increasing female labour market participation, is helping to increase the labour supply and potential growth. Employment has been increasing, but the economy cannot fully absorb the growth in the labour force. This has led to recent increases in unemployment, especially for the low skilled, even if it remains low in

comparative perspective. The gain in employment since the crisis has mainly been driven by part-time jobs rather than full-time work. Work is thus distributed among more employees. As we saw, this is limiting unemployment to some extent but also resulting in stagnating labour productivity per employee (European Commission, 2017).The Austrian labour market displays, according to OECD data, an intermediate degree of employment protection. The relative indexes measuring the strictness of regulation on individual and collective dismissals for regular contracts remained stable in the last years, being up to 2,37, less than countries like Germany, Italy or Portugal, but more than Finland, Spain and United Kingdom.

In 2015 Austria invested in labour market policies an amount of resources which was equal to 2.26% of its GDP. Expenditure increased due to the first impact of the crisis in 2008-2009, then decreased and started rising again in the last 3 years. The main focus of Austrian LMPs is training (measures that aim to improve the employability of LMP target, covering 0.46% of GDP), which are relatively high compared to the EU average. Expenditure on labour market services slightly increased as well in the last ten year (0.18% in 2015, still lower than the last EU average available: 0.21% in 2011). Other measures labelled as active, namely employment incentives, supported employment, direct job creation as well as start-up incentives, are not the focus of Austrian labour market policies.

Looking at compensatory interventions, the expenditure for unemployment benefits and out-of-work income maintenance and support declined until 2008, being below EU average, but increased afterwards to 1.38% of GDP in 2015, after a first peak in 2009 due to the economic crisis. Expenditure for early retirement are significantly higher than the EU average, although they decreased from 0.24% (2006) to 0.15% in 2011 (the EU average expenditure was 0.05% in the same year), and to 0.12% in 2015.

Regarding participation in the labour market, during the time span 2005-2015 the overall economic activity rate for 15-65 years old was slightly but constantly above the EU-28 average, increasing from 72.4% to 75.5%. This means that in 2015 3 individuals out of 4 were working or actively searching for a job. In 2015, 57.4% of the Austrian youth (aged 15 to 24) were an active part of the labour market, 60.7% for males and 54.1% for females. This rate did not change substantially in the last ten years, and it is high above the EU27-average of 41.7, which showed instead a decrease of 2.7 percentage points after 2008. At the NUTS2 level, the Austrian labour market is characterized by a clear disparity between Vienna and Upper Austria. In Upper Austria the activity rate of those aged 15-24 is very high (62.9% in 2015), as young people tend to spend less time in education (mainly vocational), thus entering earlier the labour market. In the region of Vienna the activity rate is lower than the country average (51.2% in 2015), due to the increasing relevance and diffusion of higher education.

The occupational structure of the Austrian labour market appears to be more qualified than the EU average, in line with data on innovation, productivity and R&D. Almost 30% of the working

population in 2015 was employed in high skilled white collar occupations (ISCO 1, 2, 3), while 22% was part of the high skilled blue collar group (ISCO 6, 7). The EU28 averages for the same occupations were, respectively, 27% and 19%. On the other side of skills distribution, 33% of the Austrian working population was working in low skilled white collar occupations (ISCO 4 & 5) and the remaining 16% was employed in elementary occupations, making up the low skilled blue collar group (ISCO 8, 9). The EU28 averages for the same occupations were, respectively, 33% and 21%. What is especially visible in the region of Vienna, is the significant rise of jobs with a high qualification profile. There has been a trend towards a higher request for high-qualified activities, while the share of jobs focusing on manual activities is shrinking. Moreover, Vienna's job market benefits from the fact that the city, as the capital of Austria, offers a relative high amount of service jobs in the public or educational sector. On the other hand, opportunities for young people in the dual apprenticeship system for medium-low qualified jobs are quite limited. The main challenge for the Viennese labour market in the future will be to provide sufficient jobs for its growing population. Also the job demand in Upper Austria shows an upgrading trend, even if it is more focused on industrial production that can rely on a developed apprenticeship system. Despite differences in the structure of economy and education, it is forecasted a growing gap between demand and supply of high skilled labour in the next years for both regions (Eichmann & Nocker, 2015).

Over the last decade the overall Austrian employment rate of the population aged 20-64 increased (from 71.6% in 2005 to 74.3% in 2015). More in detail, this positive trend was strong before the crisis, it stopped in 2008-2009 and then stabilized afterwards. As a contrast, the EU-28 employment rate decreased between 2009 and 2013, when it started rising again. However, in the region of Vienna the data show a decrease after 2013, as the employment rate fell from 69.3% to 67.7%. In Upper-Austria 77.7% of the population were employed in 2015, which is 3.4% above the Austrian average. Generally speaking, one has to note that the male employment rate follows a very similar pattern to the Austrian average, while the female employment rate gradually but continuously increased (from 64% in 2005 to 70.2% in 2015) and did not stagnate or decline during this time period. Nevertheless, there was still a gap of 8.4% in 2015 (70.2% against 78.4% for males). This is mainly explained with the increase of female employment in non-standard jobs: if the ratio of male part-time work has nearly doubled from 6.6% (2006) to 11.8% (2016), the female ratio of part-time work jumped up to 47.7% in 2016. Therefore, we can conclude that the Austrian labour market is still affected by relevant gender gaps in earnings as well as in type of employment, as women at all levels of educational attainment earn less than man and are more employed in non-standard employment (fixed term and part time) (OECD, 2015).

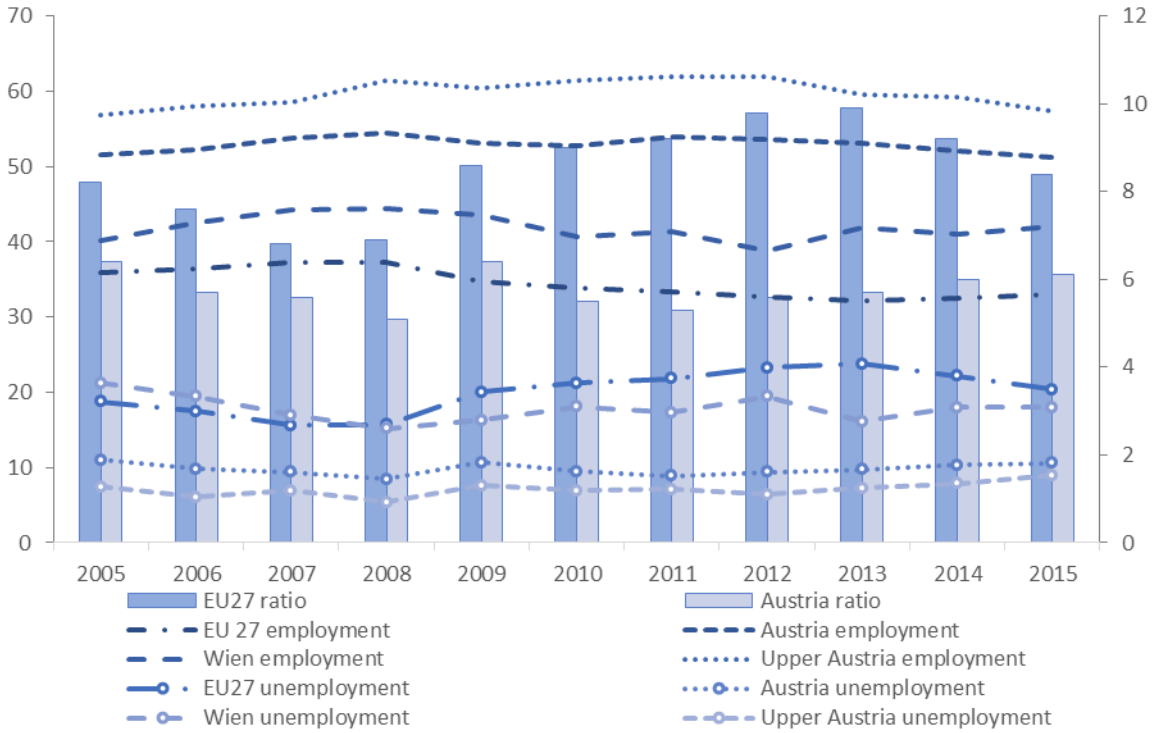
The overall unemployment rate (aged 20 to 64) strongly decreased in the early 2000s, touching 3.8% in 2008, well below the EU-27 average of 6.7%. Due to the first impact of the economic

crises it rose by 1.2% in 2009, then decreased till 2011 (4.3%). Since then it has been constantly moving up (5.6% in 2015). In Vienna, where the unemployment is traditionally higher, it rose to 10.4% in 2015 (involving more men, 12%, than women, 8.6%), above the EU average of 9.2%. On the other hand, in Upper Austria unemployment is lower and roughly stable (3.9% in 2015). In Austria, the percentage of the unemployed that have been searching for a job for a year or longer is currently 29.2%. It is higher and strongly increasing in Vienna (from 29.3% in 2009 to 36.2% in 2015, but still significantly lower than the EU average of 48.1%), and lower and decreasing in Upper Austria (20.3% in 2015). Among young people aged 15-29 long-term unemployment is quite rare: 1.6% in Austria and 3.5% in the region of Vienna (4.8% among men), compared to 5.8% in the EU27. Long-term unemployment is particularly relevant as it can have a negative effect on feelings of well-being and result in a loss of skills, further reducing employability.

Looking at the youth population (**Figure 5**), the employment rate 15-24 decreased in the last five years but it's still much higher than the EU average (51.3% against 33.1% in 2015), especially in Upper Austria (57.3%), while in Vienna is equal to 42%. Moreover, if at the national level and in Upper Austria young men are more employed than young women (54% against 48.7% in Austria, 61.6% against 52.8% in Upper Austria), in Vienna young women are slightly advantaged (42.5% against 41.4% in 2015). Accordingly, the unemployment rate for those aged 15-24 is much lower than the EU average (10.6% against 20.4% in 2015), being slightly higher for males (11.1%) than females (10%). However, after 2011 it is continuously increasing, coming closer to the levels of 2009. Once again, the situation is worst in Vienna, where it peaked up to 19.4% in 2012 and is equal to 18% in 2015: young males in Vienna appear to be particularly at risk, as their unemployment rate is 21.9%, above the EU27 average of 21% after 2012. Conversely, after a peak of 18% in 2012, the share of young women unemployed has fallen down in the last 3 years.

On the other hand, Upper Austria confirms to be a more favorable context also in terms of youth unemployment with respect to the overall Austrian situation, as the share of 15-24 years old actively searching for a job was equal to 9% in 2015, 9.5% for men and 8.5% for women. The youth unemployment ratio, measuring the share of unemployed young people among the whole youth population, also supports our view related to the comparatively good conditions of the young population in the Austrian labour market. The Austrian share of youth unemployed on the overall unemployed population is lower than the EU27 average: 6.1% for 15-24 and 7.4% for 20-29 in 2015 against 8.4% for 15-24 and 11.8% for 20-29. Nevertheless, while the average European trend is improving after 2012-2013 (it was equal to 9.9% in 2013), the Austrian ratio was equal to 5.3% in 2011. This confirms how in Austria the youth labour market conditions, even if still comparatively better than many European countries, have been slightly deteriorating in the last 3-5 years.

Figure 5: youth employment and unemployment rates (left axe, 15-24, %), youth unemployment ratio of young people 15-24 (right axe), EU27, Austria, Upper Austria and Vienna, 2005-2015



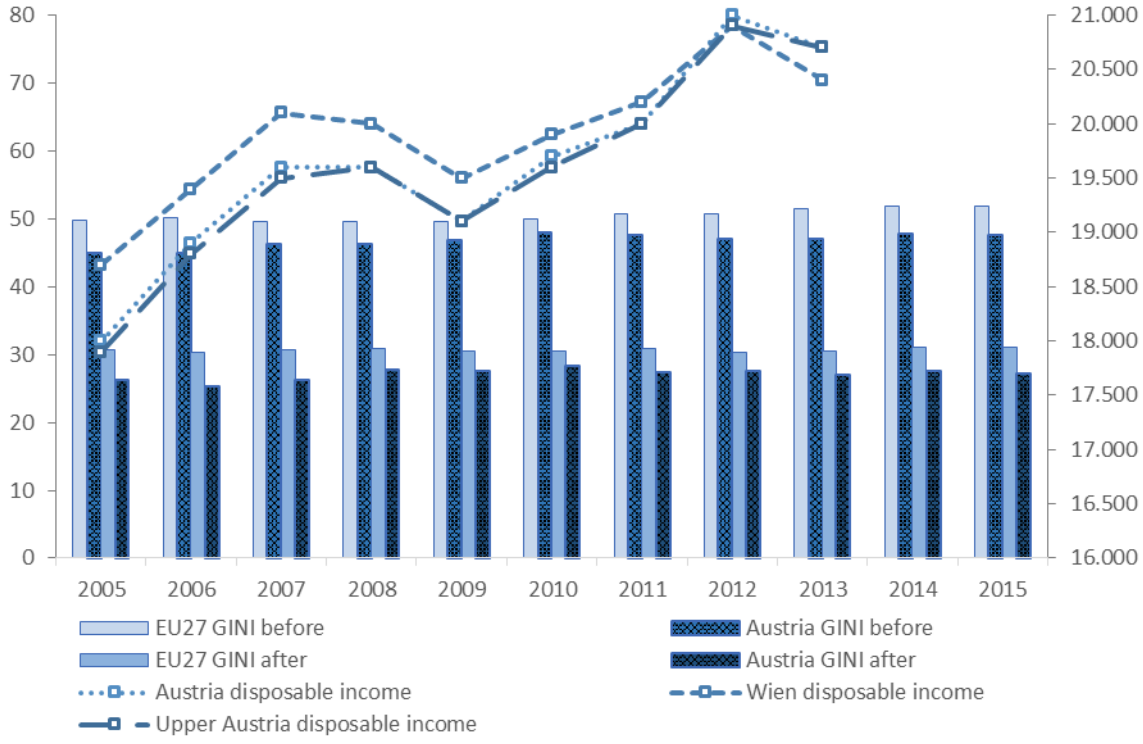
Source: Eurostat Labour market database, LFS microdata

1.5 Redistribution and social inclusion

The Austrian overall net expenditure in social protection rose from 24.5% to 26.9% of GDP in the time span 2007-2014, the strongest increase took place between 2008 and 2009 (from 25% to 27%), as an immediate response to the impact of the economic crisis. Expenditure on social protection is provided to households and individuals affected by a specific set of social risks and needs. In the case of Austria, resources spent for social protection benefits in order to protect people in need are equal to 11,312 euro per inhabitant: this value is well above EU average of 7,655 euro per inhabitant, showing the extensive amount of resources deployed by the Austrian welfare state. The main share is spent for pensions and retirement (old age risk), which is also the indicator showing the most continuous and strongest growth between 2005 and 2014, from 9.07% to 10.66% of national GDP. Relevant increases were also registered in the field of health care (from 6.58% to 7.13%), social protection benefits to counteract unemployment (from 1.32% to 1.59%) and social exclusion (from 0.36% to 0.46%). Expenditure for disability increased only slightly (from 1.83% to 1.86%), while there was a slight decline in the amount of resources destined for housing (from 0.13% to 0.12%), family and children (from 2.80% to 2.77%), survivors (from 1.63% to 1.54%).

The disposable income for households is the amount of money that a household earns each year after taxes and transfers, representing the money available to a household for spending on goods or services. In Austria it is higher than the EU average, showing an increasing trend from 2005 to 2013, from 18,000 to 20,700 in PPS (it was 16,800 for UK and 20,300 for Germany in 2013), with a stagnation in 2008-2010 because of the impact of the economic crisis. It was slightly lower in Vienna (20,300), while it was equal to the country average for Upper Austria. Looking at income distribution, Austria takes a lower-than-average position in Europe in terms of income inequality, even if it follows the general European trend of increasing inequalities. In the time span 2005-2015 the Gini coefficient of equivalised disposable income (**Figure 6**), showing the concentration of income, went from 45% to 47.6% against EU27 values of, respectively, 49.7% and 51.9%. Social redistribution and social benefits, and only slightly the taxes system, are effective in reducing market income inequality: the Gini coefficient after social transfers drops down to 27.2% in 2015, accounting for a 43% reduction of income inequalities (EU average is 40.3%). However, if inequality of income is low, inequality of wealth is by contrast high (ECB, 2016). In 2012, the richest 10% of Austrian households owned 62% of overall household wealth. As the share of renters is comparatively high, wealth in the form of homes, the major asset type for private households, is more concentrated (OECD, 2016b).

Figure 6: GINI index before and after transfers (left axe, 0:100), net disposable income in household in PPS (Euro per inhabitant, right axe), EU27, Austria, Upper Austria and Vienna, 2005-2015



Source: Eurostat Living conditions and welfare database, EU-SILC microdata

Social welfare standards are still high overall, as the proportion of the population at risk of poverty or social exclusion is one of the lowest among EU Member States, but some groups must face greater risk, in particular older women and children of foreign-born parents. The risk of poverty and social exclusion was equal to 17.4% in 2005 and jumped to 20.6% in 2008, showing afterwards a slow decrease to a rate of 18.9% in 2015, lower than the EU27 average of 23.7%. Many other indicators representing the living and material condition of the population, focusing on risks related to poverty and social exclusion, have been clearly affected by the crisis, showing a similar pattern: a slow improvement before 2007, a negative peak in 2008-2009 and then a drop and stabilization afterwards, even if on a higher level with respect to the pre-crisis. Values tend to remain, however, comparatively low in EU perspective. This is true for the risk of poverty (from 12.6% in 2005 to 15.2% in 2008, then down to 13.9% in 2015, against a EU 27 average of 17.3%); for the risk of poverty or social exclusion (from 17.4% in 2005 to 20.6% in 2008, declining to 18.3% in 2015, it was 20% for Germany and 23.5% for UK); for the severe material deprivation rate (from 3.5% in 2005 to 5.9% in 2008, then down to 4.6% in 2015, against a EU 27 average of 8%); as well as for the risk of poverty suffered by employed people (from 6.7% in 2005 to 8.6% in 2008, then down to 7.9% in 2015, against a EU 27 average of 9.5%). A different trend is instead related to the percentage of people living in households with a very low work intensity: this indicator fluctuated between 7.3% in 2005 and a maximum of 9.1 % in 2014 (considering the total population aged less than 60), going down to 8.1% the following year, well below the EU average of 10.6%. All in all, the data point out that material conditions of living in Austria are generally better than in many other EU countries, but deteriorated after the economic crisis, both at the individual and at the households' level, and started to recover with fluctuations after 2008-2009.

Concerning the public sphere and civic participation in Austria, results from recent surveys show a persisting sense of community: 93% of people believe that they know someone they could rely on in time of need, higher than the OECD average of 88% (OECD, 2016a). However, data on voter turnout in national elections, a measure of citizens' participation in the political process, express a clear trend of decline, common to many other EU countries. The percentage was equal to 78.5% in 2006, but participation decreased to 74.9% in 2013, even if it is still higher than the European average. A similar decline is also shown by turnout data in EU parliamentary election. Also trust in public institutions, essential for public support, is quite low in Austria: only 43% of the population report having confidence in the national government, in line with the OECD average. However, trust in the national government is higher among young people under 30 (50%, see OECD, 2016b).

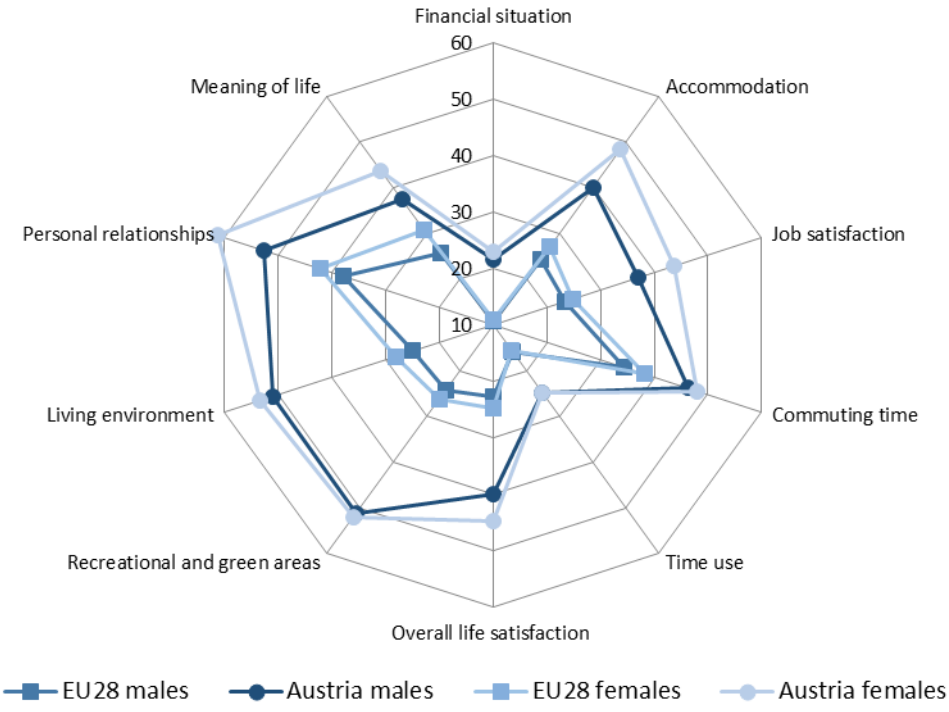
1.6 Health and well-being

Most EU countries have enjoyed large gains in life expectancy over the past decades, thanks to improvements in living conditions, public health interventions and progress in medical care. Austria's healthcare system is characterized by a large and costly hospital sector and underutilized outpatient care (European Commission, 2017). In general the accessibility and quality of healthcare provided are good in comparative perspective. Being an ageing society, however, access challenges as healthcare costs are expected to increase markedly in future. From 2011 to 2014 total health expenditure in Austria increased by more than 10%, touching 33,794 million euro in 2014, equal to 2,587 euro per inhabitant (EU average is 2,235 euro per inhabitant). The available beds in hospitals in 2014 were 768.71 per hundred thousand inhabitants, with the region of Vienna being slightly above the average (800 beds per hundred thousand inhabitants) and Upper Austria being slightly below (700 beds). It is striking the increase in long-term care beds, that rose from 35.8 per hundred thousand inhabitants to 55.9 in the time span 2005-2015, mostly resulting from the region of Vienna (from 67 to 163.35 in 2014). Accordingly, looking at the health personnel data, the values of medical doctors and nurses and midwives per hundred thousand inhabitants are higher and increasing in Vienna (respectively 689 and 975), with respect to both the national average (504 and 816) and to Upper Austria (407 and 825).

In 2015, 70% of people in Austria reported to be in good health, slightly above EU average of 67%. The ratio between people who have a good and very good perception of their health and those who have a bad perception is also quite favorable and high in comparative perspective, being 9.9 as compared to the EU average of 8.7. Not surprisingly, young people in Austria aged 15-29 tend to have a better self-perception of their health than the overall population, as 92.5% of them perceive their own health as good or very good, again above the EU average of 90.8%. Young female reported to be in good or very good health more often than young men (respectively 93.6% and 91.4% of respondents). The ratio between those who have a good and bad perception of their own health is accordingly high, being equal to 77.1 (EU average is 69.8). Despite the subjective nature of the indicator, answers have been found to be a good predictor of people's future health care use (OECD, 2016a). Moreover, looking at the Eurostat indicator of healthy life years (HLY), that measures the number of remaining years that a person of specific age is expected to live without health problems, we can gain more insights on Austrians' health status. In Austria, a male is expected to live 57.6 years without health problems (72.9% of total life expectancy) and a female 57.8 (68.8% of total life expectancy). It is important to stress that the both values are below EU average (respectively 61.4 and 61.8 years). Health conditions appear not to be distributed evenly: the gap in reported good health between the top and bottom 20% of the income distribution is especially large in Austria.

Subjective well-being can be measured in terms of life satisfaction, looking at the presence of positive or negative experiences and feelings. Such measures, while subjective, are a useful complement to objective data to compare the quality of life across countries. In general, Austrians are comparatively quite satisfied with their lives. When asked to rate their general satisfaction with life on a scale from 0 to 10, Austrians gave it a 7.8 grade, higher than the EU28 average of 7.1, and the percentage of highly satisfied with their life was 37.9%, strongly above the EU average of 21.7%. In Vienna, life satisfaction was rated at 7.7 in 2016, but labour satisfaction was significantly below the national average (7.1 against 7.7), somehow reflecting the problematic labour-related issues that we reported in section 1.4. Young Austrians aged 16-24 and 25-34 express high level of satisfaction in many life domains (**Figure 7**). The difference with other countries is particularly wide regarding the living environment (60% and 52% of high satisfaction for those aged 16-24 and 25-34, with respect to 30 and 27% in EU28),and the presence of recreational and green areas (59% and 51% of high satisfaction with respect to 28% and 25% in EU28). These results are related to education attainment: satisfaction is much lower for low-educated, roughly equal to the national-average for upper secondary educated, much higher for tertiary educated.

Figure 7: High satisfaction in various life domains (25-34, %), EU28 and Austria, 2013



Source: Eurostat Living conditions and welfare database, EU-SILC microdata

Going beyond subjective perception, we look at some other indicators related to the personal well-being, ranging from security to alcohol consumption and smoking, in order to gain a more

nuanced picture of well-being in Austria. The number of reported crimes is shrinking in the last ten years, even if the overall number of crimes increased from 2015 to 2016 from 518 thousands to 537 thousands, while the violent crimes slightly decreased from 2,387 to 2,363. The homicide rate (the number of murders per 100 000 inhabitants) is a quite reliable measure of a country's safety level because, unlike other crimes, murders are usually always reported to the police. According to the latest data, Austria's homicide rate is 0.4, much lower than the OECD average of 4.1 (OECD, 2016b). However, Austria has the highest per capita consumption of alcohol in the OECD. At 12.2 liters per person, consumption is significantly higher than the OECD average of 8.9 litters, and above countries such as France (11.5) and Ireland (11). Austria is also the only country where the share of the population who smoke daily remained stable at 24% since 2000, while on the OECD average it fell in the last years.

2. Emerging issues

Austria is characterized by a strong federalism. This implies that in many policy areas, federal states show differences that are not expressed by aggregated data at national level and go beyond the common federal institutional architecture. In the paper we showed that the two functional regions of Vienna and Upper Austria are characterized by commonalities and differences, as far as contextual living conditions of young adults are concerned. Usually the indicators considered show that the situation of young Austrian and their perceptions are quite positive in European comparative perspective. However, this goes together with some signs of deterioration in terms of growing youth unemployment, persisting gender differences, worsening skills achievement and strong influence of parental background in education, high wealth inequalities. In addition, the creation of predominantly low-paid and part-time jobs over recent years has aggravated the segmentation of the labour market.

Data confirm the leading role of Vienna in the country. The capital attracts strong flows of migration and has experienced a strong growth in the service sectors, especially in high skilled jobs. This is connected with the relevance of tertiary education in its regional skill formation system. However, Vienna combines some contradictions: the growing job market goes together with increasing unemployment and NEET rates, especially for low skilled, and scarce apprenticeship opportunities for young people. Upper Austria is characterized by a stronger industrial sector and, accordingly, vocational education and apprenticeship play a major role in the education system. The moderate increase of the population did not increased so far the pressure on the youth labour market as it happened in the region of Vienna.

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Work Package 4

Quantitative Analysis Young Adults' Data

Bulgaria –

National Briefing Paper with national and regional data sets

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Date: 30/09/2017

Work Package 4 – Quantitative Analysis of Young Adults' Data

Deliverable 4.1

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Executive Summary

The quantitative characteristics describing living conditions, education, structure of the economy and labor market in Bulgarian conditions are very important for understanding the transitions of young adults from education to employment and the opportunities for lifelong learning.

On the one hand, in the national context, there are high shares of people with higher education, both for the whole population and for the 30-34 age group. It is also indicative that in 2014 two thirds (66.5%) of the 20-24 age group are students. This percentage is an indication that education is perceived as a value, and this is also a result of the active policy of universities towards young adults in the country. The proportion of people aged between 30 and 34 with upper secondary education (ISCED 3-4) is higher than in the UK, and is comparable to Germany.

On the other hand, when it comes to adult education, the values are very low. The share of learners (24-34) is much lower than the EU27 average. This means that after completing certain degree, people stop their efforts and ambitions to continue their education, which requires more active involvement of the training organizations in formal and non-formal education and lifelong learning.

It can also be said that there is a difference in education characteristics between the two regions regarding different age groups. Apart from education, almost all other proportions describing the Bulgarian way of life are lower than the EU average:

- Social protection expenditure per capita increased from 2005 to 2014, but remains much lower than that of other EU countries.
- The Households' income in 2013 is much lower than in other EU countries.
- The share of people at risk of poverty and social exclusion in Bulgaria is decreasing in the period 2006-2015, and from 2008 to 2015 it is relatively stable between 40% and 50%. These values describe Bulgaria as the poorest European country with low standard and poor living conditions.
- The overall satisfaction for those aged 18-30 years in Bulgaria (-1.161) is much lower than the average for ES28 (-0.014) as men (-1.211) are more satisfied than women (-1.109).

The situation in the country is characterized by a process of slow economic stabilization, income growth, poverty reduction, increasing youth employment, growth in disposable household income and high educational attainment, but there is still a lot to be done to reach the average values describing the quantitative characteristics of the quality of life in the EU countries.

Introduction

This national briefing paper provides a short overview of the living conditions of young adults in Bulgaria and in the two functional regions selected for the YOUNG_ADULLLT project, the regions of Blagoevgrad (South -West) and Plovdiv (South-Central). The data were collated at national and local level (NUTs2) according to six dimensions of contextual living conditions: the demographic characteristics of the population, the structure of the economy, the inputs and outputs of the education and training system, the labour market, the material living conditions and the participation of citizens in the political and civic life and, finally, the health conditions and individual well-being. Data were extracted from Eurostat and from different surveys such as the EU-LFS, EU-SILC, PISA and PIAAC. The main corpus of data proceeding from international and harmonized data was successively complemented by data collated at the local level, made available by the National Statistical Institute and by the official websites of various Bulgarian Institutions (Ministry of Education and Science, Ministry of labour and Social policy, Chambers of commerce). The data ranges between 2005 and 2015, but for some indicators the data were not available for 2015 and for this reason we refer to 2014 as the latest year with data available.

Quality data assessment

Statistical information used in this study is taken from publicly available databases such as EUROSTAT, ESSPROS, PISA, OECD and National Statistical Institute (NSI) in Bulgaria. Although these sources provide a large number of time series and a lot of information on methods used to gather the information, there are several observations to be made regarding comparability and compatibility of the data.

Due to the unification of variables and statistical procedures it is currently possible to use EUROSTAT as a primary source when assessing and comparing living conditions across the countries-members in the European Union. However, when a comparative analysis has to be made on a lower than the national level, it is necessary to keep in mind that NUTS2 (and to a lesser extent NUTS3) are the only reliable for comparison local levels that can be used when searching for data. Even then it is possible to come up with problems such as data gaps or time series of different lengths. In addition, it is also possible to have some local databases (in our case NSI) updated with more recent information and variable values, which are still missing in EUROSTAT. In this paper, we have kept our analysis limited to the variables that were commonly agreed and are available in EUROSTAT.

Whenever it was necessary to provide information on sub-regions or comparison of regions with regard to the most recent information, we have used the same variables as those available in EUROSTAT but with latest values obtained from NSI. This has been duly noted in the footnotes or sources of the respective figures or tables. The NUTS2 data allow sound statistical comparisons but we

should keep in mind that they do not fully coincide with the chosen functional regions for the fieldwork in the project, the main diversion being that the South-West includes the capital Sofia where the situation along most of the used indicators is much better than in Blagoevgrad Functional Region, while Plovdiv Functional Region has a better situation than the rest areas in the South-Central region. NSI data has also been used when necessary to check for differences inside a specified NUTS2 region (e.g. for NUTS3 and LAU data) as it offers more recent information. With regard to economic data, local sources have been able to provide useful details on the purchasing power information that reflect the differences in the standard of living in big cities and the rest of the rest (more rural area) of the respective regions.

Description of the two Functional Regions

The traditional administrative-territorial division in the country is two-level – it consists of 28 administrative districts and 265 municipalities. In 2000 Bulgaria was divided into 6 planning regions – North-West, North Central, North-East, South-West, South-Central and South-East which were grouped into two territorial units according to the agreements with Eurostat (NUTS) in 2005. The municipalities in the country are very different in their economic development, the demographic characteristics and the social status of the population. Overcoming these economic and social differences is the main goal of the regional policy.

The two functional regions (FR) are Plovdiv and Blagoevgrad. The Plovdiv FR corresponds to the municipality of Plovdiv. The Blagoevgrad FR corresponds to the Blagoevgrad district in the national administrative-territorial division. The two FRs have a comparable population size: 341 625 inhabitants for Plovdiv and 312 831 for Blagoevgrad. The two regions have several specific characteristics: Plovdiv FR has a central location in the country while Blagoevgrad FR is a border region (with Macedonia and Greece); Plovdiv FR is an urban territory with higher concentration of services and industry in its economy; Blagoevgrad FR is mixed with rural and urban areas and has a higher share of service sector in the economy. Both regions are interesting to be studied in terms of the implementation of LLL policies due to their different economies and labor market developments, population and educational structures.

Functional Region Plovdiv

- Plovdiv FR is unique in terms of administrative-territorial characteristics, e.g. Plovdiv Municipality is one of the three municipalities in Bulgaria which comprises only the main city.

- The FR has a multi-sector economy providing around 7% of the national sales revenue of goods and services (www.pd.government.bg). The industrial production gives 62% of the revenue. There is a trend in revenue growth in services. The main economic sectors which shape the industry are production of food, beverage and tobacco products (around 28% of the gross sales revenue),

production of ferrous metals (14%); metal casting, metalworking, and machinery production (11%); production of chemicals and chemical products (9%); production of cellulose, paper, polygraph and publishing goods (8%), (www.pd.government.bg). The local economy generates output of over 6 billion EUR annually, of which about 3.1 billion EUR in manufacturing, 690 million EUR in construction, 400 million EUR in transport and logistics, and 310 million EUR in IT and business services.

- The region has a well-developed logistics network that has a big potential to attract local entrepreneurs and foreign investors, and it appears as an important characteristic on the supply side of the labor market: a highway connection with Central and Western Europe; well-developed railway network with a connection to the nearest sea port; an intersection of Pan-European transport corridors (IV, VIII and X); a cargo and passenger airport (upcoming concession); a free trade zone and a customs terminal. The Plovdiv International Fair, spread on a territory of 352 000 m^2, makes the city is an international, intellectual, trade and investment center, organizing many trade fair events and thematic exhibitions on national and international scale.

- Plovdiv has a well-developed educational system, which could serve as a source pool to feed the necessities of unemployed young people, and to insure them with modern and qualitative knowledge. There are 9 universities, with 39 260 students, and 78 primary, secondary and vocational schools with 8 351 pupils. In 2014, there were 8 657 university graduates, 5 592 high school graduates, of which 2 825 graduated from vocational high schools, and 2 767 general high school graduates (www.nsi.bg).

Functional Region of Blagoevgrad

- Blagoevgrad FR is the sixth largest district in the country covering 14 municipalities and 280 settlements (http://www.bl.government.bg/en/population). It has a relatively good demographic structure. The urban population in the district is 39% and there is a high percentage of people employed in services.

- The FR is characterized by diversified economic branch structure: food and tobacco processing industries, tourism, transport and communications, textile industry, timber and furniture industries, iron processing and machinery industry, construction materials industry, as well as pharmaceuticals, plastics, paper and shoes production. With its railway line and road connection, the district forms the heart of the land-based trading route between northern Greece, Bulgaria and Romania (http://www.bl.government.bg/en/economy). The developed labor market is an important prerequisite for the professional development of young adults in their life course. Industry occupies a significant place in the economic activities of the region. Its branches form 25.7% in total products in Blagoevgrad FR. More than 39% of all employed people in the region are engaged in the industry. There are several leading industrial branches in the area. Food industry constitutes 31% of the whole

FR industry and its companies form the predominant employment area. Textile industry, which is of particular importance for the economy of the region in recent years. Active players, at the end of 2014, dealing with the production of clothing industry are 739 or 27.8% of the total regional industry. Most of them are small and micro businesses. Typical of this sector is the participation of foreign investors (Greek, German, and French) that created new owned or joint ventures in the field. Wood and furniture production form another important segment of the regional industry. The development of the industry is based on the use of local raw materials and has a perspective. Tourism in the region is a major sector of the economy. Agriculture is also developed. The specialization of region crop production in the country is determined by the production of tobacco.

- Blagoevgrad FR is a significant, economic, educational and cultural center of the Republic of Bulgaria. The large number of young adults in the district is a good basis for the development and implementation of LLL practices in formal and non-formal education. There are a total of 133 educational institutions that include 106 general schools, 3 special schools, 1 arts school, 18 vocational high schools, 2 postgraduate colleges and 2 universities.

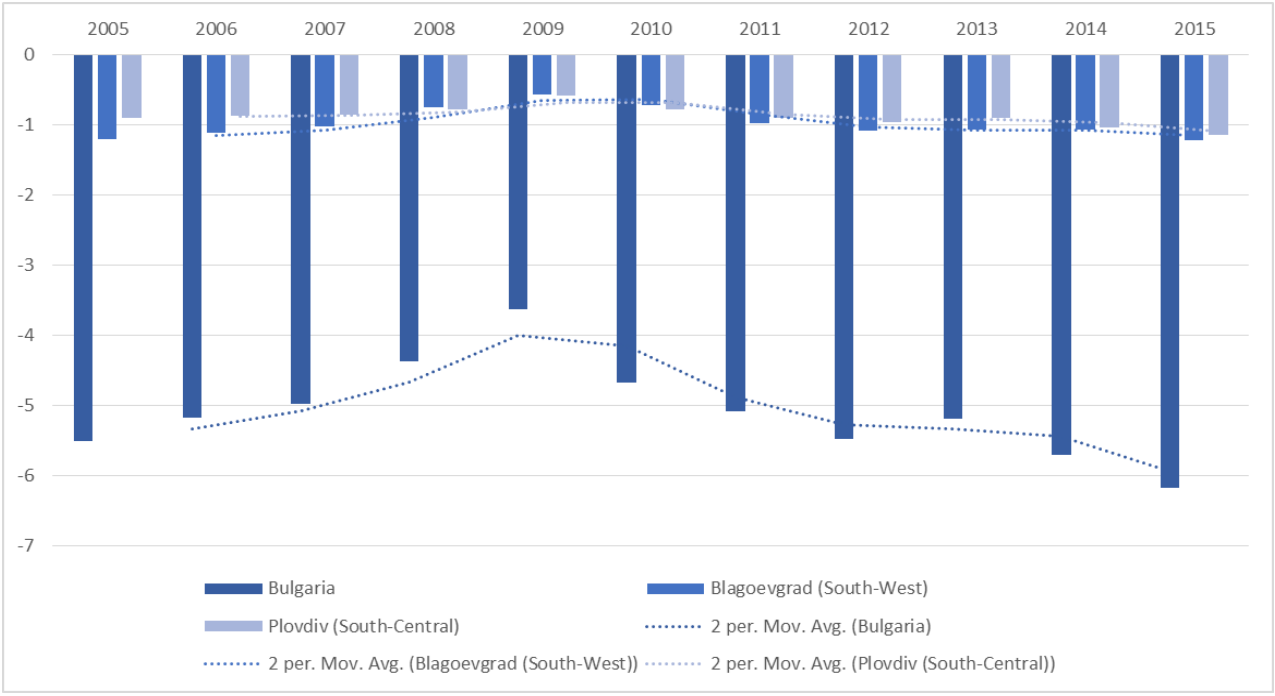
All of these characteristics of the population and the systems of education, economy and culture in the two FRs suggest a wide range of diversity in the approaches towards young adults and the policies required for their inclusion in LLL. Both regions demonstrate efforts to establish effective cohesion between education, science and business.

Demographic structure

In order to understand properly the demographic structure and processes in Bulgaria, it is necessary first to underline a few important points:

- Bulgaria is a medium sized European country (a bit over 7 million inhabitants as of 2016) which is experiencing a negative population growth since 1989.
- Figure 1 demonstrates not only the negative population growth in the country and in the two regions but also the trend in its development over time. For this we are using the 2-period moving average indicator (2 per Mov. Avg.) and its values are presented on separate lines for the country and the regions.

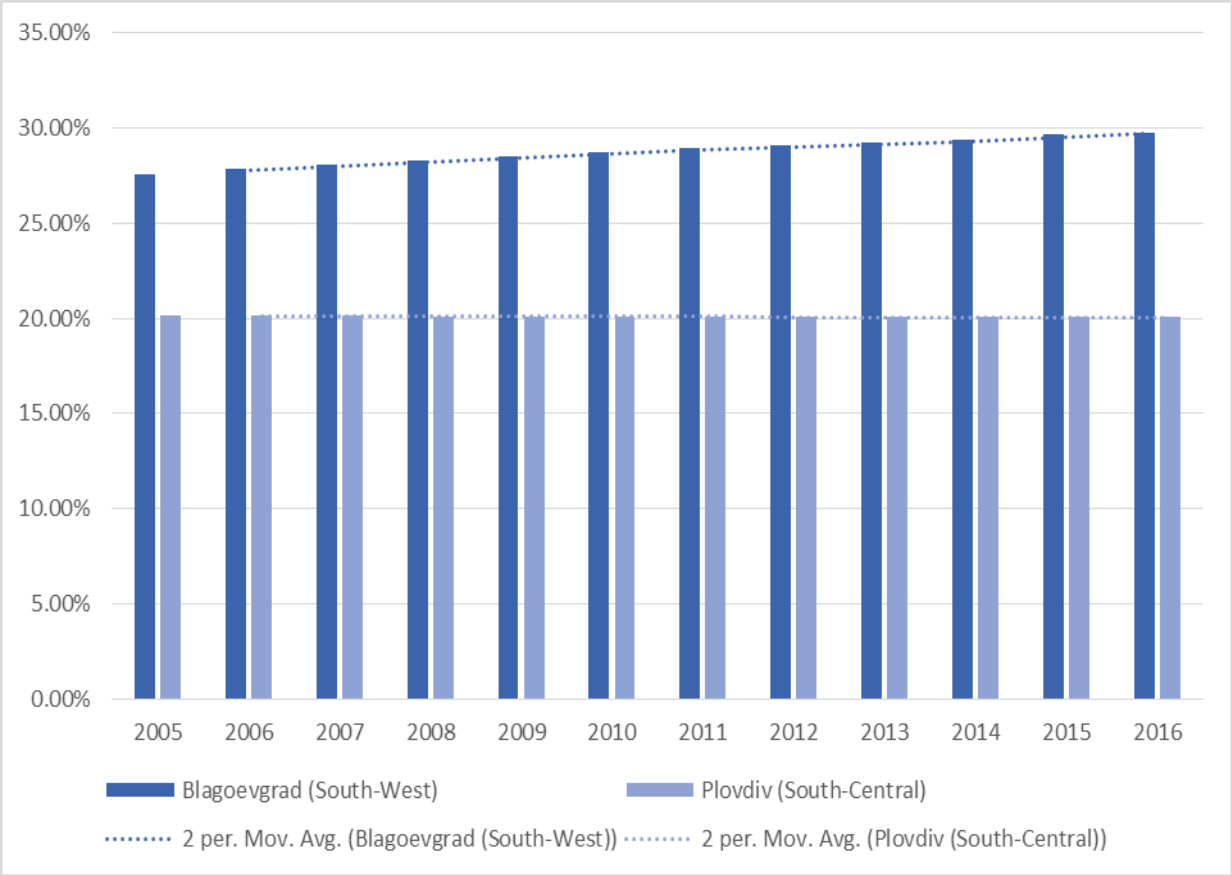
Figure 1. Natural change of population (‰)



Source: EUROSTAT, NSI

Although both South-West and South-Central regions have experienced negative natural changes in population, the effect is smaller compared to the overall country change. This is partly due to the fact that the economic development of these regions over time has attracted more people and in particular young people, which makes them better off compared to other regions of Bulgaria where population is older (thus in the rest of the country the mortality rate is higher and the birth rate is lower). The South-West region had a crude rate of natural population change of -4 in 2015, compared to -5.7 for South-Central region and -6.2 for Bulgaria. That means that the decile in natural population growth in the South-West region is smaller than the decline in the South-Central region which I turn is smaller than for the rest of the country. The decrease in population due to natural causes in the two regions is partially compensated by internal migration and by the ability of the regional authorities to provide better medical services (which in turn are related to the economic development of the regions). As a result, it is evident that the percentage of Bulgarian population living in South-West region has increased steadily from 27.6% in 2005 to 29.79% in 2015. The same indicator for the South-Central region has shown a very small (but stable) decrease from 20.15% in 2005 to 20.08% in 2015.

Figure 2. Percentage of Bulgarian population living in analyzed regions



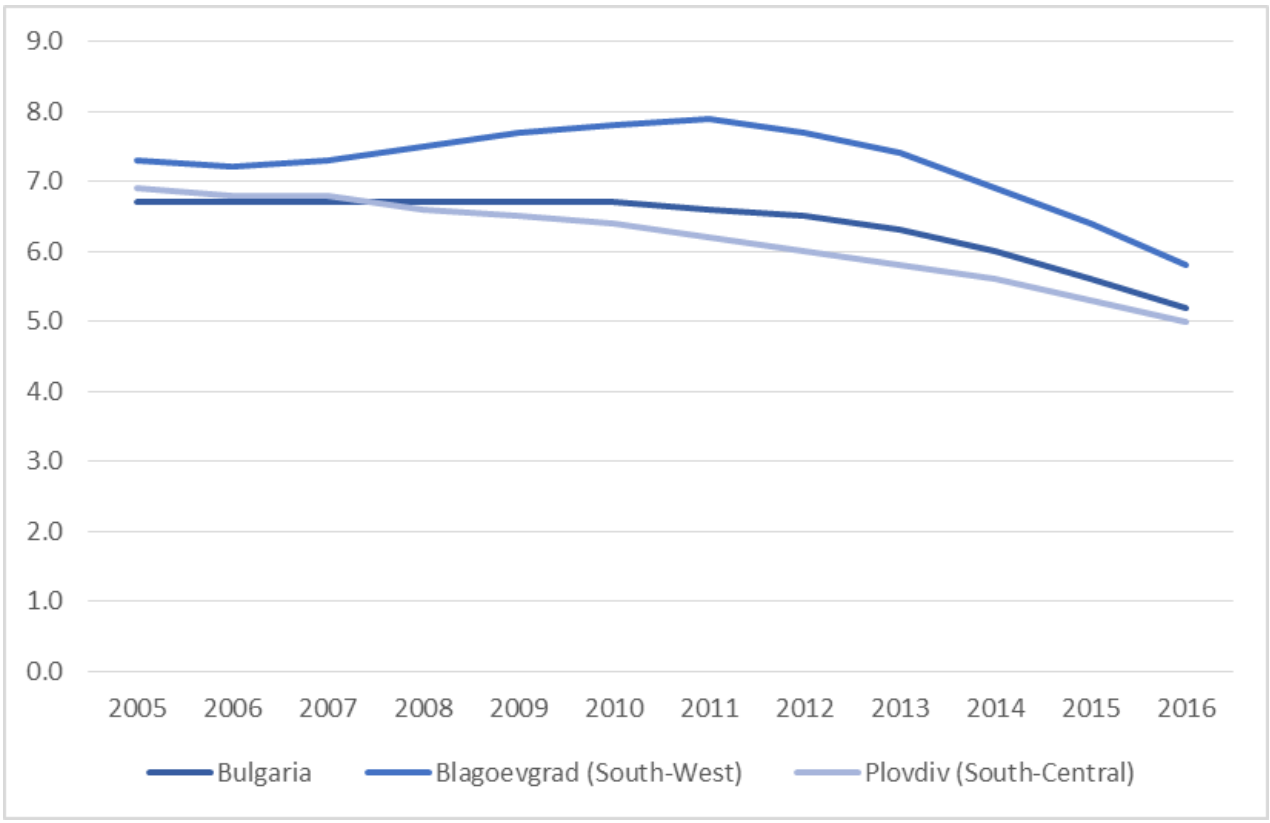
Source: EUROSTAT, NSI

- Like many other European countries, Bulgaria has an aging population. What makes the effects of this trend so serious is that combined with outmigration processes and the necessity to catch up with the more developed European countries aging and high mortality rates are turning into a major hurdle for the future economic development of the country.

Aging has resulted in an increase of the median population age from 41.2 in 2005 to 43.6 in 2015. This change is more significant for the South-Central region where the mean age has increased from 41 in 2005 to 44.3 ten years later, while in the South-West the change is so big – from 39.8 to 41.6.

It should be noted again that these effects are distorted by including the capital city in the regional division which also results in a higher population density in South-West (106 people per sq. km) compared to South-Central (66 people per sq. km) and a larger share of young population (5.8 in South-West compared to 5 in South-Central and 5.2 on average).

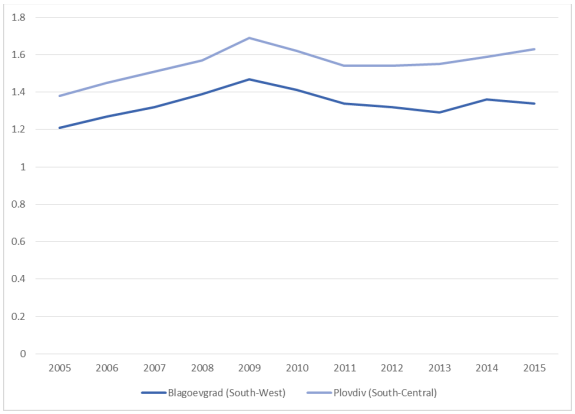
Figure 3. Proportion of population aged 20-24

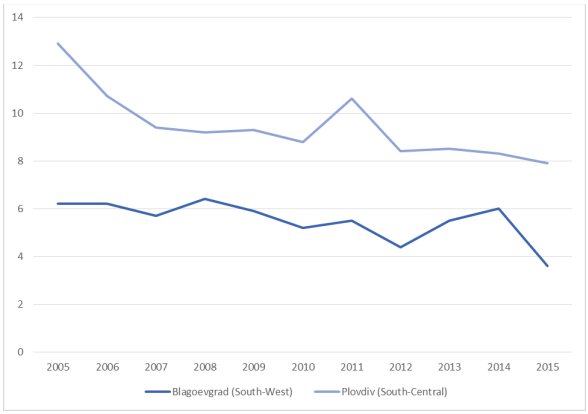


Source: EUROSTAT

The demographic comparison between the two regions will not be full enough if we did not underline that South-Central region has a higher fertility rate (1.59 compared with 1.36) but this is also followed by a higher infant mortality rate (7.9 compared to only 3.6 for South-West region).

Figure 4. Fertility rate (right) and infant mortality rate (left)





Source: EUROSTAT, NSI

- Emigration abroad affects not only the national economy, but also plays an important role for the regional development, because the economic disproportions among the regions (reflecting relative development of different regions as well as relative development within the same region – as stressed in section 1) result in a significant internal migration as well

While crude rates of net migration remain negative for Bulgaria (-0.6 in 2015), the South-West region has been able to attract more people for the last year with rates from +5.4 in 2005 down to 2.2 in 2015. The South-Central region on the other hand suffers from negative crude rates of migration, which despite from falling from -4 in 2005 down to -1 in 2015 still represent a challenge for the economic development of the region. Regarding mortality rates it should be noted that even though South-Western region is close to the nation-average this indicator differs across cities inside the region, being lower in the capital Sofia.

With 69.3% of the young people living with their parents by 2013, Bulgaria is similar to countries like Spain (69.6%), Croatia (79.1%) and Portugal (71.6%) and this share is higher than the average percentage in the EU (55.4% measured for EU 27 as of 2013). This percentage has been stable for the last few years and is due to both economic and social factors. One of the factors commonly used to explain this has been the economic crisis of 2008 and the long recovery period. Howeve,r the percentage of young people living with their parents in Bulgaria has not changed significantly with the economic cycle which indicates that besides the low pay and relatively high rents there are also significant social factors such as cultural traditions, strong family links and a shared view between parents and children to keep the former as long as possible inside a well-known "comfort zone" (Kovacheva and Kabaivanov, 2014; Mitev and Kovacheva, 2014). The EUROSTAT data also shows that men are more likely to stay longer with their parents compared to women, which is often related to internal migration as in smaller cities and villages it is easier for men to find a job and they have less incentives to relocate.

The structure of the economy

When discussing the structure of Bulgarian economy, we need to point out several important facts that account for many of the differences discussed in this text:

- First of all, Bulgaria still needs to catch up with its economic development, thus the absolute values of the GDP per capita are significantly lower than the EU 28 average values.

In terms of absolute values, the GDP per capita in Bulgaria (current prices) is growing at rates of well above 4% for the last year, however it is still about 47% of the EU average value. The economic crisis

of 2008 has also had a negative impact on Bulgaria, and although this impact has not been as strong as in other countries in Europe, the final outcome can be seen in the slow recovery and low growth rates in 2010-2014.

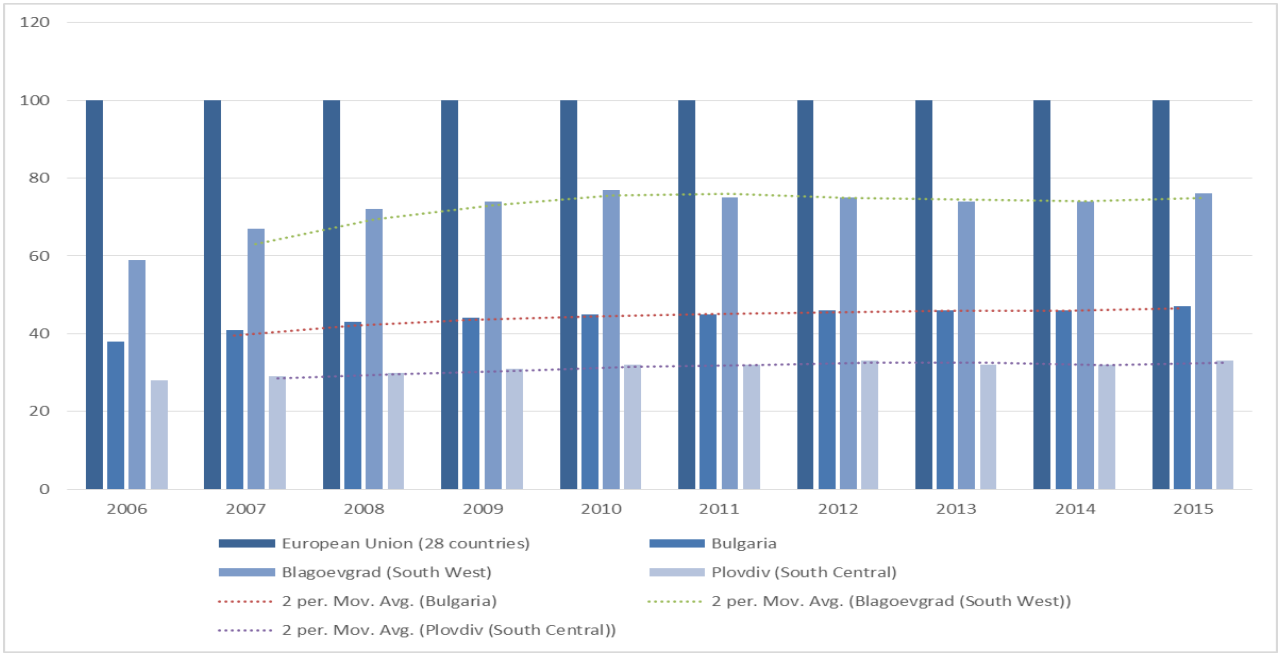
- Despite the fact that GDP in Bulgaria has grown faster than in most of the well-developed countries for the last few years, this growth is far from being sufficient to move quickly to the EU average values for gross output and income.

Figure 6 shows that the economic crisis of 2008 hit Bulgarian economy a bit later compared to the rest of the EU (with the decline in real GDP detected in 2009) and resulted in a longer period of recovery. This means that regardless of the positive growth in 2010, the country is still far from getting back the same momentum it had prior to the crisis.

- There is (and has been for a long time) a significant difference in the economic development of different regions that has to be accounted for when explaining not only economic but also demographic and social processes developing in Bulgaria.

This difference is clearly visible on Figure 5, with Blagoevgrad (South-West) region having 76% of the average GDP per capita in EU, while Plovdiv (South-Central) region has only 33% of the EU average. Considering the last ten years, Blagoevgrad (South-West) region has always had about twice the relative GDP per capita level, compared to Plovdiv (South-Central) region and it is still so, regardless of the fact that the growth rates of the latter have been slightly higher for the past three years.

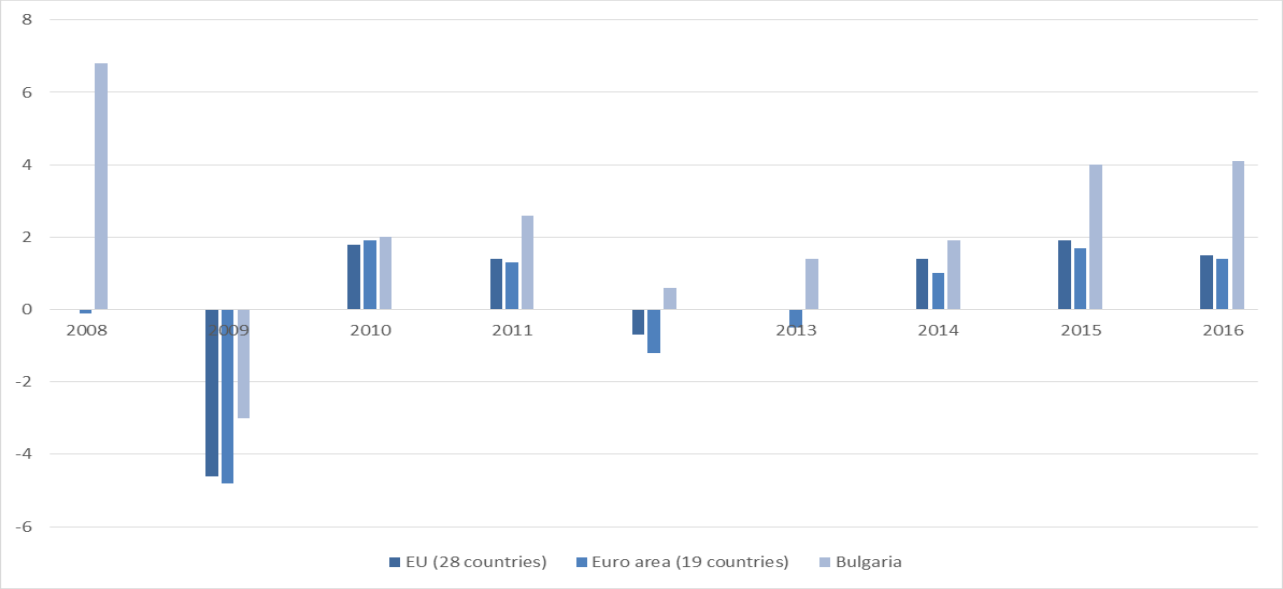
Figure 5. GDP at current market prices, Euro per inhabitant in % of European average



Source: EUROSTAT, General and regional statistics

There are several reasons for the economic differences across the examined regions, the most important perhaps being that the South-West region includes also the capital city of Sofia. It is hard not to overestimate the importance of Sofia for the development of the region as for example it accounts for more than 50% of the foreign investments per capita for the whole region (2015 data) and if we include also Sofia area we will end up with well over 80%.

Figure 6. Real GDP per capita growth rate

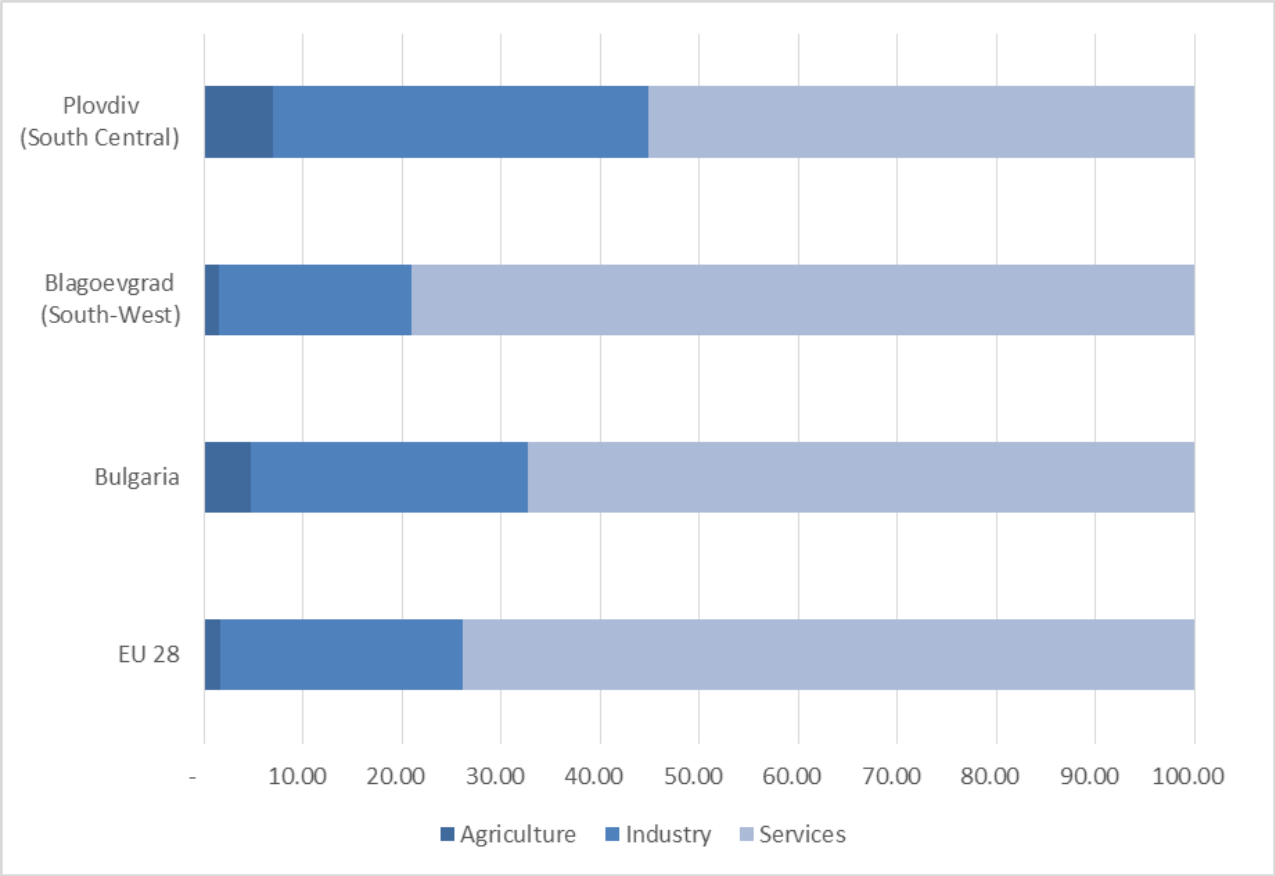


Source: EUROSTAT, General and regional statistics

The spatial concentration of economic and administrative activity that is so strikingly evident for South-West region and Sofia is also taking place (although the scales may differ) in other parts of the country. Therefore, it is essential when comparing the regions to take into account that each region has typically one large city attracting most of the Foreign Direct Investments (FDI), highly qualified employees and in effect most of the government and public attention.

If we have to sum up, the differences between the examined regions are quite important and they also have a high impact on their prospects of economic development. A notable fact is that Plovdiv (South-Central) region has 12 times less spending in R&D compared to Blagoevgrad (South-West) region, which on its turn has almost 3 times the country-average R&D spending). The spatial concentration explains the short-term prospects of widening the gap in the economic development inside the regions.

Figure 7. Economic sectors, value added (% of GDP)



Source: EUROSTAT, National Statistical Institute

The value-added contribution of the main economic sectors, shown in Figure 7, reveals that there are also differences across regions, with South-West region being closest to the EU 28 sector distribution. It should be noted that the differences in sector contribution to the added value are not necessarily an indicator of problems as they may rather point out a specialization of the region. In particular for South-West region, Sofia again plays a very important role as its economy is mainly concentrated in the service sector, thus increasing the share of the service sector for the whole region.

The percentage of researchers is low for both regions being analyzed, and has stayed virtually the same over the last five years, with a small increase in the South-West region. The R&D expenditures have already been discussed, and they also highlight the fact that there is a significant concentration of R&D spending in South-West region (and Sofia in particular). This conclusion holds for both private sector and government expenditures for R&D (where the ratio of spending for South-West and South-Central region is about 18:1, and despite that R&D expenses for South-Central have increased at a faster pace for the last year the gap is too large to be closed in short term).

Labor productivity in Bulgaria is constantly increasing, though it is still only 43.7% of the EU 28 average (as of 2015). In South-Central region over 50% of the employees work for micro and small

companies, while in South-West region over half of the employees work in medium and larger sized companies.

Table 1. Employment data by company size

Companies	< 9 employees	10-49 employees	50-249 employees	> 250 employees
Bulgaria	30.56%	20.87%	20.27%	28.3%
South-West	27.37%	20.94%	20%	31.69%
South-Central	32.78%	24.4%	23.45%	19.37%

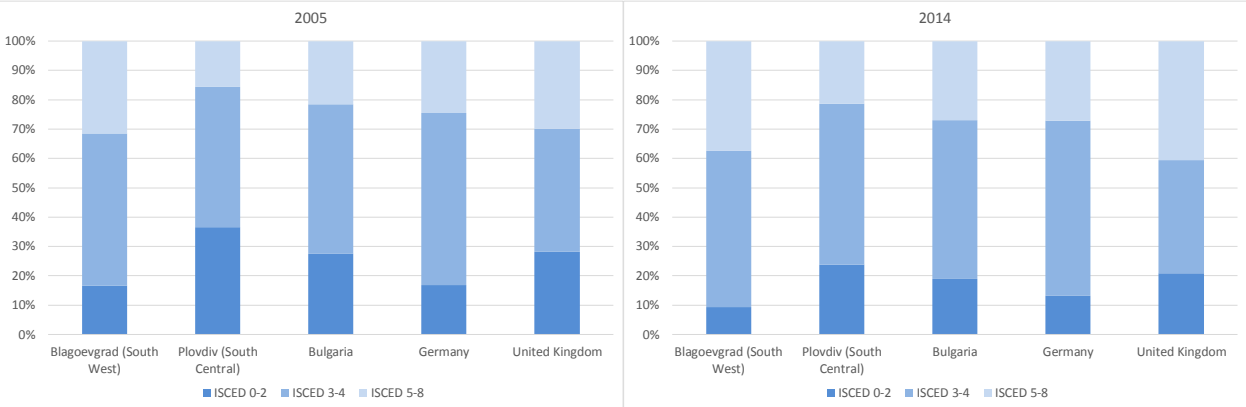
Source: National Statistical Institute (NSI)

Education and training system

The Bulgarian education and training system is comprehensive and partially decentralized at the regional level. The share of government spending on education in 2014 is 4.1% of national GDP and is relatively stable for the period 2001-2014, fluctuating around the average of 3.7%. This figure places Bulgaria below the EU average of 4.9% and among the bottom 10 EU Member States. School education is compulsory for children from 7 to 16 years of age. Secondary education (ISCED Level 3) can be divided into comprehensive education (comprehensive and specialized schools) and vocational training. General secondary education can be obtained at comprehensive schools (course duration 3-4 years) and at specialized schools (course duration 4-5 years). The admission in the specialized schools is upon completion of grades 7 or 8 and after exams depending on the profile of the school (with emphasis either on foreign language, or on science and/or mathematics, or on humanities, or sports, or arts etc.).

Secondary education can be obtained also at vocational-technical schools after completion of grade 8 and 4 years of training or after completion of grade 7 and 5 years of training. Vocational schools with a three-year curriculum also provide secondary education. All students successfully completing secondary education can access university after passing a general entry examination organized by each public university. The educational structure of the Bulgarian population is relatively close to the educational structure of Germany and the UK. In 2005, 27.5% of those aged between 25 and 65 had lower secondary education (up to ISCED 2), whereas in 2014 this rate decreased to 18.9%, equivalent to a decrease of 8, 6 percentage points for 10 years. This decrease is greater than in Germany and the UK.

Figure 8. Population attainment by ISCED levels, 25-64 years over the correspondent age group

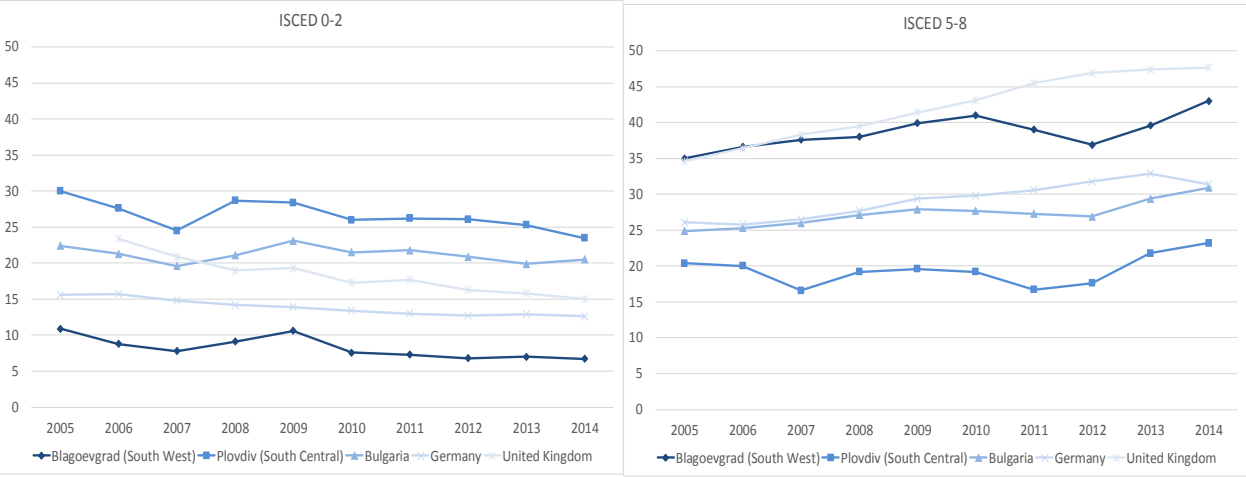


Source: LFS, EUROSTAT

The percentage of people aged 25-64 with tertiary education (at least ISCED 5) increased from 21.6% in 2005 to 27.0% in 2014. These rates are comparable to Germany values but are lower than UK and the EU average (37.9%) values. However, there are significant differences between statistical regions - the proportion of people aged 25-65 in the South-West region is higher than in the South-Central Region. In the South-West region, the growth is from 31.5% in 2005 to 37.5% in 2014.

In the South-Central region, the increase is from 15.6% in 2005 to 21.4% in 2014. The difference between the two statistical regions remains relatively constant - 15.9 percentage points in 2005 and 16.1 percentage points in 2014.

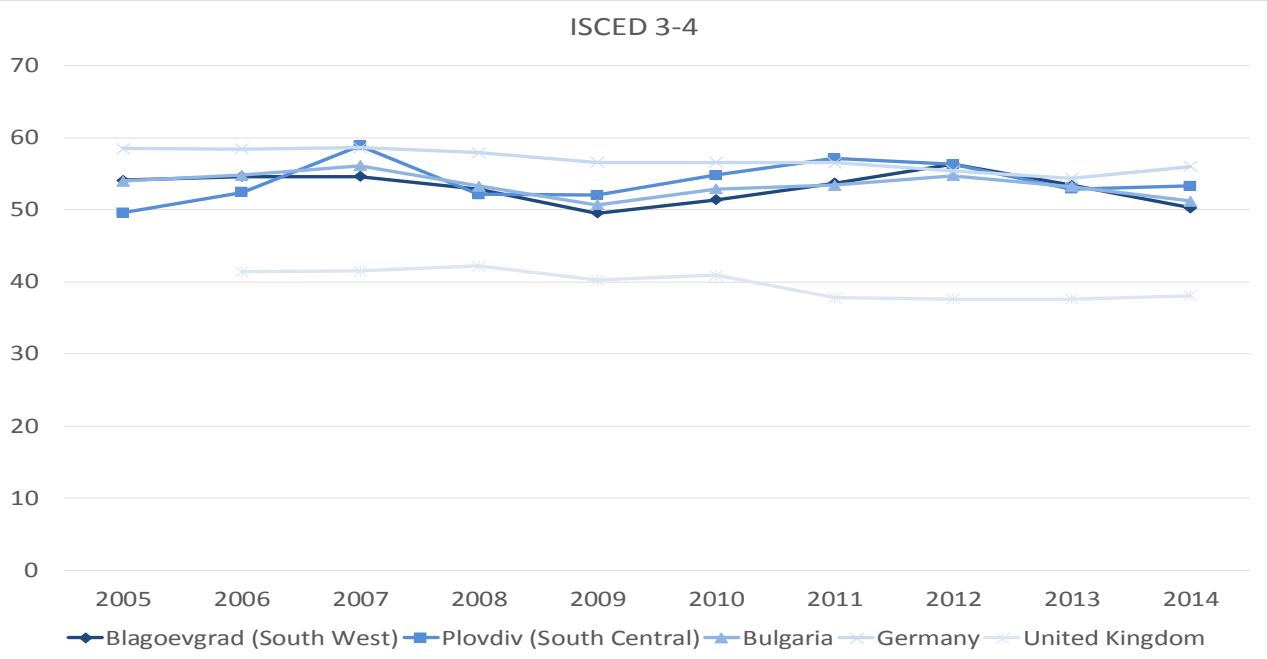
Figure 9. Young adults' education attainment by ISCED levels, 30-34 years over the correspondent age group



Source: LFS, EUROSTAT

When we look at young adults, Bulgaria has a very high tertiary education attainment. The rate of people aged 30-34 that have higher education in Bulgaria is comparable to that in Germany, but is lower than in the UK and the EU average (38.7%). This rate increased from 24.9% in 2005 to 30.9% in 2014. However, between 2005 and 2010, the proportion of people aged 30 to 34 with tertiary education in the South-West region is comparable to that of the UK. Between 2010 and 2012, this rate is decreasing, and then, in 2014, it is again approaching the value in the UK. The change is from 35.0% in 2005 to 43.0% in 2014. The rate of people aged between 30 and 34 with higher education in the South-Central Region is the lowest and between 2005 and 2011 fluctuates at levels below 20%. Growth has been observed over the last four years, with the rate in 2011 being 16.7% and rising to 23.2% in 2014. However, this highest share in the South-Central Region is lower than the lowest value for Bulgaria as a whole and for the South-West region.

Figure 10. Young adults' education attainment by ISCED level 3-4, 30-34 years over the correspondent age group



Source: EUROSTAT

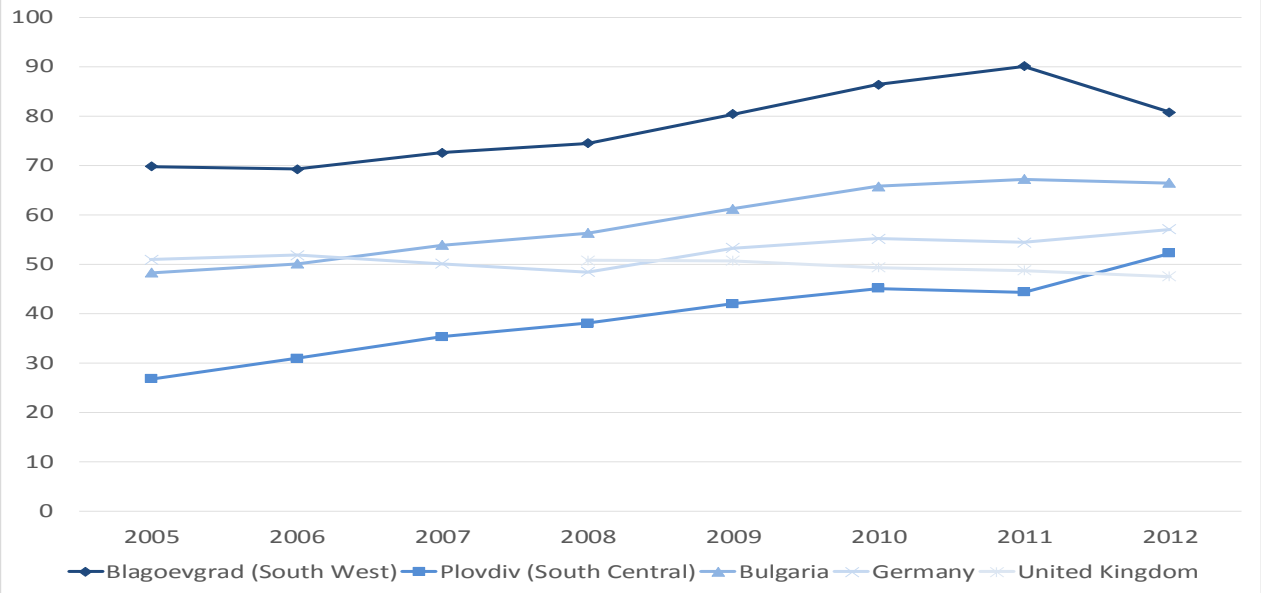
The proportion of people aged between 30 and 34 with upper secondary education (ISCED 3-4) is higher than in the UK, but comparable to Germany. The values in the two statistical regions are very close to each other and are close to the average for the country. Dynamics show cyclical ups and downs.

The percentage of people aged between 30 and 34 with lower than secondary education in Bulgaria is higher than in the UK and Germany. It was 22.4% in 2005 and is relatively stable over the whole

period, with 20.5% in 2014. However, the two statistical regions are completely opposite - the rates in the South-West region are the lowest, even lower than the rates of the UK and Germany, while the rates in the South-Central region are the highest.

In summary it can be said that there is a difference between the two regions on the one pole, with the largest rate of people aged between 30 and 34 with tertiary education, and the smallest rate of people of the same age with education below secondary is the South- West region. On the other pole, with the smallest share of 30-34 year-olds with higher education, and the largest share of people of the same age with lower secondary education, is the South- Central Region. In 2012 the share of four-year-olds attending pre-school childcare facilities is 79.5%, which is much lower than in Germany (95.8%) and Great Britain (98.0%).

Figure 11. Tertiary education access of the population aged 20-24 years over the correspondent age group



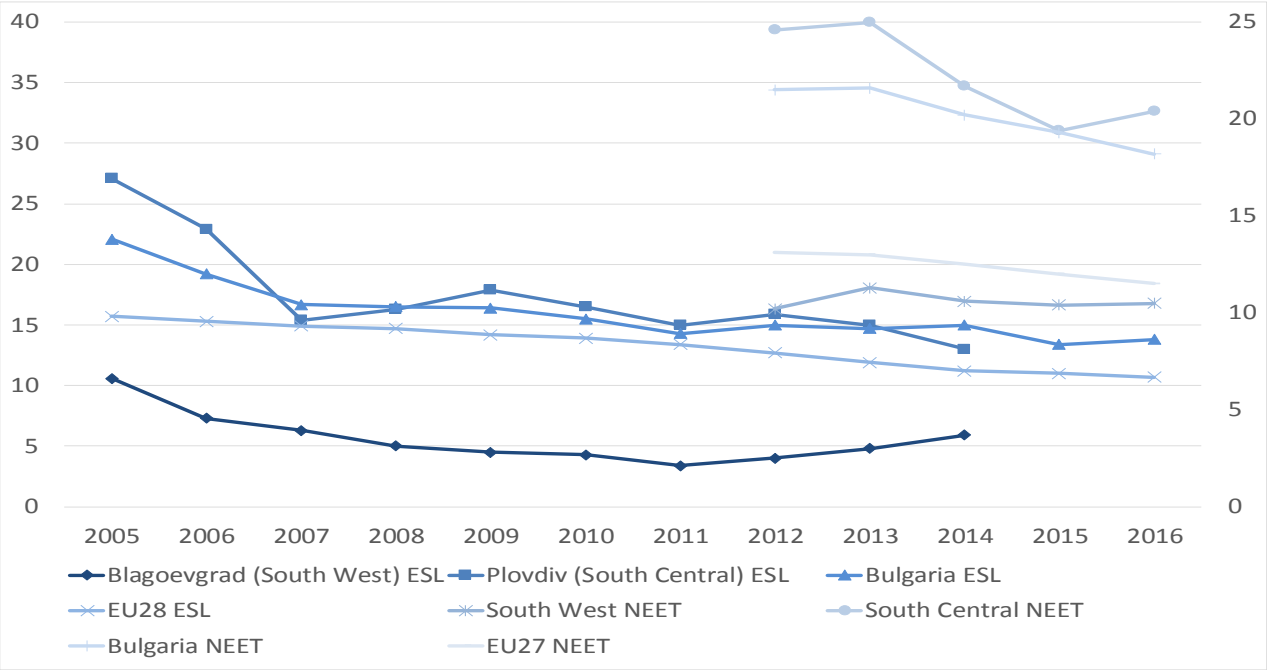
Source: EUROSTAT

The higher education system in Bulgaria comprises various forms of programs and curricula upon the completion of the secondary level. Bulgarian tertiary educational structure is step-by-step adapting to the challenges of the European Higher Education area and there is positive evidence for that, e.g. endorsing of National qualification network, developing Registers for the higher education institutions and their ranking, etc. In Bulgaria, the rate of students in the 20-24 age groups is slightly higher than in Germany and the UK. In 2005, fewer than half (48.3%) of those between the ages of 20 and 24 are students, whereas in 2014 two thirds (66.5%) of the 20-24 age group are students.

The dynamics in the South-West and South- Central regions is parallel to the overall dynamics for Bulgaria. In the South-West region, the rate of students increased from 69.8% in 2005 to 90.1% in 2013 and in 2014 to 80.8%. In the South-Central Region, the rate of students increased from 26.7% in 2005 to 52.2% in 2014. The difference between the two statistical regions is relatively constant for the period 2005-2013, fluctuating around 40 percentage points, while in 2014 it is reduced to 28.6 percentage points. In the South-Central Region we see an increase in the number of students growing every year, and this growth process is the result of the active policy of universities in the region aimed at attracting young adults and their retention in local universities. Reducing the share of students in the South-West region is due to several reasons that operate in a complex way: 1) Targeting a large percentage of young people in universities outside the country - mainly in Germany, Austria, Netherlands, United Kingdom; These universities are perceived as more prestigious and preferred, and this reduces the percentage of university students in the region. 2) Migration of young people out of the country. 3) The understanding that after completing secondary education, it is good to gain labor experience and resources; So, the education career in a higher education institution is postponed for several years in time.

In Bulgaria the rate of early school leavers in 2016 is 13.8%. The share of early school leavers is changing in parallel with the EU28 and is always higher than it. In Bulgaria, the change is from 22.1% in 2005 to 13.8% in 2016. The rate of early school leavers in the South-West region is much lower than that in the South- Central region, which is comparable to that of Bulgaria as a whole.

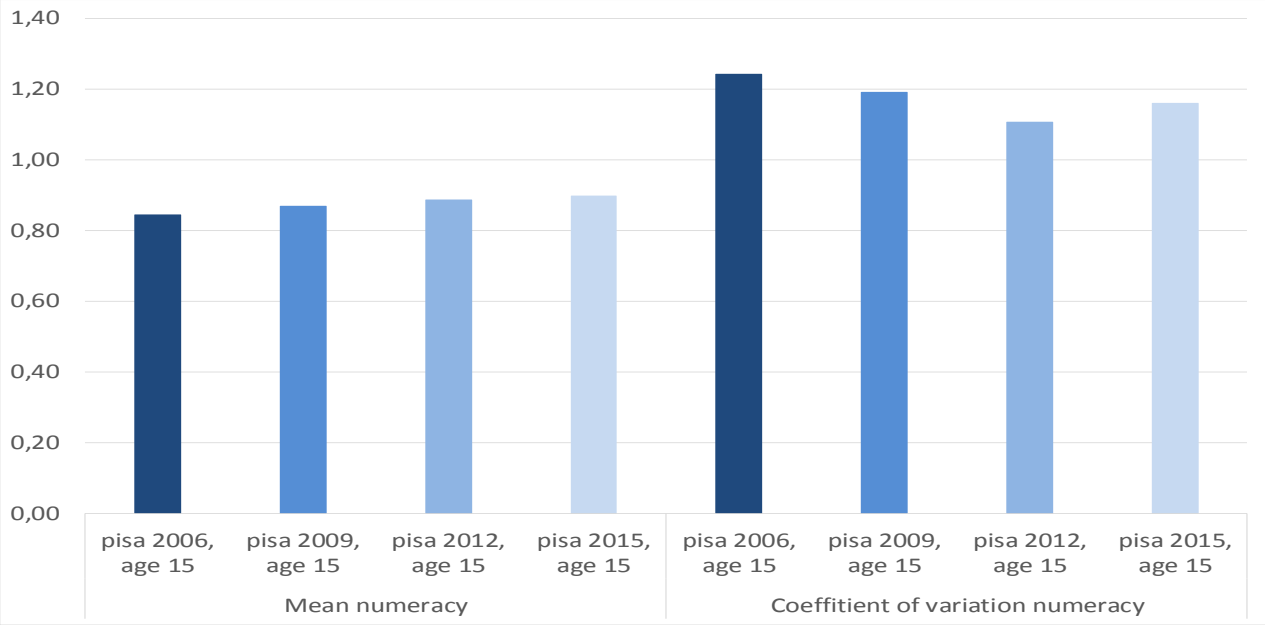
Figure 12. Early School Leavers 18-24 years, ESL (left axis) and population neither in Employment nor in Education 15-24 years, NEET (right axis)



Source: EUROSTAT

The rate of the people between 15 and 24 who neither study nor work is decreased from 21.5% in 2012 to 18.2% in 2016. This change is parallel to the change in the EU27, but the percentage for Bulgaria is higher than in the EU27. However, the rates in the South-West region are close to the EU27 rates, while the rates in the South -Central region are close to the rates of Bulgaria as a whole.

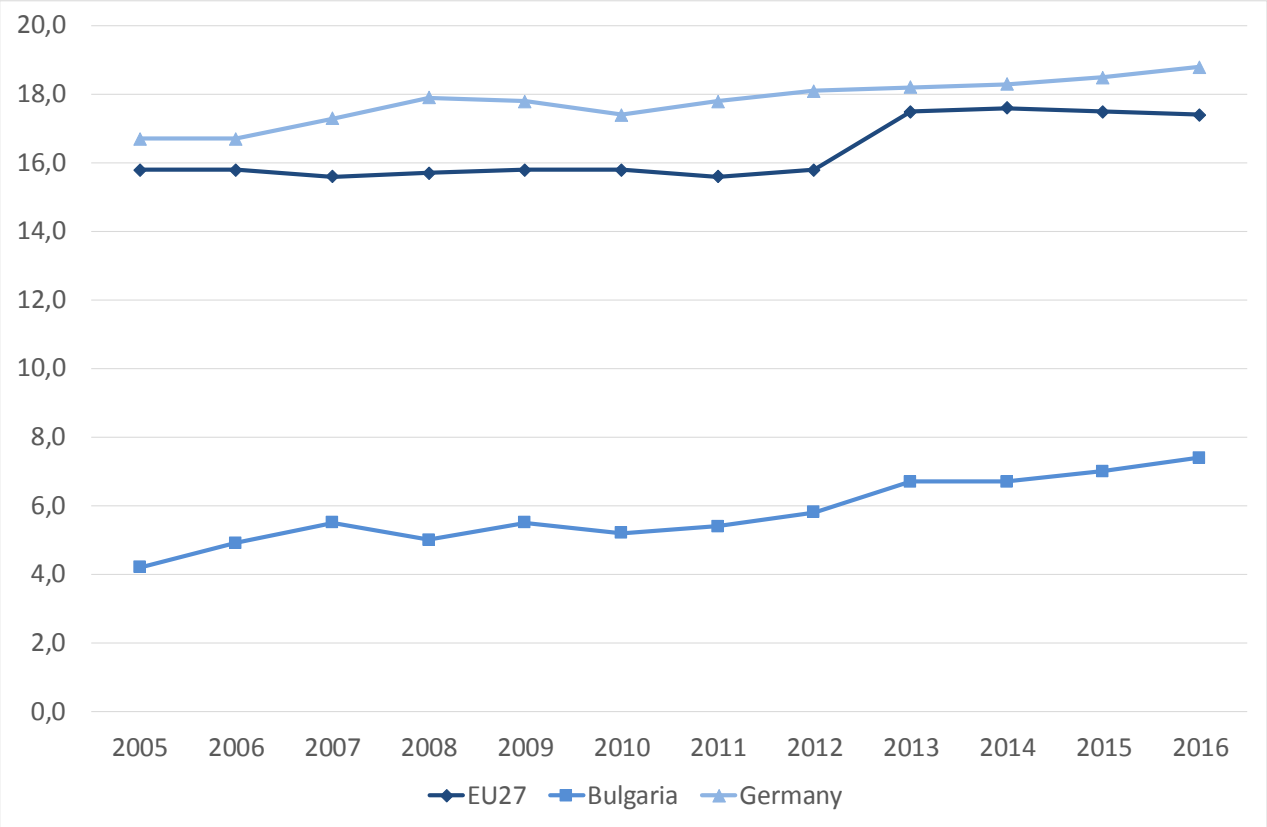
Figure 13. PISA and PIAAC competences, European average=1



Source: PISA

According to PISA's results, the average of 15-year-old Bulgarian students is lower than the average for Europe, and over the years they are approaching but at a very slow pace. In 2006 the results of Bulgarian students are 84% of the average for Europe, while in 2015 they are 90% of the average for Europe. At the same time, the results of Bulgarian 15-year-old students are more inhomogeneous than the average for Europe. In 2006 the coefficient of variation for Bulgaria was 1.24 times higher than the average for Europe. By 2012, Bulgaria is moving closer to the average for Europe, but in 2014 Bulgaria is again moving away from the European average – The coefficient of variation for Bulgaria is 1.16 times higher than the average for Europe.

Figure 14. Participation rate in education and training – 24-34 age group (last 4 weeks)



Source: EUROSTAT

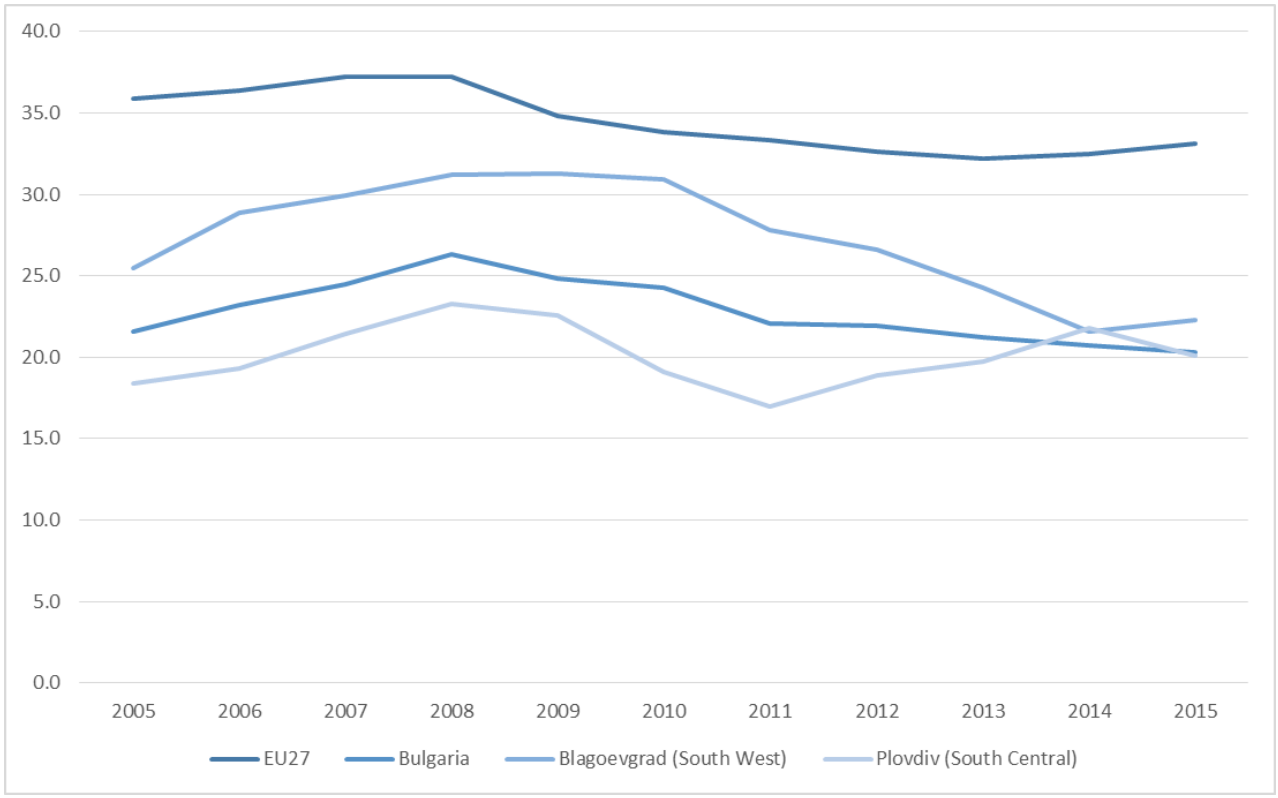
Regarding adult participation in education and training, in Bulgaria people who have participated in adult education in the last four weeks before being interviewed are 7,4%. This rate of young adults in age group between 24 - 34 years is much lower than the EU27 average. This share increases from 4.2% in 2005 to 7.4% in 2016 for Bulgaria. The low participation is due to several reasons: 1) the enterprises and organizations do not invest funds for training their employees and workers. 2) The people's incomes are low and they cannot afford to target training. 3) Insufficiently active policy of organizations in the formal and non-formal education system towards adults.

Labour market

Youth employment rates in Bulgaria are well below the EU-27 value, as shown on Figure 15 with South-West region being above country-average of 20.3% in 2015. However, these values are just slightly higher than youth employment in Spain and Croatia, while being close to the youth employment rate in Portugal. The employment of male youths in 2015 is higher for both regions (25.3% compared to 19.3% for females in South-West and 23.6 compared to 16.1% in South-Central) as well as for Bulgaria in general (24% compared to 16.5% for females).

Long term unemployment rates, shown on Figure 16, indicate the effects of the economic crisis from 2008 on the youth employment. They also demonstrate one interesting characteristic of the studied regions – South-West (in particular Sofia) responded much faster to the crisis, while South-Central region was the first one to reach the peak in unemployment and move to recovery.

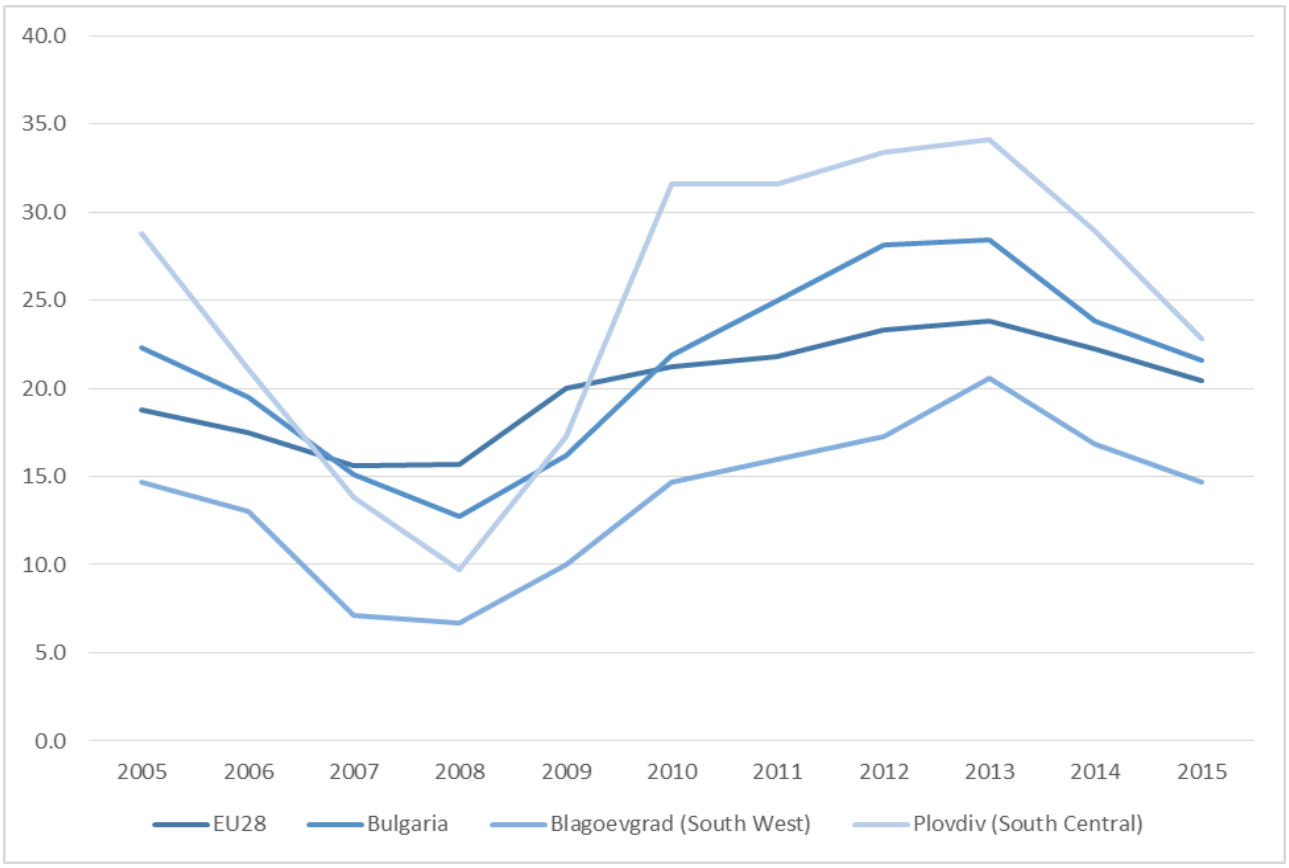
Figure 15. Youth employment rate (age 15-24)



Source: EUROSTAT

The gender structure of the unemployment has also been subject to a change with both rates for males and females going down after the initial surge due to the crisis in 2008. By the end of 2015 the percentage of unemployed males aged 15-24 is 21.2% and is almost identical the share of unemployed females in the same age group - 22.3%. Both regions that we have on focus follow the same pattern, but with important differences in the absolute number of unemployment rates – for example by the end of 2015, the share of unemployed young males in South-West is 14.9% compared to 23.2% in South-Central region.

Figure 16. Long term youth employment rate (age 15-29)



Source: EUROSTAT

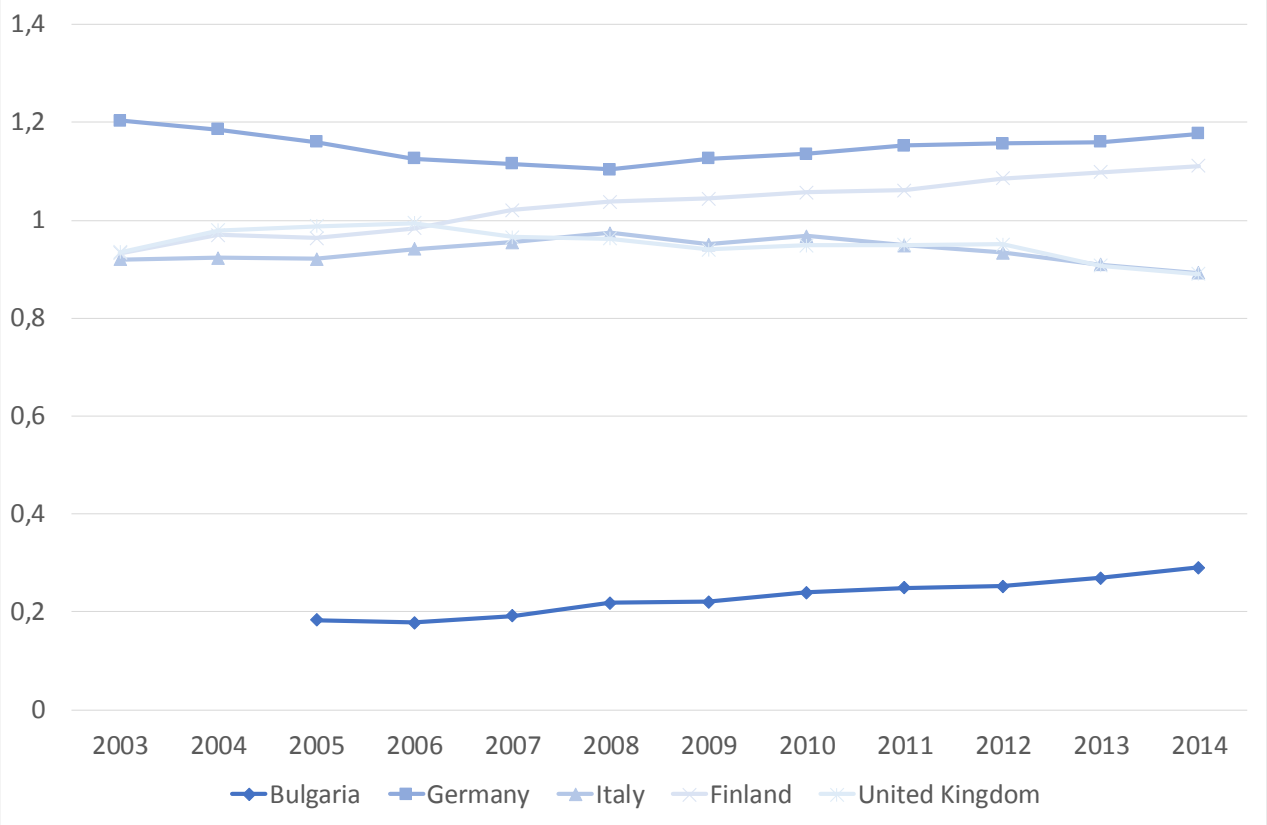
These facts once again confirm that there is a significant difference across the studied regions and it affects not only their prospects for economic development but is also an important force driving internal migration. It is still necessary to stress that with an overall youth unemployment ratio of 5.6% (closer to Austria with 6% and UK with 8.6%, rather than to Span with 16.8% or Croatia with 14%) Bulgaria is offering quite good employment opportunities for young people.

Looking at the qualification structure of Bulgarian workforce in the labor market it is important to note that by the end of 2015 the share of highly skilled white-collar employees is much lower than the EU-27 average (19% compared to 27%), while the share of low skilled blue-collar employees is higher (28% compared to 21%). Taking into account that we have almost identical percentages of low qualified white collar and high qualified blue-collar employees as the EU-27 average, this indicates that Bulgarian labor market is in general less qualified.

Redistribution and social inclusion

In Bulgaria, net social protection expenditure increases from 13.4% of GDP in 2007 to 18.5% of GDP in 2014. In Bulgaria, the cost of social protection per capita in PPP in 2014 is EUR 2544, which is 29.0% of the EU average19 and is 32.2% of the EU average28. This rate increases from 2005 to 2014, but remains much lower than the other EU countries.

Figure 17. Expenditure in social protection in PPS per inhabitant as % of EU19



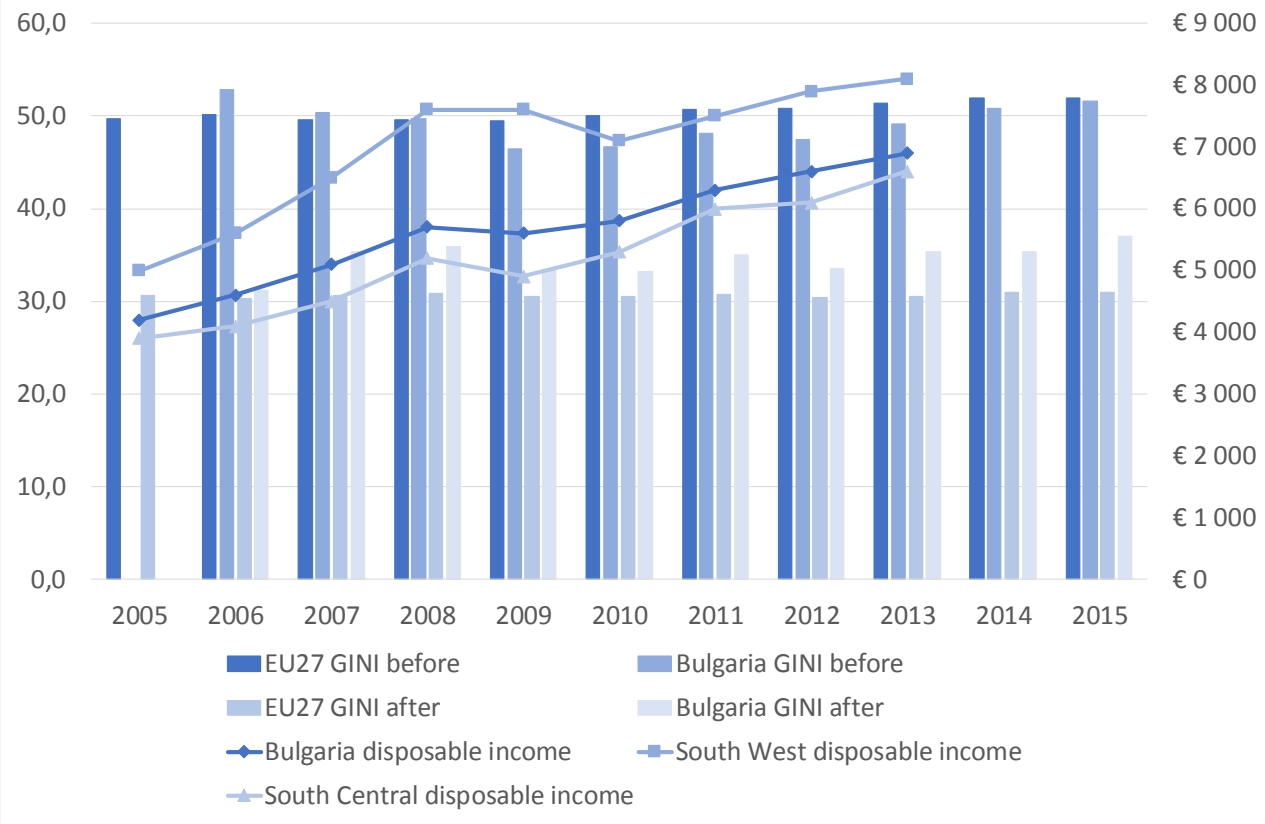
Source: ESSPROS, EUROSTAT

The disposable household income in Bulgaria in 2013 is much lower than in other EU countries - 34.0% of Germany and 41.1% of UK. The disposable household income rises from 4200 Euro in 2005 to 6900 Euro in 2013. The disposable household income in the South-West region in 2013 is 1200 Euro higher than the average for Bulgaria, while the disposable household income in the South - Central Region is 300 Euros lower than the average for the country.

In 2015, the Gini coefficient for the equivalent disposable income before social transfers for Bulgaria is very similar to that for the EU27 - 51.9% for the EU27 and 51.6% respectively for Bulgaria, which shows a relative equal degree of inequality. However, after social transfers, Gini coefficient for Bulgaria is higher than for the EU27 - 31.0% for the EU27 and 37.0% respectively for Bulgaria in 2015.

This means that social transfers reduce inequality, but this decrease is less pronounced in Bulgaria than in the EU27. Gini coefficients for both Bulgaria and the EU27 are relatively stable over the period 2006-2016.

Figure 18. GINI index before and after taxes (left axis) and disposable income (right axis)



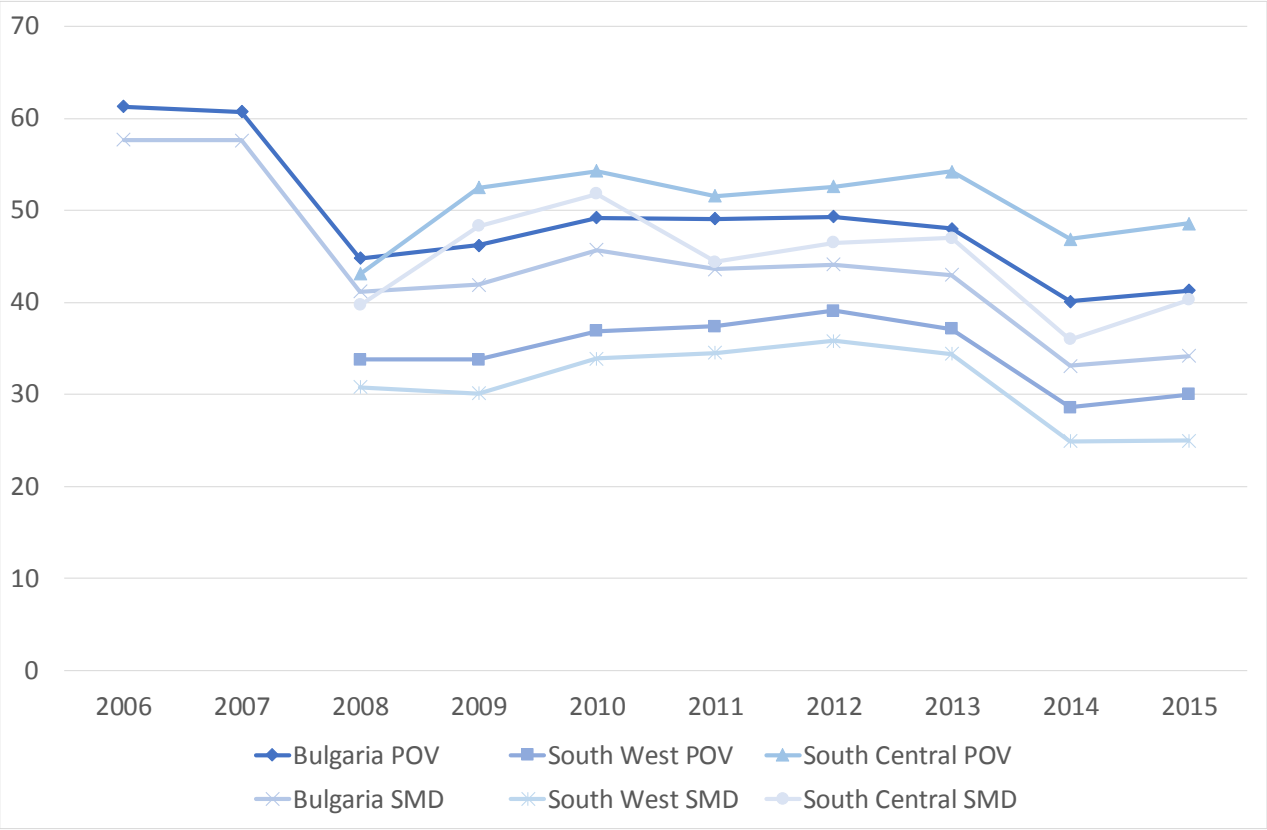
Source: EUROSTAT

The rate of people at risk of poverty and social exclusion in Bulgaria is decreasing in the period 2006-2015 and is relatively stable between 2008 and 2015 between 40% and 50%.

The percentage of people at risk of poverty and social exclusion in the South-West region is lower than in the South-Central Region and Bulgaria as a whole. The change in the two statistical regions is parallel and parallel to the change in Bulgaria as a whole. In the period 2009-2015, the difference between the two statistical regions is relatively stable and fluctuates around 17 percentage points.

Similar conclusions can be drawn for the rate of people living with severe material deprivation. The rate of these people in Bulgaria is decreasing and three periods can be highlighted – in the period 2006-2007 the rates fluctuated around 58%, in the period 2008-2013 the rates fluctuated around 43% and in the period 2014-2015 the rates fluctuated around 34%. Again, the rate of people living in severe material deprivation in the South-West region is lower than in the South- Central Region and Bulgaria as a whole.

Figure 19. Population at risk of poverty or social exclusion, % (POV) and severe material deprivation population, % (SMD)



Source: EU-SILC, EUROSTAT

Health and well-being conditions

Health and well-being conditions are difficult to assess. There have been many data gaps and there is not enough information at the regional level and we refer to the general state of health and well-being in this section.

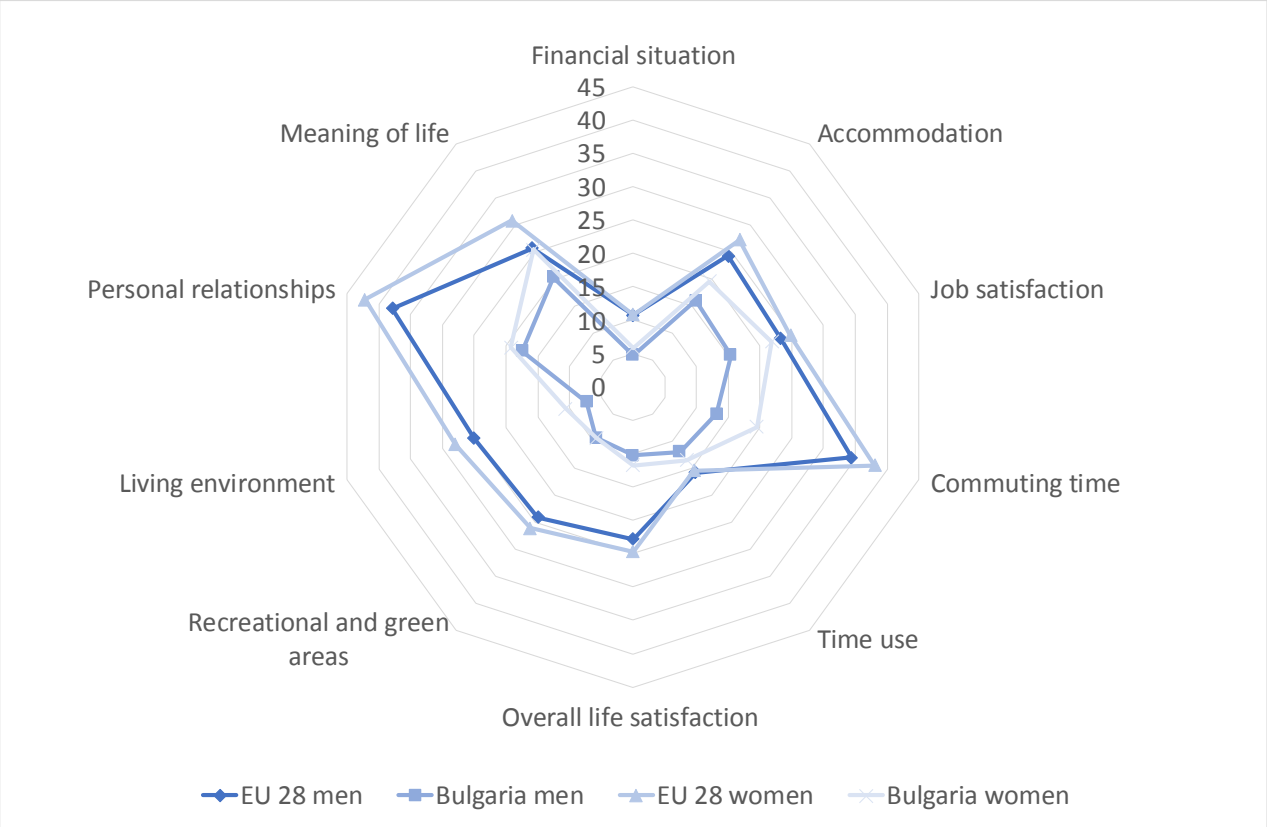
In 2014 the average life expectancy in good health in Bulgaria is 66 years for women and 62 years for men. These rates are higher than in Germany and are comparable to those in the UK. The rate of people who appreciate their health as good or very good in Bulgaria in 2015 is 65.6%, which is slightly lower than the EU27 average (67.0%). However, this rate rises rapidly from 2006 to 2010, and then begins to slow down.

Overall, both men and women in Bulgaria aged between 25 and 35 are more dissatisfied by the ten indicators for men and women in the EU28. The greatest discrepancy is in travel time indicators

(-21.2% for men and -18.6% for women), "personal ties" (-20.5% for men and -23.0% for women), "Living environment" (-17.7% for men and -17.4% for women) and "leisure and green areas" (-14.8% for men and -16.8% for women).

Total satisfaction for the 18-30 age group in Bulgaria (-1,161) is much lower than the EU28 average (-0,014), while men (-1,211) are less satisfied than women (-1,109). At the same time, the results for Bulgaria are more inhomogeneous than the results for the EU28.

Figure 20. High satisfaction in various life domains, population aged 25-34, EU28 and Bulgaria, 2013



Source: EU-SILC, EUROSTAT

In 2015 the number of beds in hospitals in Bulgaria is 713 per 1000 people, while in the South-West region it is 688 and in the South-Central region is 763. Overall, the trend in Bulgaria is to increase the number of beds in hospitals per 1000 people. An upward trend is also observed in the South-Central region, while in the South-West region there are cyclical periods of increase and downward periods.

In 2015 the number of nurses and midwives per 1000 people in Bulgaria is 485, in the South-West region is 500 and in the South- Central region is 453. Overall, the trend in Bulgaria is on the increase, again such an increase is observed in the South -Central region, while in the South-West region there is a cyclical alternation of periods of increase and periods of decrease.

The number of doctors per 1000 people in Bulgaria has increased from 364 in 2005 to 399 in 2014. Growth is also seen in the South- Central region - from 317 in 2005 to 374 in 2014. In the South-West region, however, from 2005 to 2010 there was a decrease from 419 to 391, and then an increase and in 2014 the figure reached 418, i.e., reaches the 2005 value.

Final remarks

To sum up this overview of the living conditions for youth in the two regions in Bulgaria, we should stress the following points:

At the national level and within the functional regions there is a process of economic stabilization, income growth, poverty reduction, increasing youth employment, growth in disposable household income, and an increase in the share of people with higher education. While this trend has a positive impact on the living situation of young adults in the country, still the country lags far behind the conditions for youth development in the other EU member states. The Bulgarian economy, productivity, employment and incomes remain low when compared to the average values on the European level. Bulgaria still needs to catch up in its economic development with the rest of Europe, as the absolute value of the GDP per capita is significantly lower than the EU 28 average values. It remains at about 47% of the EU average. The labor productivity in Bulgaria is constantly increasing, though it is still only 43.7% of the EU 28 average (as of 2015). The share of government spending on education in 2013 is 4.1% of the national GDP and is relatively stable for the period 2001-2013.In addition, the rates of participation of the Bulgarian population in the forms of lifelong learning are also low.

There are important differences between the two regions in Bulgaria. For example, in the South-Central region over 50% of the employees work for micro and small companies, while in South-West region over 50% of the employees work in medium and larger sized companies. Concerning the unemployment rates, the South-West region has somewhat more favorable conditions for youth transitions from education to employment. Thus the rate of unemployed young males in South-West is 14.9% compared to 23.2% in South-Central region. Regarding education, the South- West region is with the largest share of people aged between 30 and 34 with completed tertiary education, and the smallest share of people in the same age range with less than education. The South- Central Region is with the smallest share of 30-34 year-olds with higher education, and the largest share of people with lower secondary education. In addition, the percentage of people at risk of poverty and social exclusion in the South-West region is lower than in the South-Central Region and Bulgaria as a whole.

The analysis of the living conditions of young adults in Bulgaria reveals several risk factors that place young people in vulnerable situations. In education it is the young Roma who are particularly

disadvantaged who are at a risk of early school leaving because of poverty, cultural practices of early marriages and the existence of segregated schools (Milenkova and Hristova, 2017). While young people from other minorities and the majority population also face the risk of dropping out before the obligatory school leaving age, for the Roma this often means not only a lack of any qualifications, but also remaining illiterate – about one fifth of the Roma youth. (NSI, Census 2011). On the labor market underprivileged are the long-term unemployed and those working in the informal economy but most at risk are the NEETs - with those not in education, training and employment who are over 20% in the South-Central region. Young people with disabilities and from Roma ethnicity are overrepresented in this group. Those are risk of severe material deprivation in the total population vary between 25% in the South-West to 40% in the South-Central region. Again, in this group most affected are families with many children, single mothers and the Roma youth.

In conclusion, the data show that the living conditions for young adults including the state of education are better in the South-West region than in the South-Central region. However, we consider that the differences between Bulgaria and the more developed countries in the EU are more significant, and they need to be accounted for when trying to explain young people's decisions as these discrepancies are often the major reason for the still ongoing mass youth emigration out of the country.

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Work Package 4

Quantitative Analysis Young Adults' Data

Croatia - National Briefing Paper with national and regional data sets

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Executive Summary

This National Briefing Paper provides a short overview of the living conditions of young people in Croatia. Special attention is given to the living conditions of young people in two Croatian functional regions (Istria County and Osijek-Baranja County).

Based on the obtained data, it is possible to conclude that young people in Croatia live in conditions that are less favourable in comparison with the EU28 average. This conclusion concerns youth in both functional regions, even though the Istria County is more developed than the Osijek-Baranja County.

The main demographic characteristic is a decline of the rate of natural population (including increasing the average age of the population and low fertility rate). Croatian economic conditions are significantly under the EU28 average (the Croatian GDP is significantly lower than the EU28 average, and the Croatian labour productivity is significantly under the EU28 and Euro area countries average). Comparing Croatia with other EU countries, the share of youth living with their parents is very high. The main strengths of the Croatian education system are a very low early school leaving rate and the high proportion of secondary vocational school graduates entering higher education. The main weaknesses are low results in international studies of numeracy, literacy and reading skills of youth, as well as extremely low participation in early childhood education and care and in adult education. The economic activity rate of youth (age 15-24) has decreased in the last ten years. Croatia is one of the three EU28 countries with the highest youth unemployment. The key issues faced by young people when entering the labour market in Croatia are the lack of previous work experience and mismatch between their qualifications and the skill demand. Moreover, economic active youth in the labour market shows a great gender gap. Characteristics of the Croatian social welfare system show that the social protection expenditures in the national GDP is behind the expenditures in the GDP of EU 28 average, while the material deprivation rate is multiple times higher. However, the living conditions for young people in Croatia and the Gini index have a tendency to be similar to the European average. The best aspect of healthcare in Croatia is the broadness that encompasses the population with free healthcare including persons in the regular system of education and persons with low income. However, Croatian people are less satisfied than the average European citizens in the field of satisfaction with financial situation, overall life, recreational and green areas and living environment. Moreover, the availability of health services is not uniform in all regions of Croatia and it is significantly weaker in relation to other EU countries.

All analysed data show that the living conditions of young people are better in Istria than in the functional region Osijek-Baranja.

Introduction

This national briefing paper provides a short overview of the living conditions of young people in Croatia and, more specifically, in the NUTS 2 regions - Continental Croatia and Adriatic Croatia. Data has been collected at national (NUTS 0) and regional (NUTS 2) level according to six dimensions of contextual living conditions agreed upon in the WP4 guidelines.

Eurostat online databases at aggregated national and regional level are used as main sources. This main corpus of data is complemented by data collected at the local level, coming from different sources and made available by Croatian Bureau of Statistics, by official websites of various Croatian Institutions (for example: Ministry of science and education, Croatian Institute of Public Health, Ministry of Health of the Republic of Croatia), *regional* developmental strategies as well as scientific papers. Contextual living conditions of young people in Croatia are analysed by looking at the:

- demographic characteristics of the population and its subgroups;
- structure of the economy;
- inputs and outputs of the education system;
- labour market situation;
- material living conditions of young people;
- participation of young people in the political and civic life;
- health conditions and individual well-being.

1. **Quality data assessment**

As it is mentioned above, data have been collected at national (NUTS 0) and regional (NUTS 2) level. Whenever possible, the results representing the living conditions of young people in the selected functional regions (Istria County and Osijek-Baranja County) are given.

Eurostat provides a vast amount of data that can be used to comparatively assess living conditions of young people in different domains and in various countries/regions. However, data availability at the regional/local level is limited at NUTS 2 level and extremely limited at NUTS3 level.

This restrains the comparability among regions to a limited range of indicators. Moreover, harmonized data are hard to complement with local data, often suffering from a fragmented landscape

of sources, as they are collected for more or less specific purposes and usually not with the objective of interaction with other data sources.

As for the available data published by Eurostat, data cover several fields and are complemented with metadata and information about time series. However, accessibility of data may be a problematic issue, as databases on Eurostat are not completely combined and flexible so that the collection is at times difficult: as an example, the same information on two different age groups may be available only looking at two different databases in different sections of the website (the NEET rate for 15-24 is available among labour market statistics while the NEET rate 15-29 is available among youth statistics). Of course, the complexity and variety of the data published make such comprehensive integration difficult to achieve.

Due to the fact that Croatia became member of the European Union in the year 2013, the Croatian national data at Eurostat are available from the year 2007 or later. That is why the comparative national and European data, in general, cover the period from 2007 to 2015.

2. Demographic structure

The Republic of Croatia covers 56,539 sq km of continental surface (including Adriatic Islands) and 31,421 sq km of the Adriatic Sea along the coast. According to the Population Census taken in 2011, the population size is 4,284,889 inhabitants (Population, Household and Apartment Census, 2011). It can be said that Croatia is a Central European, a Pannonian, a Danube-basin, a Peralpine and a Mediterranean country. The border countries are Slovenia, Hungary, Bosnia and Hercegovina, Serbia and Montenegro, and Italy (sea border). Due to its geographic and traffic position, cultural and economic influences arising from wider surroundings, natural and geographic features, Croatia appears exceptionally heterogeneous. The Continental Pannonian and Peri-Pannonian area covers 53.7% of the whole state territory, while the coastal area covers 31.4%. The remaining 14.9% of the state territory comprises a narrow mountain area of Lika and Gorski Kotar.

According to the National classification of territorial units, as of 1 January 2013 the Republic of Croatia has been divided into two statistical regions – Continental Croatia and Adriatic Croatia[1] (**Figure 1**). This classification has been set up according to EUROSTAT criteria.

Even though it is only a statistical division, that is without elements of management character or a division of non-administrative type, the recent division of the Republic of Croatia into two

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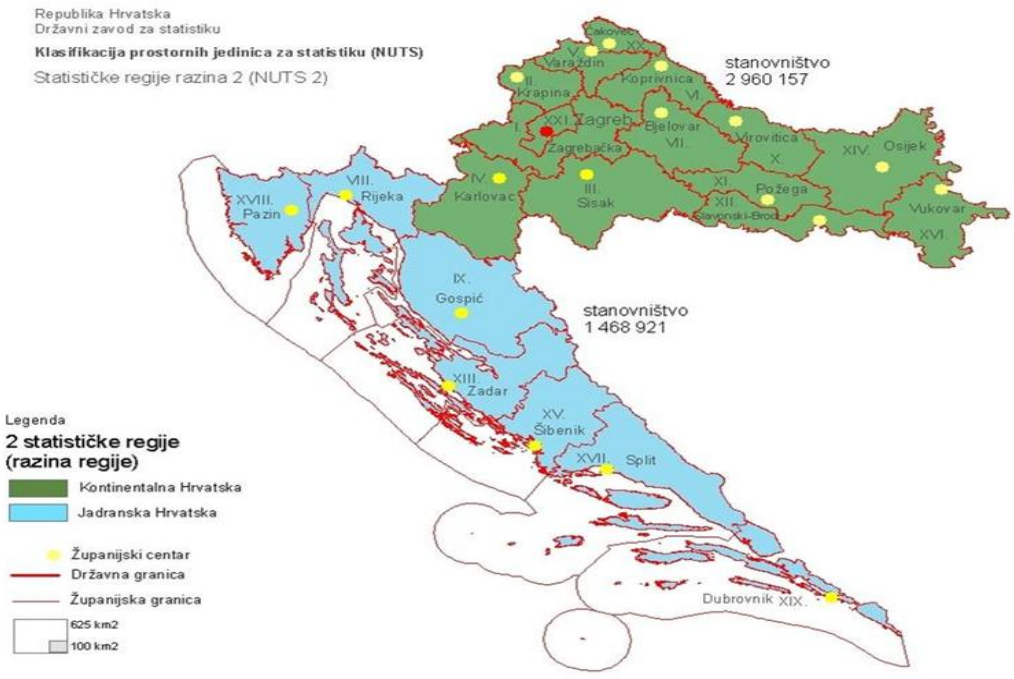
statistical regions – Continental and Adriatic Croatia, has opened up a series of questions in a sense of financial and administrative efficiency of local and regional self-government (Bošnjak & Tolušić, 2012).

Figure 1: Statistical regions Level 2 (NUTS II), 2013 (green = Continental Croatia, blue = Adriatic Croatia)

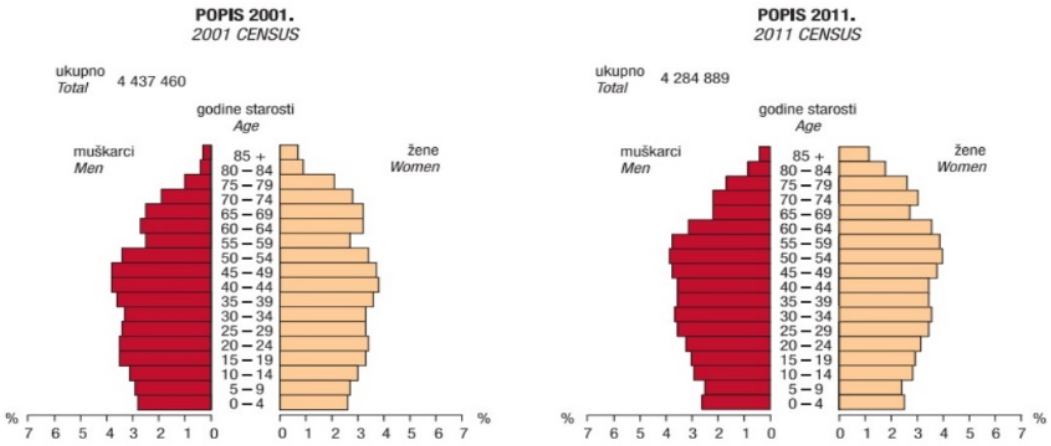


Source: Croatian Bureau of Statistics

Namely, Continental Croatia includes 13 counties and the City of Zagreb as the largest economic centre which comprises almost a fourth of the population of Croatia. The region has almost 3 million inhabitants. On the other hand, Adriatic Croatia includes 7 counties with 1,469,000 inhabitants. The area of Continental Croatia is 31,846 square kilometres, whereas that of Adriatic Croatia is 24,696 square kilometres (Croatian Bureau of Statistics, 2016). The functional region of Istria County is part of Adriatic Croatia. The area of Istria County is 2,813 square kilometres, and the number of inhabitants in 2015 was 208,055 (Statistical Yearbook of the Republic of Croatia, 2016). The other observed functional region – the Osijek-Baranja County is part of Continental Croatia, with an area of 4,155 square kilometres and 305,032 inhabitants (Statistical Yearbook of the Republic of Croatia, 2016).

The number of inhabitants in Croatia shows a steady decline. Due to the process of depopulation and population ageing, Croatia has been facing numerous demographic challenges for a number of years. According to the 2011 census the Republic of Croatia had 4,284,889 inhabitants, which represents a decline of 3.4% compared to the previous census in 2001. In Adriatic Croatia this decline was somewhat lower than in Continental Croatia, Namely, the population of Adriatic Croatia decreased by 1.06%, whereas in Continental Croatia the decrease was as high as 4.57%. In the years after the last census, the population has continued to decline. According to data from mid-2014, the total population was by 0.4% lower than in 2013. If comparing the two selected functional regions, it has to be noted that an increase in the population was observed in Istria County, whereas Osijek-Baranja County was the one with the highest population decline in 2014 (Regional Development Strategy of the Republic of Croatia for the period until 2020, 2016). In the period from 2001 to 2011 in Istria County there was a mild increase in the total population (by 1,711 inhabitants, or by 0.83%). This population increase is not the consequence of natural growth, which has shown a negative trend, but is primarily the result of a positive external migration balance, which has shown a rising trend in the last few years.

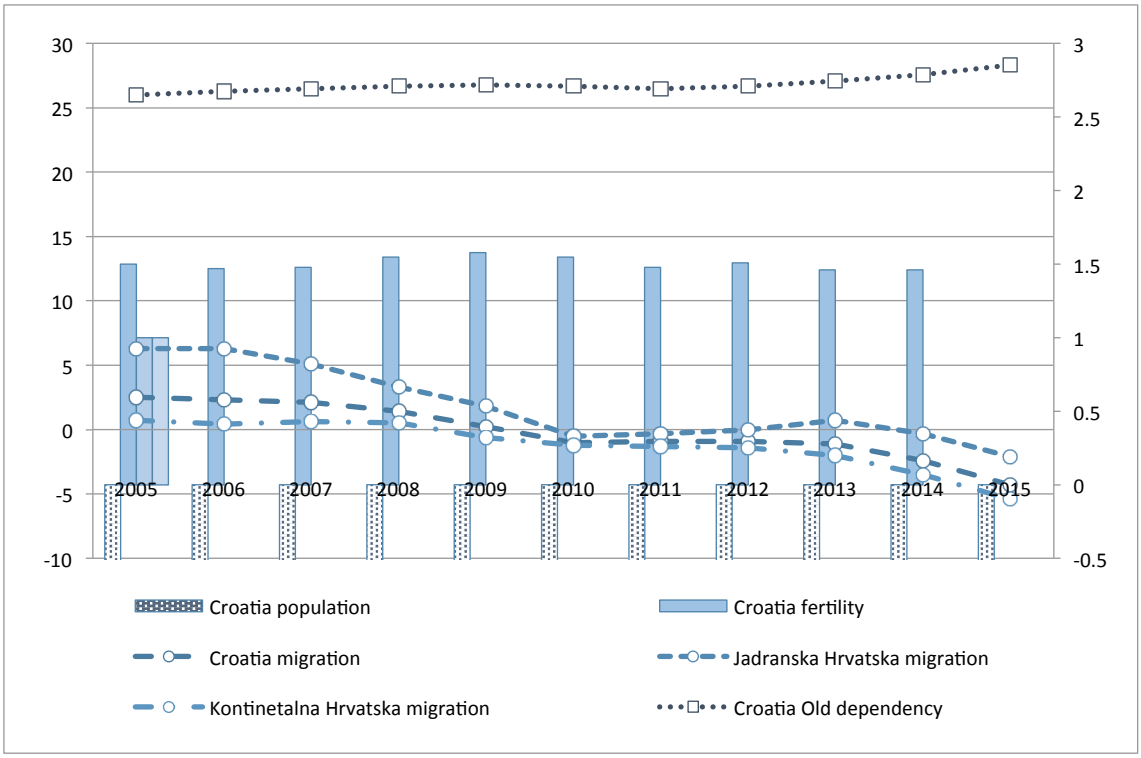
Figure 2: Comparison of population regarding age according to the census in 2001 and in 2011



Source: Croatian Bureau of Statistics

The balance of external migration, i. e. between the number of persons who emigrated from and those who immigrated to Istria County, shows a positive growth trend, with a significant increase in 2014. Parallel with an increase in the balance of external migrations, a negative natural growth could be observed, with a tendency of mild increase of growth. In 2011, natural growth was according to available data -392, and in 2013 it was -362, which was to some extent compensated by the positive external migration trends. The demographic structure of the population in Istria regarding age shows signs of demographic erosion, which has a negative influence on the work potential of the population. Persons of mature age (50-59 years of age) make the most numerous population group of Istria, whereas the average age is 43. The ageing index of Istria County is 136.8 and is higher than the national average (which is 115.0). This means that the population of Istria belongs to the type of population in the stage of deep demographic old age (Strategy of Development of Human Potentials of Istria County 2016 – 2020).

Figure 3: Migration, old dependency and fertility rates (right ax), population change (right ax), Croatia,



Continental Croatia, Adriatic Croatia, 2005-2015

Source: EUROSTAT

The rate of natural population decline and the problem of demographic ageing in the Republic of Croatia is worrying (e.g. in 2014 it was -2.7 ‰, and in 2015 -4.0‰). Croatian population is among the fifteen oldest world populations, with the share of older persons in the population constantly rising. In 2005, 16,700 more people died than there were born (37,500 born, 54,200 died, according to Eurostat). The average age of the population is constantly increasing. In 1961 it was 32.5 years; in 1971 it was 34.1; in the year 1981 it was 35.4 and in 1991 it was 37.5, in 2001 it was 39.3 and in 2011 it reached 41.7 years. The ageing index (calculated as the number of persons older than 60 per hundred persons aged 0-19) was 115.0 in 2011 and is a quarter higher than in the previous census (2001 – 90.7), the ageing index calculated from the number of persons aged 65 years and older in relation to the group 0-14 years is 116.3, whereas in 2001 it was 91.9. Thus, in Croatia the number of older persons is significantly higher than the number of younger persons. Population ageing is also visible in the old-age dependency rate (ratio between population aged 65 and over to population 15 – 64), that rose from 26% in 2005 to 28.3 in 20015. A comparison of child base (0 – 4) and persons 75 and older is very significant for understanding the states and processes in the composition according to age. In 2001 those age groups were almost equal in their number, and in 2011 there were 62% more older people than children. Based on trends and projections a significant decline in the population of Croatia can be expected in the decades to follow. According to a projection conducted by means of the cohort - component method for closed population (not including migration), in 2031 Croatia will have 3,680,750 inhabitants. Thus, in thirty years' time (2001 is the initial year of the projection) the number of inhabitants will have diminished by 756,710 or 17.1%. In other words, due to biological (natural) depopulation, i.e, a higher mortality than birth (the migration has not been included), on average the Republic of Croatia will have lost 25,220 inhabitants per year (according to: Nejašmić and Toskić, 2013).

The fertility rate in Croatia is low and does not show significant changes (from 2005 to 2015 it is 1.5). Infant mortality in the first year after birth is 4.1 deaths per thousand in 2015. In Croatia life expectancy in 2014 was 77.9 years, with the expected life duration in Adriatic Croatia being 79.3 years, which is higher than the national average, and in Continental Croatia it is 77.2 years. Moreover, life expectancy is significantly lower for men (74.7 years) than for women (81 years), (data for 2014).

In 2013, among young people, 79.1 % of those aged 20 – 29 lived with their parents. This percentage has shown a certain stability, fluctuating between 74.4 to 79.9 % in the period from 2010 to 2013. Comparing Croatia with other EU countries, the share of youth living with their parents is very high. However, the average values do not reveal existing strong gender differences. The percentage of

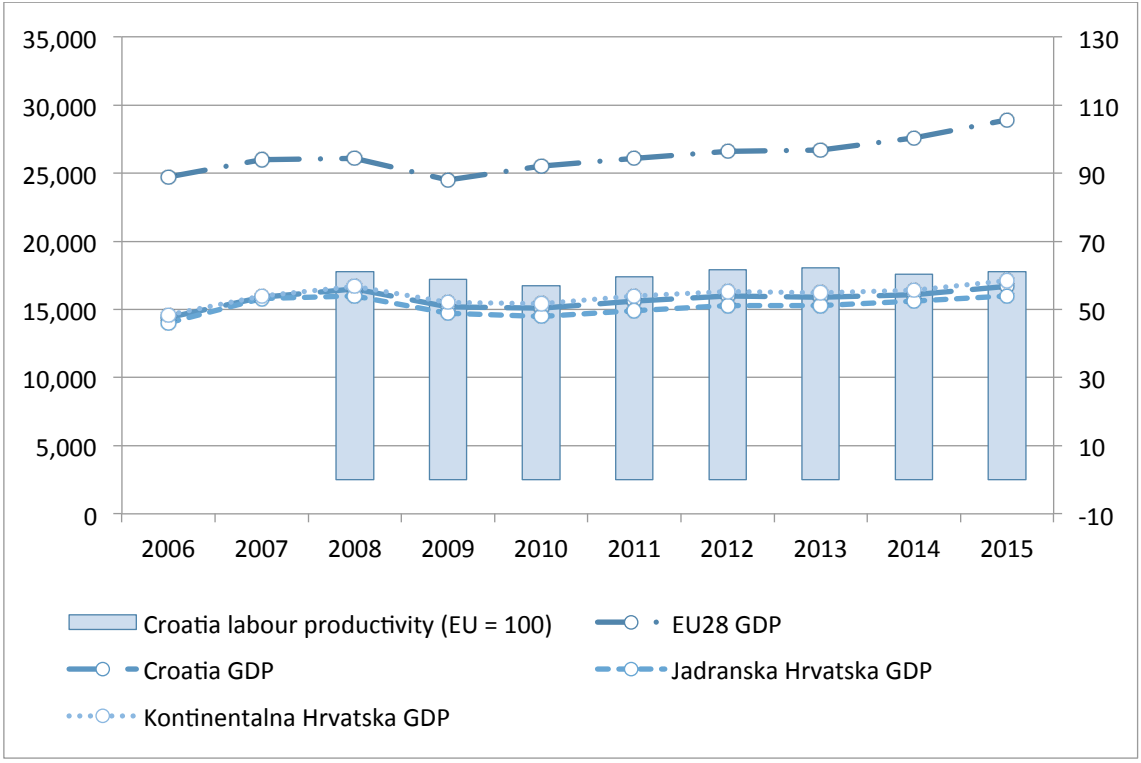
young males living with parents is 86.1 against 72.1 for females. The reasons for young people living with their parents are various: the impossibility of securing accommodation, unemployment or job insecurity, cultural family patterns, etc.

There is no doubt that Croatia faced with unfavourable demographic trends: namely, between 1953 and 2011 the share of youth (aged between 15 and 29) in the total population decreased from 27.7% to 20.6%. This is one of the reason for which youth are becoming an increasingly important social resource (Ilišin et al., 2013).

3. General state of the economy

GDP measures (**Figure 4**) for Croatia in general, as well as for two NUTS 2 regions, show that economic conditions are significantly under the EU28 average.

Figure 4: GDP in euro per inhabitants PPS and labour productivity (right ax, EU=100), Croatia, Continental Croatia, Adriatic Croatia, 2006-2015



Source: EUROSTAT

After a positive growth of GDP in the years 2006 – 2008 (from 14,400 to 16,500), the economic crisis that started in 2008, has caused a drop and stagnation of low GDP in the next 6 years (from 2009 -2014). In 2015, the GDP increased to the state from 2008 (GDP 2015 = 16,700). However, even with a visible economic growth in 2015, the Croatian GDP is still 42% lower than the EU28 average.

Data for Adriatic and Continental Croatia indicate the same trend change of the GDP during the observed period, where the GDP for Continental Croatia is continuously greater than the Croatian average and of the average for Adriatic Croatia. Still, this data should be interpreted with caution. The national classification of area units from 2012, divided Croatia into two statistical regions (Continental and Adriatic Croatia)[2]. Continental Croatia includes 13 counties and the City of Zagreb as the economically strongest center with 3 million inhabitants. In that way, the BDP for Continental Croatia is almost artificially doubled (Bošnjak and Tolušić, 2012). Data presented in this way are contradictory to the findings in functional regions, and therefore the Osijek-Baranja County although part of Continental Croatia, had, in 2014, a GDP per resident 8,045 EUR. On the other hand, Istria County as part of Adriatic Croatia is one of the most developed Croatian counties and with its GDP significantly deviates from the data (GDP per resident in 2014 was 12,724 EUR).

Data about labour productivity shows that Croatia is significantly under (around 40-50%) the EU28 and Euro area countries average.

Croatia has had 146,766 active business economies in 2014 according to Eurostat, and in the same year EU28 average was 26,307,386. But, it is significant that estimated percentage of active businesses with no employees in Croatia is 15, while EU average is 57%. In 2014, around 99,500 (69%) of active business economies in Croatia had from 1-4 employees, and a small percentage of them had 5-9 employees (9%) or 10 and more employees (8%). The Eurostat data about active business economies for Croatia is available since year 2012, and in those years' number of total active business economies has increased from 147,798 in 2012 to 146,766 in 2015.

Nine members of the EU28, among which is Croatia, allocate less than 1% of their BDP for research and development. In 2014, Croatia spent 0.79% of the BDP for R&D. An amount of investment in R&D has decreased in 2014 than in 2004 for 1.5% of 2004 amount. In 2015, the amount invested in R&D increased for 8,7% of an amount in 2014. However, that is still less than 1% of the BDP in Croatia (0.85% BDP). To compare those numbers with EU28 average, the situation is following: in year 2015 total investment in R&D in Croatia expressed in Euro per inhabitant was 88.7, and EU28 average was

2 Official Gazette NN 96/2012

587.7. There are only 3 countries in EU28 whose investment in Euro per inhabitant is lower than in Croatia: Bulgaria (60.1), Romania (39.4) and Latvia (76.7). From the amount of investment in R&D, the business sector invested 51.2%, the governmental sector invested 24.5%, and the remaining amount is covered by the higher education sector (23%) and private non-profit sector (around 1%). The percentage of researchers employed in all sectors of the economy is very low (0.6% of all employment). More precisely, in 2014 the number of researchers employed in all sectors was 10,726. Most researchers are employed in the higher education sector (around 7,000) and in the business enterprise sector (1,100). In Adriatic Croatia in 2015, there were 0.27% researchers (of all employees) employed in all sectors. In Continental Croatia, that percentage was only a little bit higher (0.45%).

The share of people employed in the public sector is slowly growing in Croatia, for example from 2008 (5.8%) to 2014 (7.1%). The same movement is present in employment in education, that in the year 2008 was 5.4%, and in 2014, that percentage has grown to 7.6. Finally, people employed in the health sector and in social work make around 6.8% of total employment of Croatia.

In brief, it is possible to conclude that Croatia's immediate economic challenges include restoring macroeconomic stability and modernizing public services, the judiciary, and the governance of state-owned enterprises, to better support the needs of people and firms.

4. Education in Croatia

The proportion of general government expenditure spent on education in Croatia was generally stable between 2007 (10.5%) and 2013 (10.7%) but it fell significantly to 9.8% in 2014. Although general government expenditure on education as a proportion of GDP rose from 4.7% of GDP in 2007 to 5.1% in 2013, it also fell in 2014 back to 4.7%. This figure places Croatia below the EU average of 4.9% and among the bottom 10 EU Member States. In real terms, between 2007 and 2013 there has been only a small increase of 1.4% in absolute expenditure on education, however there has been a drop of 7.8% between 2013 and 2014 – the second highest drop in the EU. A large proportion of government expenditure on schools goes on staff salaries. (Education and Training Monitor 2016 – Croatia).

Despite the International Standard Classification of Education (2011), (dividing the basic system of education into pre-primary, primary, lower secondary, and upper secondary), the Croatian pre-tertiary education sticks to the old scheme which remained unchanged for more than fifty years. The main difference in comparison with other countries is a shorter primary education (ISCED level 1). The overall educational system is divided into the following segments: pre-school education, elementary school education, secondary school education, higher education and adult education. In

Table 1 the key indicators about the Croatian education system (year 2012 and 2015) are presented and compared with the EU average.

Table 1: Key indicators of Croatian education system compared, *source: Education and Training Monitor 2016 – Country analysis*

		Croatia		**EU average**	
		2012	2015	2012	2015
ET 2020 benchmarks					
Early leavers from education and training (age 18-24)	Total	5.1%	2.8%	12.7%	11.0%
Tertiary educational attainment	Total	23.1%	30.9%	36.0%	38.7%
Early childhood education and care (ECEC) (from age 4 to starting age of compulsory education)		71.0%	72.4%	93.2%	94.3%
Proportion of 15 year-olds with underachievement in:	Reading	18.7%	:	17.8%	:
	Maths	29.9%	:	22.1%	:
	Science	17.3%	:	16.6%	:
Employment rate of recent graduates by educational attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-8 (total)	60.2%	62.6%	75.9%	76.9%
Adult participation in lifelong learning (age 25-64)	ISCED 0-8 (total)	3.3%	3.1%	9.2%	10.7%
Other contextual indicators					
Education investment	Public expenditure on education as a percentage of GDP	4.9%	4.7%	5.0%	4.9%
Tertiary educational attainment (age 30-34)	Native-born	23.2%	31.7%	36.7%	39.4%
	Foreign-born	21.7%	23.6%	33.8%	36.4%
Employment rate of recent graduates by educational attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4	54.2%	45.0%	69.7%	70.8%
	ISCED 5-8	65.9%	76.2%	81.5%	81.9%
Learning mobility	Inbound graduates mobility (bachelor)	0.2%	0.2%	5.5%	5.9%
	Inbound graduates mobility (master)	0.5%	0.5%	13.6%	13.9%

Even though pre-school education in Croatia is not compulsory, it represents the beginning part of the educational system. Pre-school education can start when the child becomes six months old, but, in the existing practice, children enter pre-school institutions when they are one year old. The

participation rate in early childhood education and care (from age 4 to the starting age of compulsory education) has steadily increased over the last decade but is still one of the lowest in the EU, at 72.4% compared to the EU average of 94.3% in 2014.

Elementary school education in Croatia is provided through the network of public and private elementary schools. Elementary schooling, lasting eight years, is the compulsory part of education in the Republic of Croatia for children between the ages of seven and fifteen, and corresponds to the ISCED levels 1 and 2. In 2014/15 there were approximately 850 elementary schools with 321,000 pupils, and 31,800 teachers (Croatian Bureau of Statistics). In the 2014/15 school year, there were 707 secondary schools in Croatia.

One indicator of the quality of development of pupil competences at the end of compulsory education are the results in international comparative research. Croatia has been participating in the OECD Programme for International Student Assessment – PISA since 2006. The Croatian PISA results, in comparison with other EU countries, are unsatisfactory. For example, in 2012, 29.9% of students in Croatia failed to achieve basic skills in mathematics compared to the EU-25 average of 22.1% (OECD 2013). In reading and science, Croatia was around the EU average (OECD 2013).

After the completion of compulsory elementary school more than 95% of students continue their education in secondary schools (corresponding to the ISCED 3 level) although secondary education is not compulsory. In the school year 2014/15 there were 707 secondary schools in Croatia, with 175,512 students and 26,138 teachers (Croatian Bureau of Statistics).

The main characteristic of secondary education is streaming in three directions: academic (gymnasium), vocational schools and art schools. While academic (gymnasium) and art schools are four-year secondary schools, there are two types of vocational schools, the four-year and the three-year vocational schools. Roughly, 70% of the secondary school population attend vocational schools, of whom about 44% are in the four-year programmes and the remaining 26% are in the three-year programmes (Domović & Vizek Vidović, 2015). The level of participation in vocational education and training (VET) at upper secondary level in Croatia is one of the highest in the EU — 71.3 %, compared to the EU average of 48.3 % in 2015. However, the employment rate for recent upper secondary graduates (people aged 20 – 34 who left upper secondary education between one and three years before the reference year) 46.1 % in 2014, is significantly below the EU average of 73% and is the third lowest percentage in Europe after Italy and Greece. The employment gap between youth with upper secondary and tertiary education is more significant than in other EU countries, especially 1-3 years after gaining a qualification. A relatively small proportion of VET graduates find their first employment

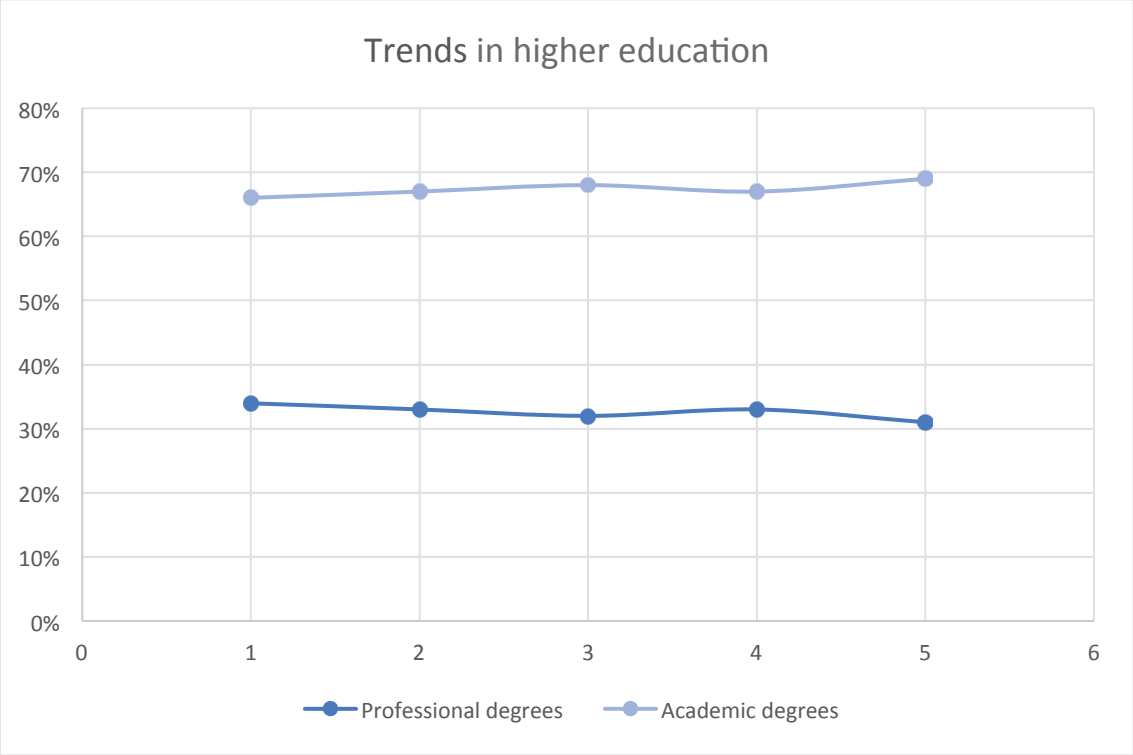
in the occupation that they trained for. On average, between 37% and 47% manage to do so, whereas some sectors stand out as less challenging for finding matching employment, such as the retail sector, hospitality and tourism and wood processing (Education and Training Monitor 2016 – Croatia, p.7).

One of the strengths of the Croatian educational system is the lowest early school leaving rate in EU (2.8%) in 2015, compared to the EU average of 11%.

It should be noted that the depopulation trend in Croatia has a significant impact on the continuous decrease of the number of pupils and students in Croatia. In primary schools, at the end of the 2014/2015 school year the overall number of students was 1.3% lower and in secondary schools 2% lower than the year before. The trend towards shrinking student populations continued in the school year 2015/2016 when 1% fewer primary and 4.5% fewer secondary students enrolled. The number of students entering higher education also experienced a significant drop in 2014/2015 when, after a period of fairly constant expansion, 3,000 fewer people enrolled in higher education than in the previous year (National Statistics Office, 2015).

Tertiary education in Croatia is based on the binary system and it can be acquired at the university and professional higher education institutions. Most of the total number of students study at public higher education institutions (**Figure 5**). Higher professional schools and polytechnics offering higher education are not a part of the university system. They offer specialist professional programmes and relevant diplomas but do not provide programmes leading directly to Ph.D.

Figure 5: Trends in enrolments in academic vs. professional higher education



Source: Education and Training Monitor, 2016 – Country Analysis

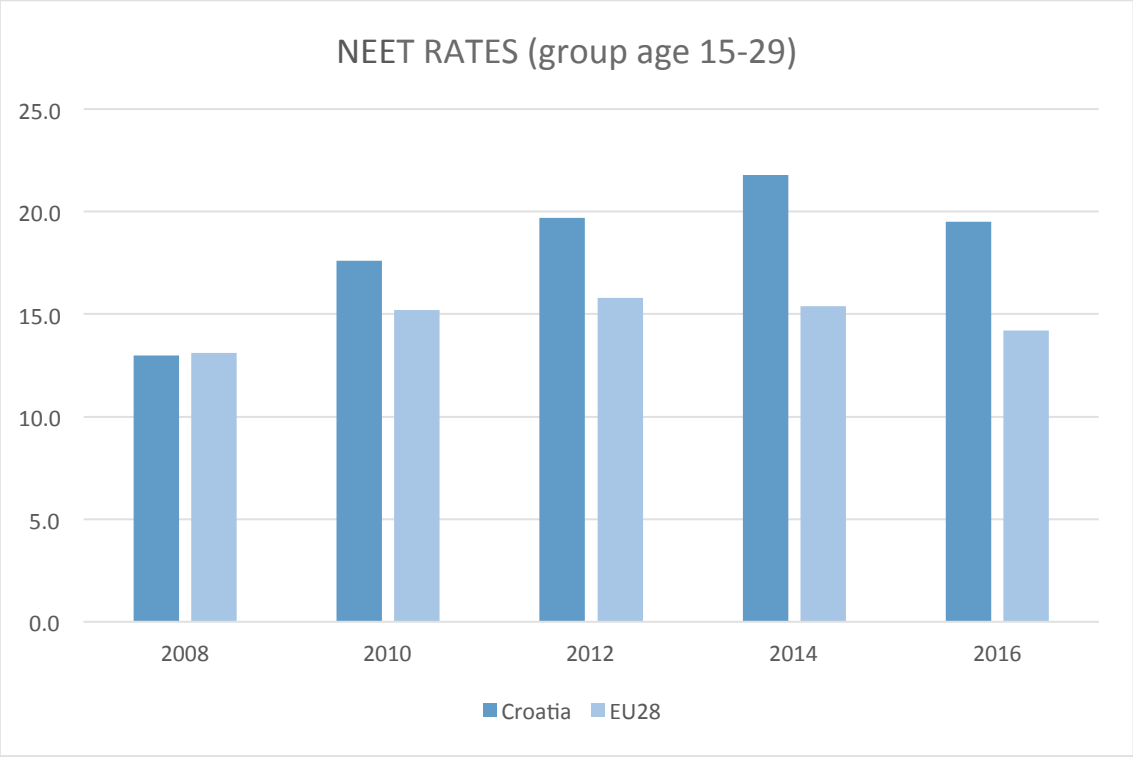
Tertiary educational attainment in Croatia has for many years been on a generally upward trend. The proportion of 30-34-year-olds with tertiary education in Croatia in 2015 returned to 30.9% after a surge to 32.2% in 2014. Compared to the EU average of 38.7%, this is a relatively low percentage, but it is approaching Croatia's Europe 2020 target of 35%. More than their peers in other EU countries, students in Croatia mainly choose to study social sciences and humanities. This is especially the case for economics, business and law degrees, which are studied by 41% in Croatia compared to 34% in the EU. In the past 5 years, there has been a slow but steady increase in the proportion of students studying in universities (**Figure 5**) as opposed to polytechnics or schools of professional higher education. There has also been a steady increase in the proportion of students pursuing academic degrees and a slow drop in the proportion of those pursuing professional degrees (Education and Training Monitor 2016 – Country analysis).

The employment rates of tertiary graduates in Croatia have not recovered to the pre-crisis levels. In 2008, 86.3% of tertiary educated graduates found employment within 1-3 years of graduation

while in 2015 this number was still as low as 76.2%. This figure puts Croatia among the six worst performers in the EU, after Greece, Italy, Spain, Cyprus and Portugal.

Participation in adult education in Croatia is low compared to other EU countries. For example, in 2015, only 3.1% of Croatian adults participated in education and training, compared to the EU average of 10.7% (Education and Training Monitor 2015 – Country analysis). The Croatian NEET rate, measuring the percentage of young people aged 15-29 out of education and not employed, was increasing since 2008 to 2014 (from 13 % in 2008 to 21.8 % in 2014). In 2016, the NEET rate has slightly decreased (19,5 %) compared to previous years. However, the NEET rate in Croatia is constantly much higher compared to the EU28 average (14,20 % in 2016).

Figure 6: NEET rates for group age 15-29 in Croatia and EU28



Source: EUROSTAT

The **Figure 7** sums up the strong points and weak points of the Croatian system of education in comparison with the European average and European goals for 2020.

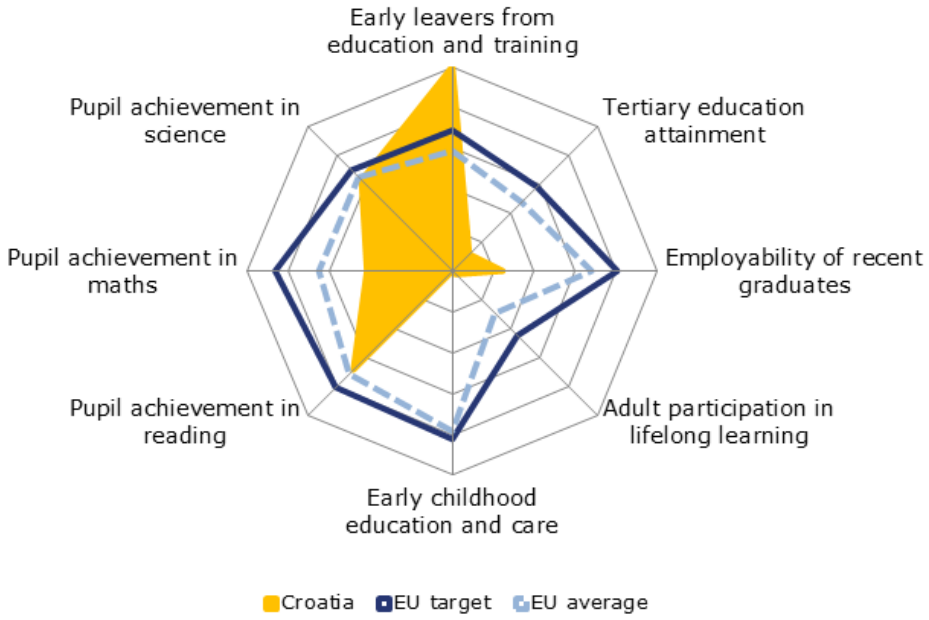


Figure 7: Position in relation to strongest (outer ring) and weakest performers (centre)

Source: Education and Training Monitor 2016

Table 2 shows data on the available educational institutions in Croatia and the two counties, including the structure of population aged 20-29 according to the level of education.

Table 2: Schools in 2015/2016 school year and population aged 20-29 according to highest level of completed education, *source: Croatian Bureau of Statistics, 2016*

Schools in 2015/2016 school year	**Croatia**	**Istria County**	**Osijek-Baranja County**
Primary schools	2,125	105	187
Upper secondary schools	751	44	52
Faculties and high schools	104	2	13
Population aged 20-29 according to highest level of completed education			
Total population (20-29, 2011)	**550,724 (100%)**	**26.569 (100%)**	**40.762 (100%)**
No schooling	2,352 (0.43%)	61 (0.23%)	168 (0.41%)
1-3 grades of basic education	586 (0.11%)	22 (0.08%)	58 (0.14%)
4-7 grades of basic education	2,502 (0.45%)	103 (0.39%)	273 (0.67%)

Elementary education	27,831 (5.05%)	1,499 (5.64%)	2,486 (6.10%)
Secondary education	415,729 (75.49%)	20,356 (76.61%)	31,776 (77.95%)
Higher education	1010,385 (18.41%)	4,521 (17.2%)	5,991 (14.70%)

Data presented in **Table 2** lead to the conclusion that Istria County, despite the significantly lower number of educational institutions, stands out in terms of a favorable educational structure of youth which is reflected in the below-average representation of persons with a low level of education. On the other hand, in Osijek-Baranja County we encounter an above-average proportion of youth who have not completed secondary education and a small proportion of highly educated persons, despite the relatively favorable number of available institutions of higher education.

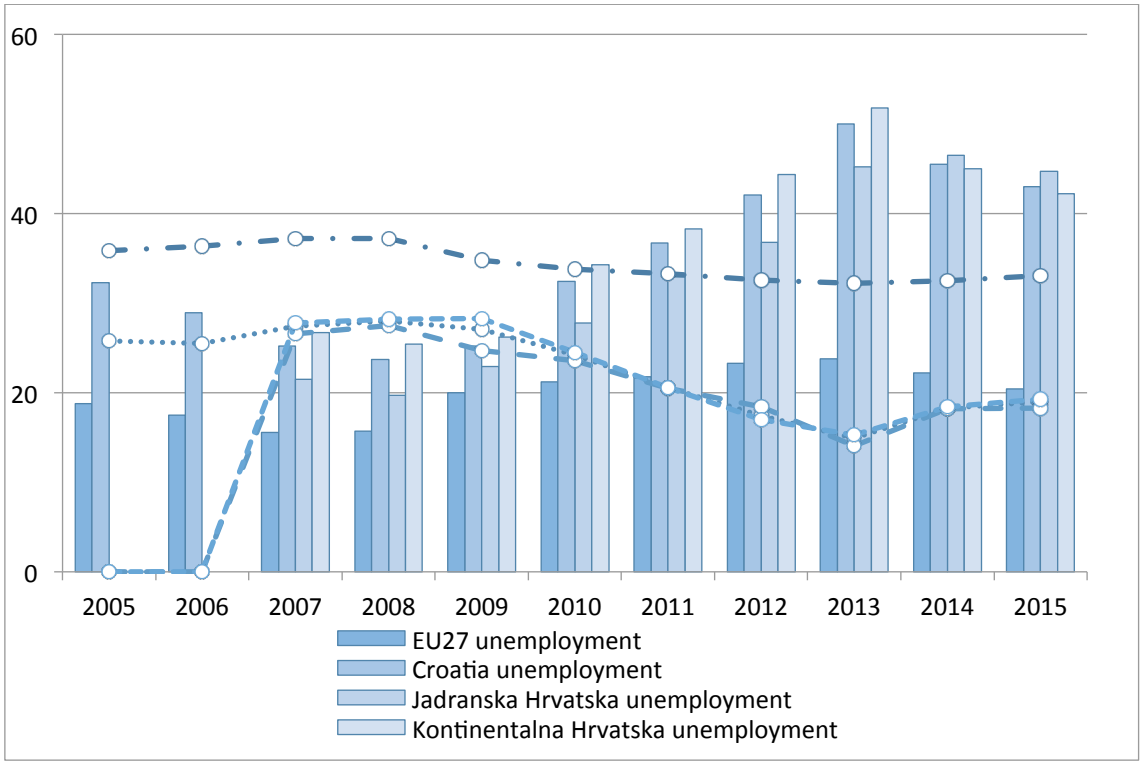
5. Youth and the Labour Market

In 2015, Croatia invested in labour market policies an amount of resources which was equal to only 0.6% of its GDP. As much as 49% of that amount was directed into LMP measures. The main focus of Croatian LMP measures is training (60%), and approximately the same amount goes to the employment incentives (15%) and direct job creation (16%). Around 7% of Croatians investment in LMP measures goes to start-up initiatives.

Regarding participation in the Croatian labour market, the overall economic activity rate from people age 15-65 has shown a slow growth in the last ten years, from 63.3% in 2005 to 66.9% in year 2015. That is below the EU27 average (72.6%). On the other hand, the economic activity rate of youth (age 15-24) has decreased in the last ten years, from 38.1% in 2005 to 33.2% in 2015, that is 8.3 percentage points lower than the EU27 average. Economic active youth in the labour market shows a great gender gap, with 28% active females, and 38% active males. The employment rate shows the proportion of the working age population that is in employment. In Croatia, the overall employment rate – for persons aged 20-64 was 60.5% in 2015, the lowest among all EU-28 Member States and 9.6% below the EU-27 average (**Figure 8**). Overall employment of persons aged 20-64 in Adriatic Croatia is 59.5% and in Continental Croatia 61%. According to a statistical portrait of Croatia in the European Union (Croatian Bureau for Statistics, 2013), the Croatian employment rate for the population aged 20-64 had increased to 62.9% by 2008, but during the financial, economic and public debt crisis, it decreased each year from 2009 to 2012. One of the Europe 2020 targets is that, by 2020, 75% of persons aged 20-64 in the EU should be in employment; for Croatia the target is 59%. The gender gap

in the Croatian employment rate was 9.4 percentage points, with the rate of males at 65.2% in 2015 and that for females at 55.8%. In 2012, the gender gap was 8.9%, which shows that the gap increased through the last three years. The gap is significantly smaller in Adriatic Croatia (6.9%) than in Continental Croatia (11%). The employment of youth in the 15-24 age group in 2015 was 19%, that is, 14.1 percentage points below the EU27 average. Again, the employment is a little bit higher in Continental Croatia (19.3%) than in Adriatic Croatia (18.3%). The gap between males and females (6.6%) exist even in this age group, and it is again lower in Adriatic Croatia (5.3%), than in Continental Croatia (7.2%).

Figure 8: Youth employment and unemployment rates, youth unemployment ratio of young people 15-24 (right ex), EU27, Croatia, Adriatic Croatia and Continental Croatia



Source: EUROSTAT

The general business cycle has a significant impact on unemployment levels, and the impact of the financial, economic and public debt crisis can be seen in the recent developments of unemployment statistics in most EU Member States. The unemployment rate in Croatia rose from a pre-crisis low of 8.4% in 2008 to 15.9% by 2012, while in the EU27 it rose from 7.1% to 10.5% over the same period. In

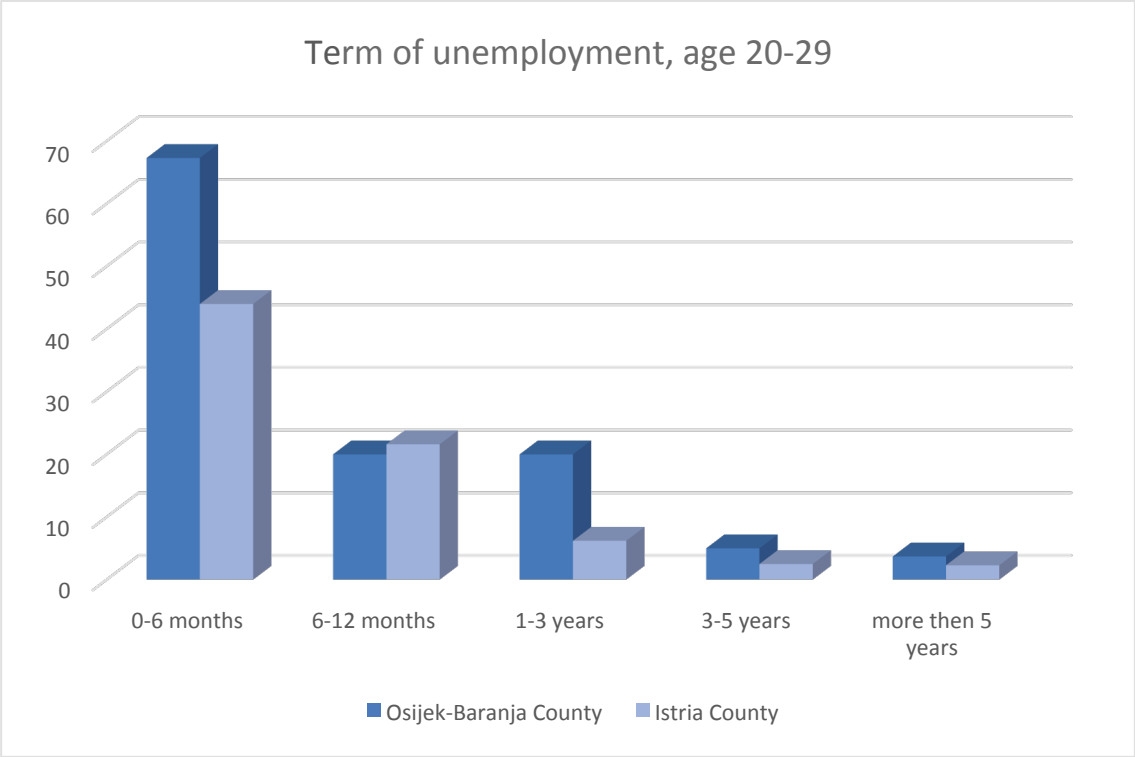
2015 the unemployment rate in Croatia was 15.6%, which is 6.2% higher than the EU28 average (9.4%). Unemployment is a little bit higher in Adriatic Croatia (16.3%) than in Continental Croatia (15.3%). This information is, once again, contradictory with information about the unemployment rate in the two functional regions – Osijek-Baranja County and Istria County. In the year 2015, the unemployment rate in the Osijek-Baranja functional region was 28.3%, that is, 13% higher than the unemployment rate in its NUTS 2 region, Continental Croatia (15.3%). In the same year, in Istria functional region the unemployment rate was only 6.1%, which is remarkably under the average of Croatia (for 9.5%), as well as Istria NUTS 2 region, Adriatic Croatia (for 10.2%). The gender gap in unemployment of people age 20-64 is significantly lower than in employment (just 1.3%). Even here, the gender gap is higher in Continental Croatia (1.7%) than in Adriatic Croatia (0.4%).

Croatia is one of the three EU28 member countries with the highest youth unemployment (group age 15-24). With a high 43%, Croatia is 22.6 percentage points away from the EU28 average. Youth unemployment is high in both Continental (42.2%) and Adriatic Croatia (44.7%). Again, female youth, age 15-24 are more unemployed than their male peers (for 2.9%). According to the statistics of the Croatian Employment Service, from 24,549 unemployed people in Osijek-Baranja County, 23.3% are young adults, age 20-29, and 3% are youth age 15-19. In the Istria functional region, at the moment there are 2,949 unemployed persons, out of which 20% are young adults (age 20-29), and 2% belong to the age group 15-19. The youth (age group 15-24) unemployment ratio in Croatia was 14%, which is very high according to the EU27 average (8.4%) in 2015. Of the overall unemployed population, the ratio of young adults (age 20-29) was 17.9% in 2015.

In comparing all those percentages with the EU27 or EU28 average, it is obvious that Croatia is a country with high unemployment rates of all population, but also of young adults. There is 15.3% of those unemployed young people (age 15-29) that have been unemployed for one year or more. That percentage is same in Croatia, as well as in both NUTS2 functional regions. The percentage of long-term unemployed of Croatia's entire unemployed population is as high as 63.1%, that is the highest percentage of all EU28 member countries. In Continental Croatia this percentage is 63.7%, and in Adriatic Croatia 61.9%. By looking more deeply into the Osijek-Baranja functional region, 14.9% unemployed persons are unemployed from 6-12 months, 14% are unemployed from 1-2 years, and a high percentage of 17.3% of people are unemployed for 5 and more years. In the Istria functional region, 50% of those unemployed are unemployed for only 6 months, 18% are unemployed from 6-12 months, from 1-2 years unemployed is 10% of all unemployed, and 13% are unemployed for more than 5 years. The distribution of the term of unemployment of unemployed young adults (age 20-29) in the

Osijek-Baranja and Istria Region (**Figure 9**) indicates that young adults in the Osijek-Baranja functional region are more at risk of long-term unemployment. In that county, 20% of young only 6.2%. The percentage of unemployed persons from the age group 20-29, that are unemployed for more than 3 years is 8.7% in Osijek-Baranja County, and 4.8% in Istria County.

Figure 9: Distribution of term of unemployment of unemployed young adults (age 20-29) in Osijek-Baranja and Istria Region



Source: Croatian Bureau of Statistics, 2016

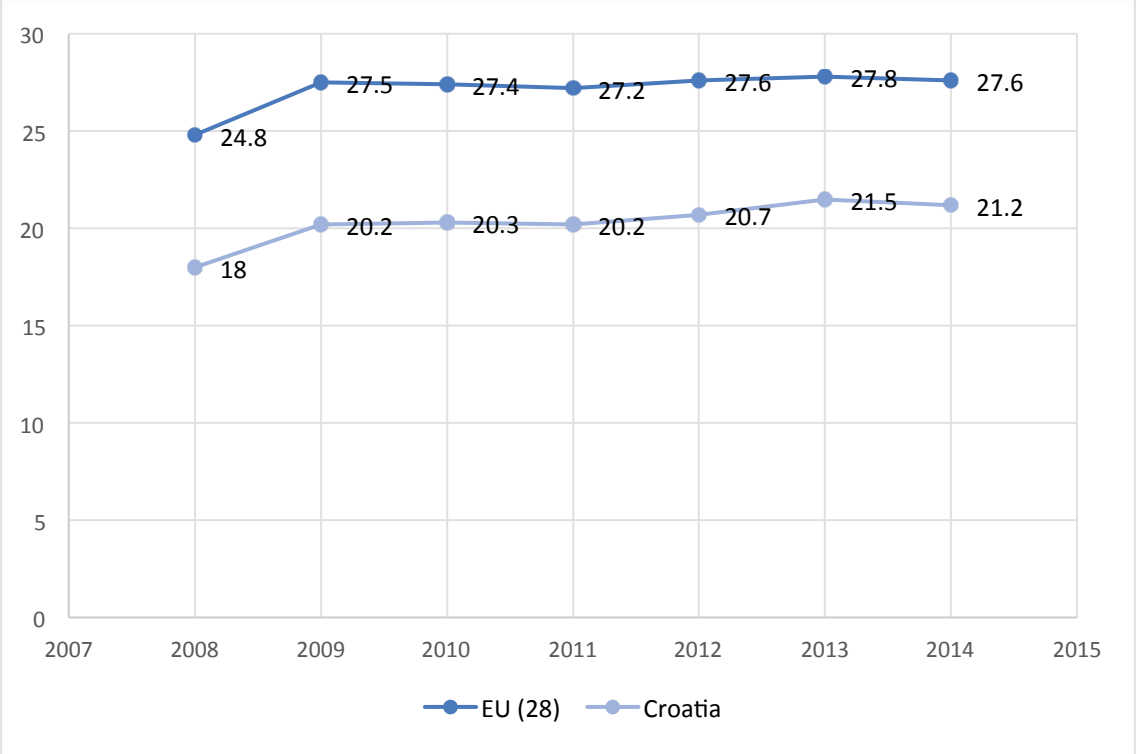
The key issues faced by young people when entering the labour market in Croatia are lack of previous work experience and mismatch between their qualifications and the skill demand. These problems are in particular evident in cases of individuals with lower educational attainment, young mothers and Roma population. Long-term unemployment and large differences in regional youth unemployment rates are also recognized. About 17% of all registered youth unemployed are without prior working experience, about 34% of long-term unemployed young people have no high school education, and 28% have a three-year course of vocational education, and only 13% are highly educated (National Youth Programme 2014-2017).

6. Redistribution and social inclusion

Social protection includes all interventions of public or private bodies aimed at alleviating the financial burden of households and individuals from a defined series of risks and needs, provided that there is no simultaneous reciprocal or individual counter performance (an intervention that seeks something of identical value in return from the beneficiary of social protection). Croatia maintains a comprehensive and complex system of social protection. The system serves multiple objectives and includes support to war veterans and their families, population policy measures, social assistance to low-income groups, and a large number of other social assistance programs. The administration of social benefits is highly fragmented, with insufficient coordination among the different levels of government providing these services (Jafarov & Gunnarsson, 2008).

A key social policy issue in Croatia is how to reduce the government-spending-to-GDP ratio, without undue sacrifices in quality, even though Croatia spends much less on social protection than the European Union average (**Figure 10**). Comparing data on the share of social protection expenditures in the national GDP with the share of such expenditures in the GDP of EU member countries, the Republic of Croatia ranks 18th, lagging by 8.6 percentage points behind the average of the EU-28.

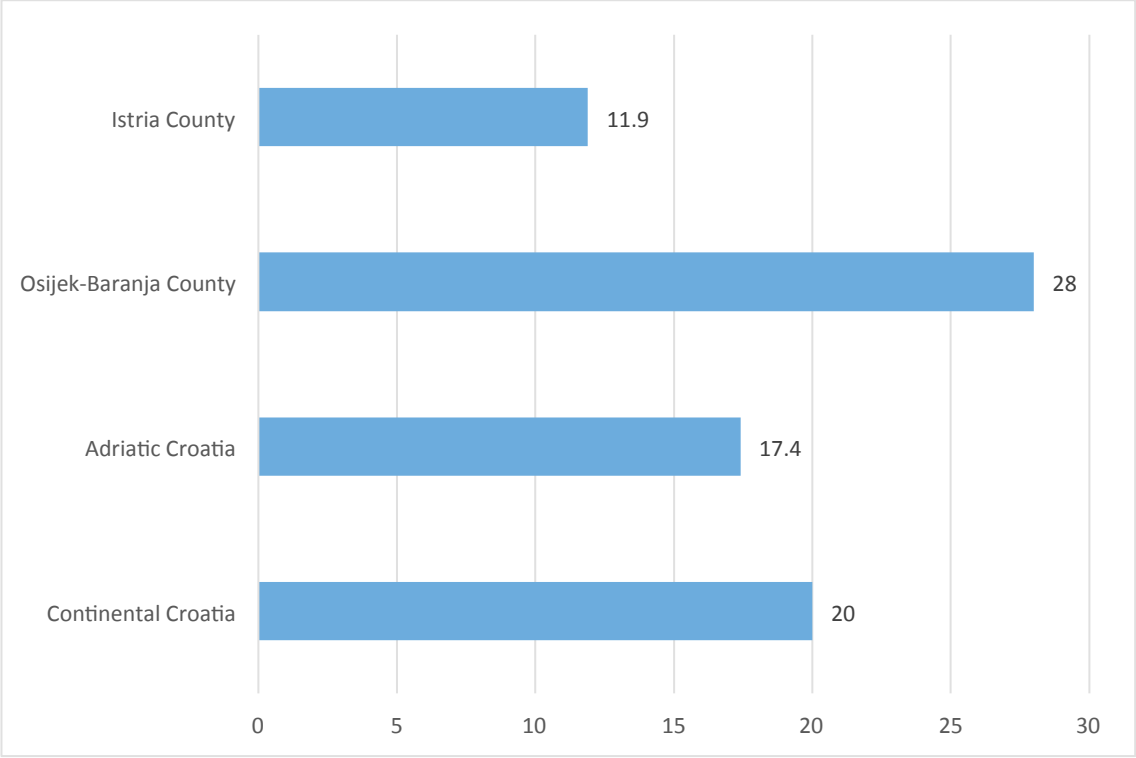
Figure 10: Social protection benefits (% of the GDP)



Source: EUROSTAT: Tables by functions, aggregated benefits and grouped schemes

According to the Social welfare Act[3], The Government of Croatia is the main source of the social benefits of persons that are at risk of poverty, live in severe material deprivation or live in households with a low work intensity. The social insurance and social assistance component of social welfare policy itself consists of three components. There are cash transfers, benefits in kind and foster-care or residential care for vulnerable groups (Bejaković & McAluey, 1999). Inhabitants in both functional regions have the right to the same social benefits, but differences arise from the number of people who are in need of social protection **(Figure 11**).

Figure 11: At-risk-of-poverty rate by NUTS2 and NUTS3 (%)



Source: Croatian Bureau of Statistics, Census 2011

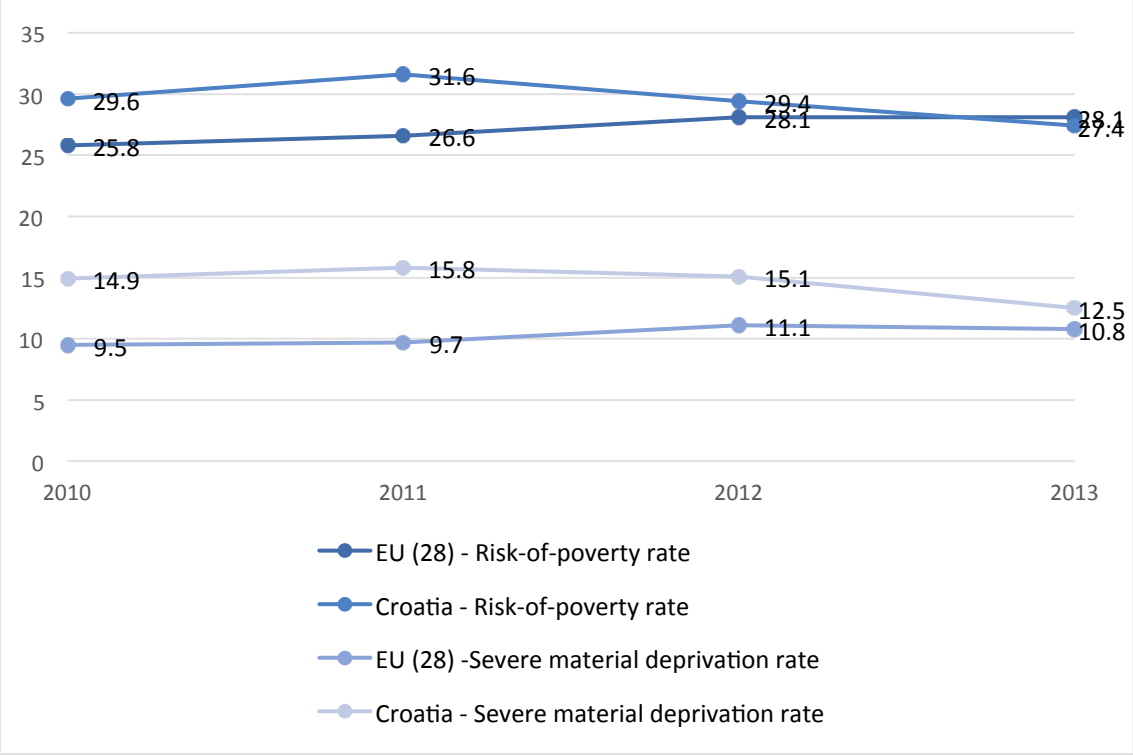
The data presented in **Figure 11** show that Osijek-Baranja County is characterised with a significantly higher rate of people at risk of social exclusion than it is the case with Istria County.

3 *Official Gazette*, 157/13; 152/14; 99/15; 52/16

Although the percentage of persons who should receive social assistance is 28%, only 5% of the population exercise this right. In Istria County, 0.7% of the population receive financial help, and every twelfth person is at risk of poverty (*Annual statistical report on applied rights of social welfare, legal protection of children, youth, marriage, families and persons deprived of legal capacity, and protection of physically and mentally handicapped persons in the Republic of Croatia*). Thus, in both functional regions there is an imbalance between the need to improve living conditions for part of the population and the possibilities for the welfare system to contribute to it adequately.

Unfortunately, the data on social provisions in Croatia are not kept according to beneficiary's age. However, data about young people at risk of poverty or exclusion rate in the European Union and in Croatia show that living conditions for young people in Croatia have a tendency to be similar to the European average (**Figure 12**). Having in mind that this average is the result of many different European countries (the lowest rate of social exclusion is around 10%), it is possible to conclude that Croatia belongs to the countries with a higher level of youth at risk of social exclusion.

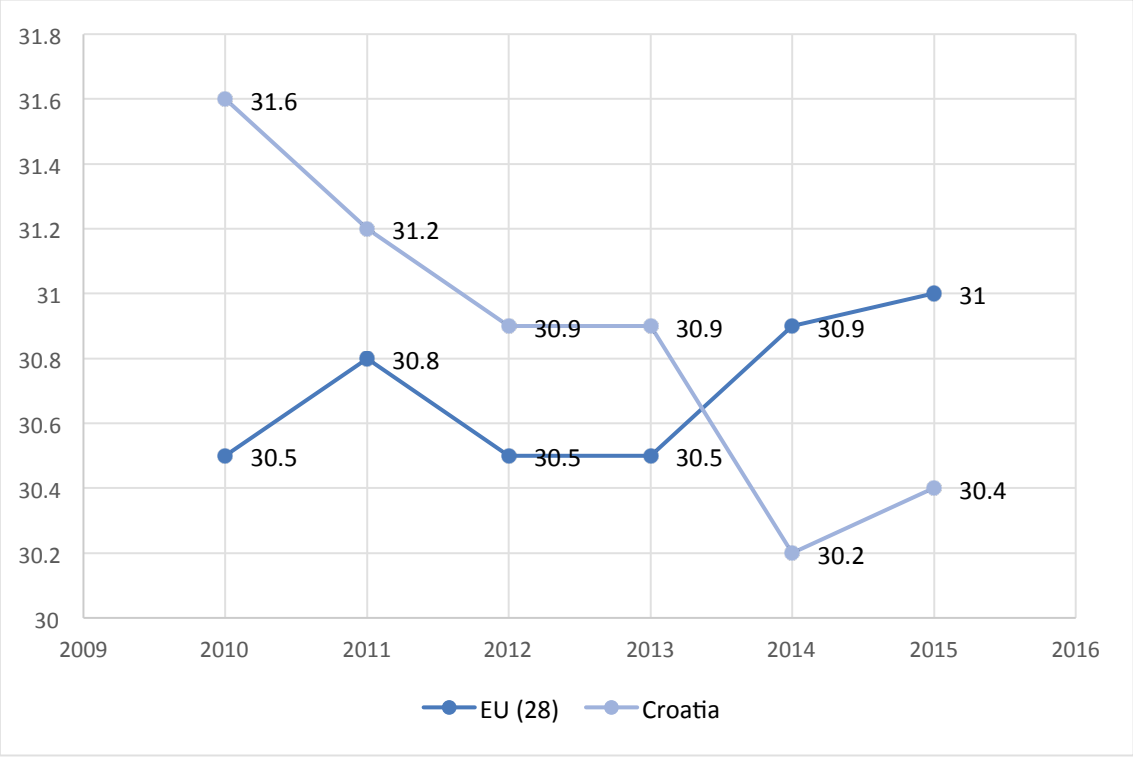
Figure 12: Young people at risk-of-poverty or exclusion rate and severe material deprivation rate (age 16-29, %)



Source: EUROSTAT

It is well known that young people are generally in an unfavourable socioeconomic position in comparison to other age groups. That means that youth do not own property (real estate, savings and stocks), they have difficulties in finding employment and obtaining housing, and are dependent on their parents' support. Transitional processes increase the degree of uncertainty for young persons who, having completed their education, have no clear perspectives on the opportunities for employment, professional development and leading independent and productive lives. The Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality. The Gini index in Croatia has not significantly changed in the last six years and is equal to the Gini index of the EU 28 average (**Figure 13**). Nevertheless, it can be observed that the Gini index in Croatia has a tendency of mild decline, whereas the average Gini index in the 28 EU states shows a mild increase.

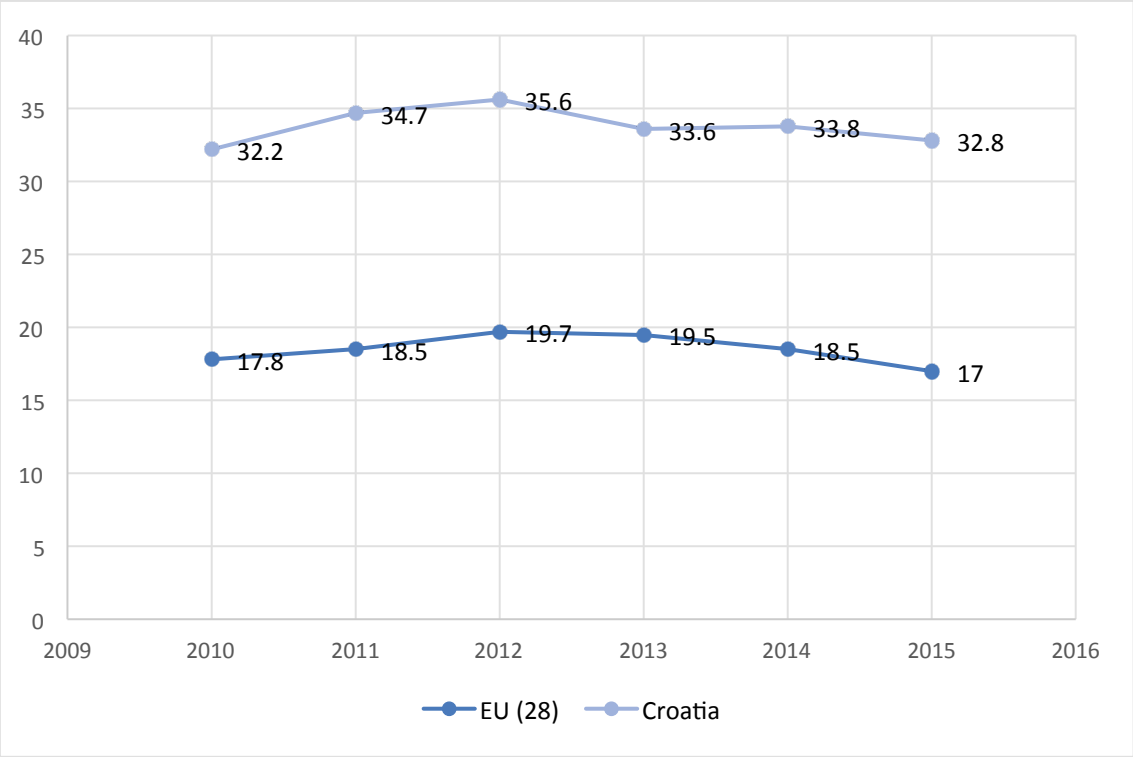
Figure 13: Gini index of equalised disposable income



Source: EU SILC survey, EUROSTAT

Despite the fact that data about exposure to poverty and material deprivation of youth in Croatia are comparable to the average data for the European Union, the material deprivation rate for the total population is not in favour of Croatia. Data show that this ratio in relation to the EU (28) is multiple times higher, which points to a significantly unfavourable living conditions for young people in Croatia (**Figure 14**).

Figure 14: Material Deprivation Rate



Source: EU SILC survey, EUROSTAT

Finally, the quantitative analysis in the field of redistribution and social inclusion of young adults in Croatia shows that some effort should be invested in improving the quality, range and frequency of social statistics. Such information is required for social planning, for the formulation of appropriate policies concerning young people. This can be deduced from the unavailability of data about social policies, which are in Croatia, and so in the two functional regions, directed to young people, and from the difficulties in comparing data form different sources.

Nevertheless, it is evident that youth in Croatia do not get sufficient social support in the process of transition from childhood to adulthood, which can be seen from the number of persons

receiving social support in the two functional regions. It has been established that the rate of material deprivation for the total population is higher in relation to the group of youth aged 16-29, a fact which is particularly disturbing.

7. Health and well-being conditions

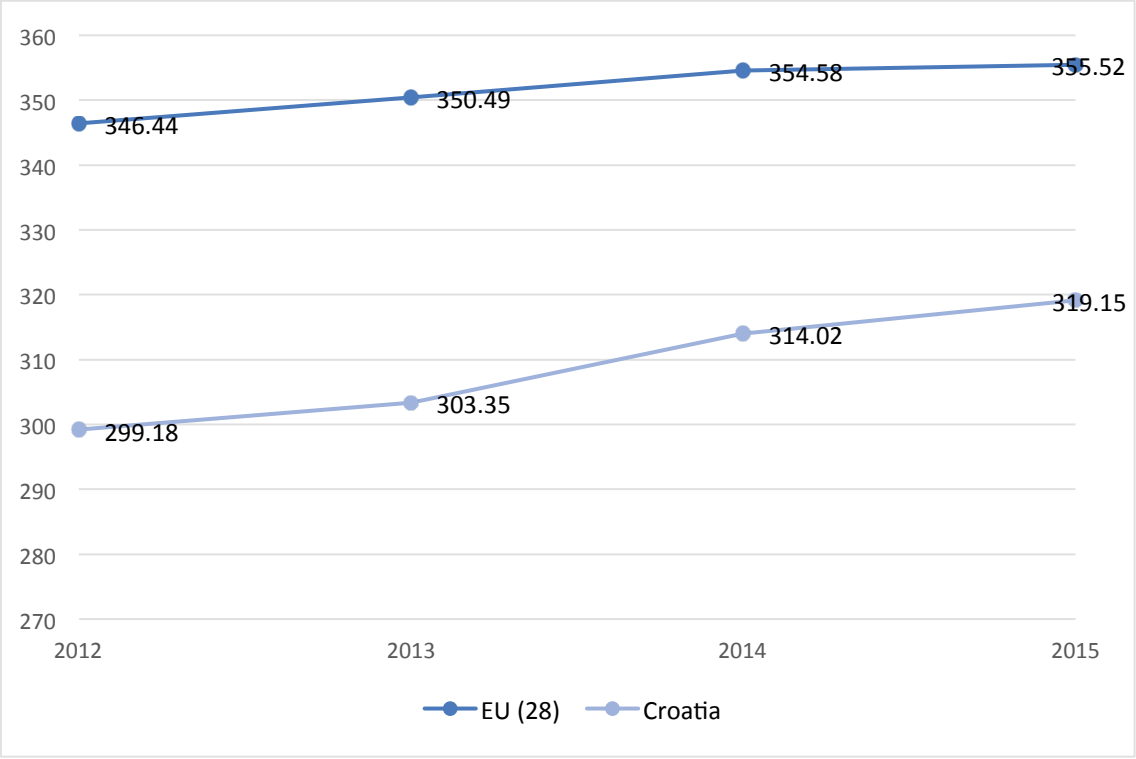
The Constitution of the Republic of Croatia guarantees everyone the right to health care in accordance with law, and that right is exercised through the health care system, which falls within the responsibility of the Ministry of Health. The health care system includes health care service of interest to the Republic of Croatia, which is being performed as a public service based on professional medical doctrine and with the use of medical technology in the provision of health care (National Health Care Strategy, 2012). The health care of the population of the Republic of Croatia is implemented according to the principles of universality, continuity, availability, a comprehensive approach in the primary health care, and specialised approach in specialist-consiliary and hospital health care. The basic legal framework of the health care system in Croatia consists of three key acts: The Health Care Act, the Mandatory Health Insurance Act and the Patient's Rights Protection Act. Even though the health care is in principle free of charge, the patients must pay from their own pockets to the privately owned health care service providers. It includes patients who do not have a contractual relationship with the Croatian Institute for Health Insurance and patients who do not have additional health insurance. However, the main source of the health protection of all the population is the national budget.

Croatia is among the countries in Europe with the highest mortality rates of cerebrovascular diseases, trachea, bronchus and lung cancer in men, and diabetes. The trend of increasing mortality of women by some types of neoplasms is especially disturbing, as well as the mortality rate caused by diabetes, which is among the highest in Europe (National Health Care Strategy, 2012).

In Croatia, on average there are 1.4 hospitals per 100,000 inhabitants. Many significant differences are observed in the quality of health service and protection with respect to counties. There are significant differences in the coverage by primary health officers, doctors, and the number of teams of general practitioners and in the number of hospital beds per 1,000 inhabitants. (Regional Development Strategy of the Republic of Croatia – 2020, 2016), but in the two functional Croatian regions they are not particularly apparent. Although, over time, there is an observed increase in the number of medical staff in Croatia, their representation in comparison to EU countries is continuously lower (**Figure 15**). Moreover, significant numbers of Croatian health professionals consider moving to

other EU countries, because of the significantly lower earnings and career opportunities for health care workers in Croatia.

Figure 15: Medical doctors: Health personnel (per hundred thousand inhabitants)



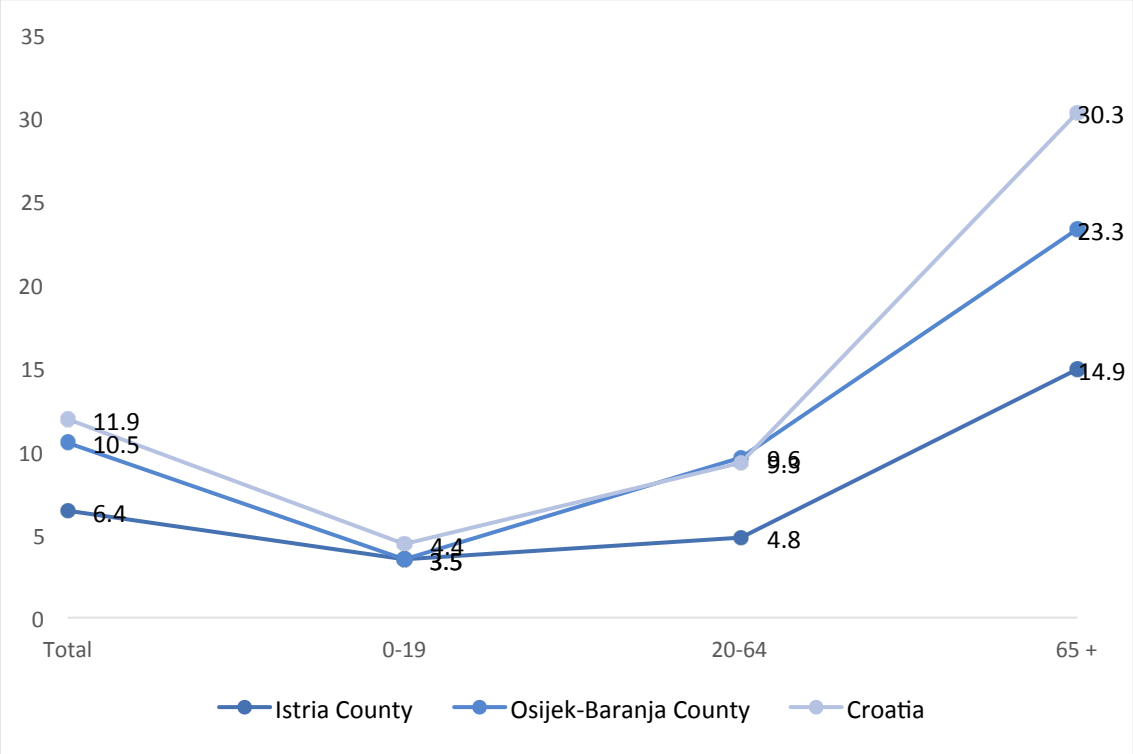
Source: EUROSTAT

It is well known that in the pathology of young persons, an increasingly significant place is being occupied by disorders and diseases connected with certain kinds of behaviour, habits and lifestyles. Croatian researchers of youth (Ilišin et al., 2013; Bouillet, 2017) indicate a worrying level of tolerance towards alcohol use in Croatian society, and of shortcomings in preparedness of young people for responsible sexual behaviour.

One of the indicators of the nation's state of health is the portion of persons with a disability in the entire population. According to the Croatian Registry of Persons with Disability (2017), there are 511,850 persons with disability in Croatia, which is about 12% of the total population. The most common conditions causing disability are impairments of the locomotor system, mental disorders, impairments of other organs and body systems and impairments of the central nervous system. In the

majority of the analysed age groups, more persons with a physical disability are recorded in Osijek-Baranja County in comparison to Istria County, and with the increase in age there is an increase in the number of persons with physical disability (**Figure 16**).

Figure 16: Prevalence of the ratio of persons with a disability in the total population of functional regions

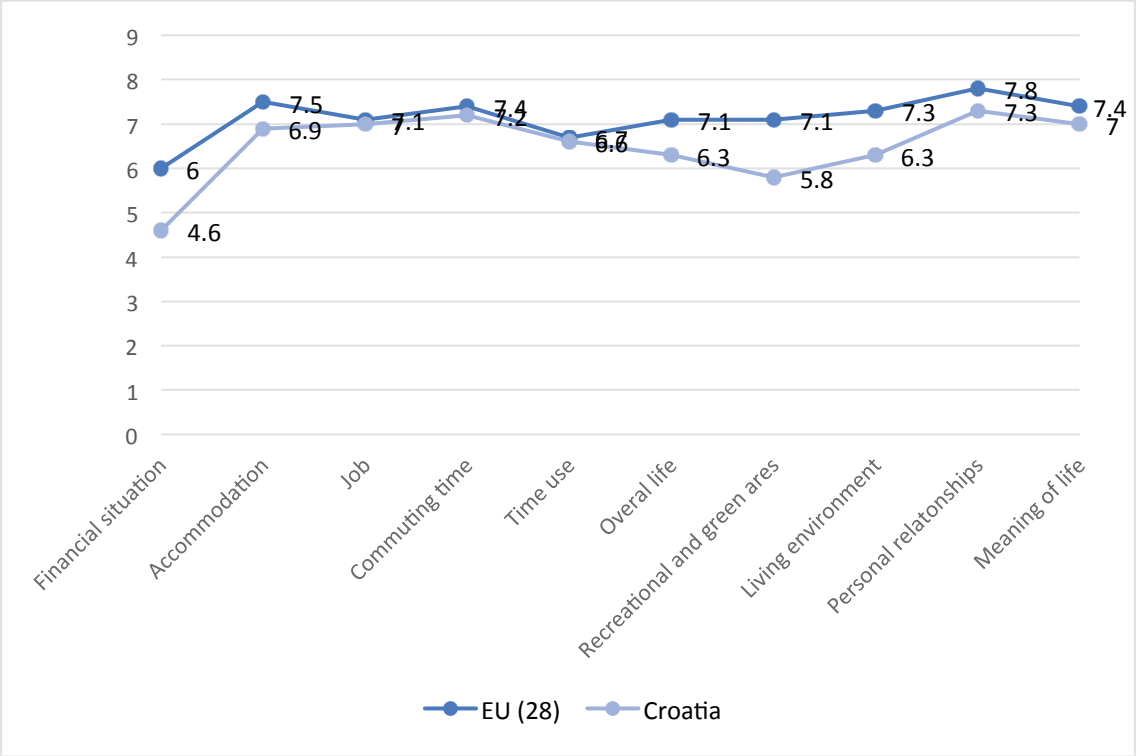


Source: Croatian Institute of Public Health, 2017

The determination of health as a state of complete physical, mental and social well-being is related to the research of subjective evaluations of health. Such research confirms that the evaluations of subjective well-being are, for the majority part, linked with the personal evaluation of health (Miljković, 2013), where well-being contributes to the subjective experience of minor representation of physical symptoms and better evaluation of health, while positive feelings lessen the risk of illness (Marčinko, 2013). At the same time, research suggests that every person tries to find a way to evaluate their health condition in a positive light and that subjective evaluation of health can be interpreted a s a predictor of the physician's evaluation, although the two evaluations can be in discrepancy (Tucak & Nekić, 2006).

The average rating of satisfaction by different life domains in Croatia is not significantly different in comparison with the European Union average in the field of job satisfaction, commuting time, time use, personal relationships and meaning of life. The differences are higher in the field of satisfaction with financial situation, overall life, recreational and green areas and living environment (**Figure 17**). In these fields, Croatian people are less satisfied than the average European citizen. It is possible to conclude that citizens in Croatia are relatively content with the private aspects of life while their dissatisfaction is expressed in relation to the social conditions in which they are living.

Figure 17: Average rating of satisfaction by different life domain (rating: 0-10, age: 16 years and over, 2013)



Source: EUROSTAT, EU-SILC microdata

Overall, the best aspect of health care in Croatia is the broadness which encompasses the population with free healthcare including persons in the regular system of education and persons with low income. However, the availability of health services is not uniform in all regions of Croatia and it is significantly weaker in relation to other EU countries. Smaller availability of healthcare is accompanied with the relatively poor health image of Croatian citizens.

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Work Package 4

Quantitative Analysis Young Adults' Data

Finland – National Briefing Paper with national and regional data sets

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Work Package 4 – Quantitative Analysis of Young Adults' Data

Deliverable 4.1

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Executive Summary

The Finnish education system, especially the comprehensive school, is characteristically intertwined with the Scandinavian notion of welfare state, which entails strong emphasis on equal educational opportunities. As one of the key elements of the Scandinavian welfare model, the comprehensive school system is identified by universal, non-selective, and free basic education provided by the public sector. PISA results from the early 2000's on have shown that not only is the average level in reading, mathematics, and sciences high in Finland, but also the share of low achievers is comparatively small. The other important sign is that the Finnish school system has been successful in compensating for the poor socioeconomic background of pupils. Also, the between school variation in learning outcomes is one of the smallest in the OECD world. The school system has proved to be homogeneous in quality. Young people have relatively good educational opportunities at the upper secondary and tertiary level. However, there are about 10 percent in each age cohort young people who do not continue in education or training after basic education. Their situation is getting worse while the competition in the labour market gets tighter. The other phenomenon is the decreasing level of average learning outcomes tested in PISA, TIMSS, and PIRLS. The share of low performers has been growing.

Finnish economy has suffered two severe crises since the 1980's, first in the early 1990's and then as an effect of the global financial crisis from 2008 onwards, which have had drastic effects on youth employment. After the financial crisis, unemployment for young people has increased, more heavily for males than for females. Long-term unemployment of 20-29 year old males was seven times higher and females eight times higher in 2016 than in 2008. Uncertain employment prospects have also discouraging effects on educational motivation especially of young people in the low end of the achievement curve. In certain regions of the country getting a job without work experience and vocational training is practically non-existent. The number of NEET young has been slightly increasing during the past decade or so. Actually, young adults living in the two functional regions, FR Southwest Finland and FR Kainuu, live in quite different realities what comes to their future prospects. People born in northern and eastern parts of the country tend to move to southern cities after completing compulsory or upper secondary education. The overall employment in FR Kainuu has decreased quite dramatically within the past decades: the number of employed in FR Kainuu is only about 70 percent of the level it was in the beginning of the 1990's. However, Finnish young people are clearly more satisfied with several areas of their life than their peers in Europe on average. Especially large differences between Finnish youth and European average are in accommodation, job satisfaction, and overall life satisfaction.

Being at risk of poverty and social exclusion is lower in Finland than it is in EU27 countries on average. About 17 % of the population has been at risk of poverty or exclusion

between 2005 and 2015. The gap between different parts of the country has been growing during the past decade. The risk of poverty and social exclusion has grown bigger especially in northern and eastern regions of Finland.

The number of children born in Finland will be lower than ever since the last famine years 1866-68, although the size of the population has more than doubled. According to the projection, the share of persons aged under 15 in the population would decrease to 14 per cent by 2060. The share of people with foreign background has been very low compared to other European countries. Hostility towards people with foreign background has increased during recent years among native population. These developments will have severe consequences for the dependence ratio in the future.

Introduction

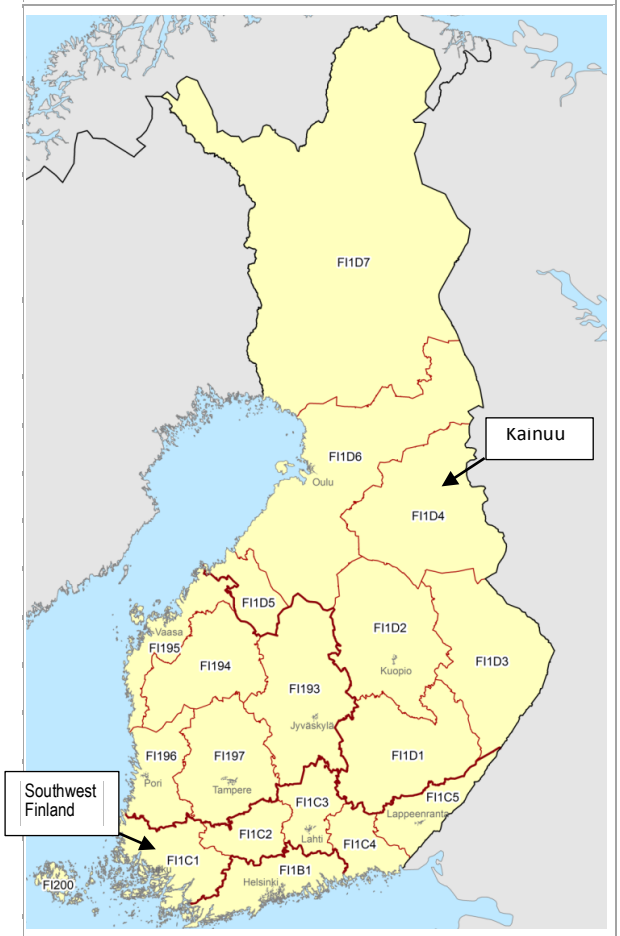
The Finnish education system, especially the comprehensive school, is characteristically intertwined with the Scandinavian notion of welfare state, which entails strong emphasis on equal educational opportunities. As one of the key elements of the Scandinavian welfare model, the comprehensive school system is identified by universal, non-selective, and free basic education provided by the public sector and of adequately good quality in order to prevent the demands for private schools. Together with the health and social security systems, the comprehensive education forms a virtuous circle that has cumulative positive effects. Universal education system provides equal educational opportunities that lead to greater solidarity and universal social capital, social trust which confirms the legitimacy of universal models. (Kalalahti, Silvennoinen, Varjo & Rinne 2015). The system has proved to be productive in several respects: Finnish young people have outstanding results in international assessment on learning, and quality differences between schools are the smallest in Europe (OECD 2013; OECD 2016a).

However, the living conditions and opportunity structures for young people are quite different in different parts of Finland. The capital city Helsinki with its metropolitan are offer much better opportunities for education and employment than more remote areas in eastern and northern parts of the country. Our functional regions Southwest Finland and Kainuu are located in the opposite parts of Finland and they are defined by quite different prospects for young people. The general trend since the 1960s' has been the concentration of population in the southern parts of the country (including FR Southwest Finland), whereas the northern and eastern parts (including FR Kainuu) are becoming more and more sparsely populated.

Quality data assessment

In this report, the basic statistics are presented at NUTS2-level ('larger areas' South Finland and North & East Finland). However, crucial information at NUTS3 level is added so that the functional regions Southwest Finland (part of NUTS2 area 'South Finland') and Kainuu (part of NUTS2 area 'North & East Finland') will be described more properly. There are substantial differences between NUTS3 level regions included in the same NUTS2 level areas. This concerns also our two functional regions (FR), Southwest Finland and Kainuu.

Figure 1. Description of NUTS levels and their relations to each other in Finland

eurostat NUTS 1	Code	NUTS 2	Code	NUTS 3	Code
Mainland Finland	FI1	West Finland	FI19	Central Finland	FI193
				Southern Ostrobothnia	FI194
				Ostrobothnia	FI195
				Satakunta	FI196
				Pirkanmaa	FI197
		Helsinki-Uusimaa	FI1B	Helsinki-Uusimaa	FI1B1
		South Finland	FI1C	**Southwest Finland**	FI1C1
				Kanta-Häme	FI1C2
				Päijät-Häme	FI1C3
				Kymenlaakso	FI1C4
				South Karelia	FI1C5
		North & East Finland	FI1D	Etelä-Savo	FI1D1
				Pohjois-Savo	FI1D2
				North Karelia	FI1D3
				Kainuu	FI1D4
				Central Ostrobothnia	FI1D5
				Northern Ostrobothnia	FI1D6
				Lapland	FI1D7
Åland	FI2	Åland	FI20	Åland	FI200

As can be seen in **Figure 1**, geographically the area of 'North & East Finland', of which the FR Kainuu is a rather small region, covers more than half of Finland. Statistics on NUTS2 area 'North

& East Finland' do not represent properly the situation in FR Kainuu. The same is true with FR Southwest Finland and NUTS2 area South Finland, within which there are in many respects quite different regions from Eastern Finland (e.g., NUTS3 regions Kymenlaakso and South Karelia). Suitability of NUTS2 level statistics indicating the realities at NUTS3 level - at the level of our functional regions, that is – is disputable. That is why we try to present statistics at NUTS3 level, from FR Southwest Finland and FR Kainuu, whenever it is possible. Roughly, the differences between FR Southwest Finland and FR Kainuu are in general wider than NUTS2 areas South Finland and North & East Finland.

Statistics Finland continuously collects a huge amount and variety of data on population, economy, education, labour market, housing, etc. but statistics only on quite general level are available free of charge. Most of the relevant data on NUTS3 level are accessible only for extra costs.

The most serious weakness concerning this briefing paper is the unsystematic nature of available data on living conditions of age groups in NUTS3 regions – i.e. the two functional regions of our study. Some relevant data are gathered by administrative bodies in the two functional regions (mostly population, economy and employment), but they lack a systematic approach on data collecting.

1. Findings

1.1 Demographic structure

According to Statistics Finland's most recent data, Finland's population was 5,506,312 at the end of May 2017. The share of 20-29 year olds is about 12.5 percent of the whole population. The percentage of young people aged 20-24 in South Finland is lower than the country average, and the percentage of young aged 25-29 is lower than the country average in both examined areas, South Finland and North & East Finland (**Figure 2**). In many regions in northern and eastern Finland, a number of people aged 25-29 have already moved away from their childhood home to other parts of the country.

These days the birth rate is very low in Finland. Population increased by 3,015 persons during January-May 2017. The reason for the increase was migration gain from abroad, since immigration exceeded emigration by 5,684. The number of births was 2,669 lower than that of deaths (**Figure 3**).

Figure 2. The share of 20-24 year old and 25-29 year old population in Finland, Southwest Finland and North & East Finland (%)

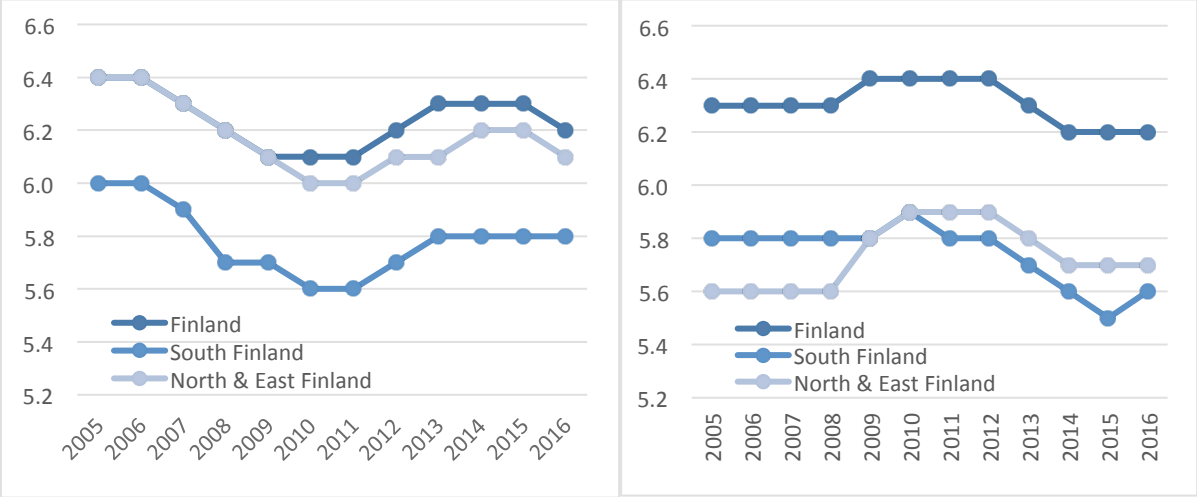
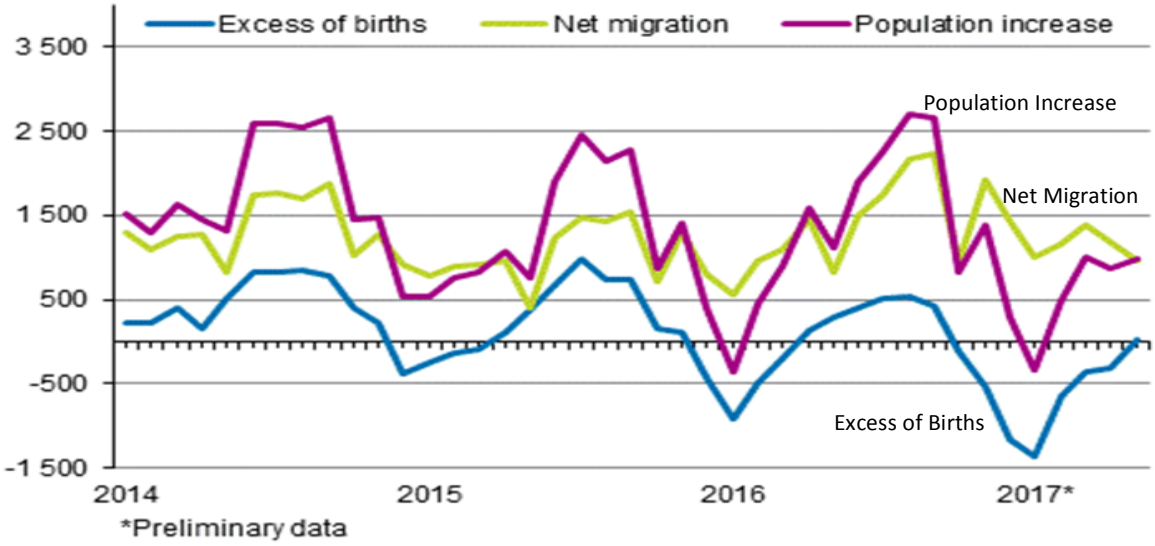


Figure 3. Population increase by month 2014-2017



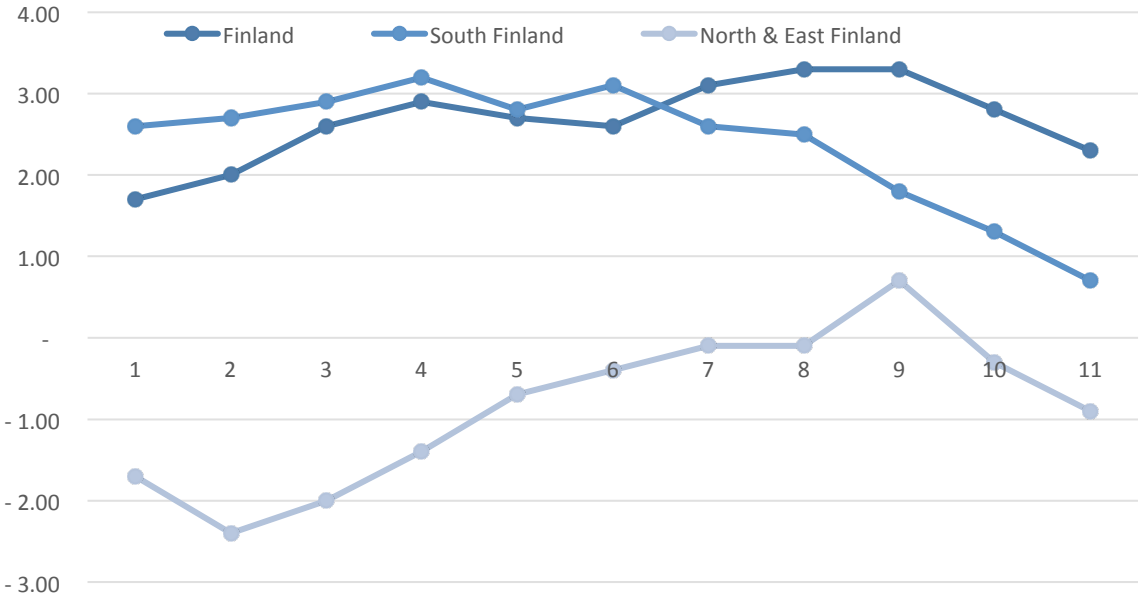
Source: Population Statistics, Statistics Finland

During January-May 2017, 20,510 children were born, which is 1,613 fewer than in the corresponding period in 2016. The number of deaths was 23,179, which is 130 lower than a year earlier. According to the preliminary statistics for May 2017, 10,908 persons immigrated to Finland from abroad and 5,224 persons emigrated from Finland. The number of immigrants was 612 lower and the number of emigrants 1,393 lower than in the corresponding period of the previous year. In total, 2,604 of the immigrants and 3,471 of the emigrants were Finnish citizens. (Population Statistics, Statistics Finland.)

The rate of net migration has been about three percent yearly in the past decade in Finland (**Figure 4**). North & East Finland has been losing population almost every year from 2005 to 2015. From many regions in North & East Finland people are constantly moving out to

the southern parts of Finland, and despite some immigration, northern and eastern Finland is losing population, especially young adults and the working age population.

Figure 4. Crude rate of net migration plus statistical adjustment years 2005-2015, Finland

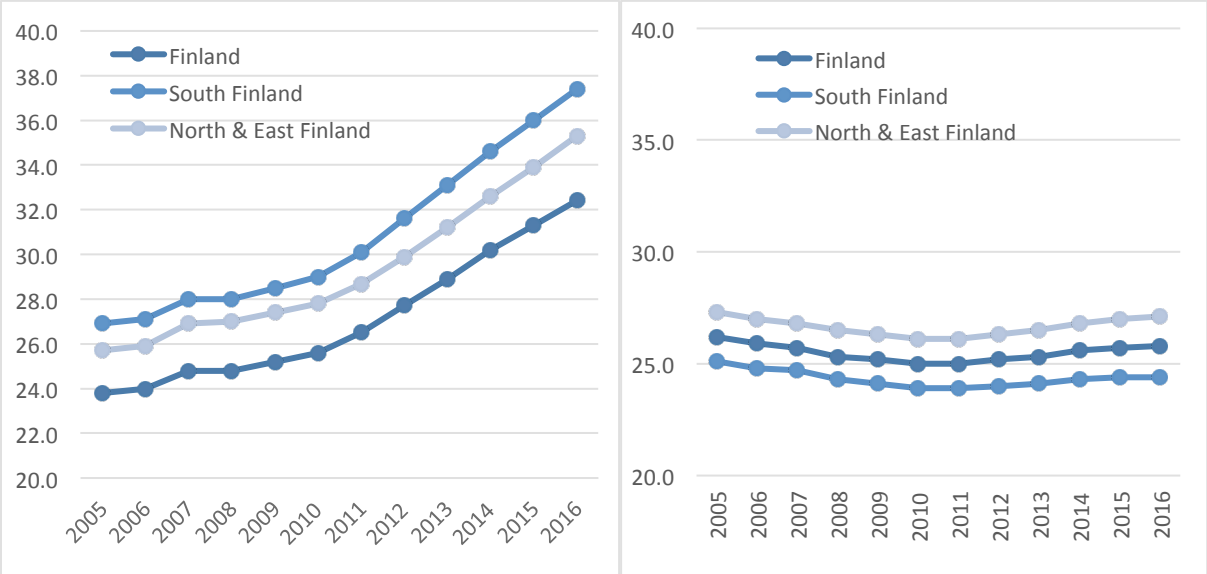


The worsening of the dependency ratio is due to the ageing of the population. The share of children (aged 0-14 years) has been quite steady and relative to the size of the working age population. However, the size of the elderly population is growing fast and old age dependency ratio has risen from 24 % to 32 % between years 2005 and 2016. (**Figure 5.**) In South Finland as well as in North & East Finland the old age dependency ratio is higher that the country average. In South Finland area the ratio was nearly 38 % in 2016, having thus grown more than 10 percentage points in ten years' time.

As can be seen in **Figure 5**, young age dependency ratio is higher in North & East Finland than on average in Finland. At NUTS2 level, the young age dependency ratios have been quite steady during the years 2005-2016.

The mean age of women at birth of the first child is in Finland about the same as in European Union (28 countries), 28.8 years in 2015. In Finland, the mean age has risen almost by one year in the period of ten years. Infant mortality rate in Finland is the lowest among the YA countries: 1.7 in 2015. Fertility rate was 1.64 in 2015 which is a bit higher than EU28 average (1.58 in 2014). Fertility rate is higher in North & East Finland (1.92 in 2014) than in South Finland (1.66 in 2014) or in Finland on average. Like in Europe generally, in the long run fertility rates have gone downwards.

Figure 5. LEFT: Old dependency ratio 1st variant (population 65 and over to population 15-64 years) (%) RIGHT: Young-age dependency ratio 1st variant (population aged 0-14 to population 15-64 years) (%)

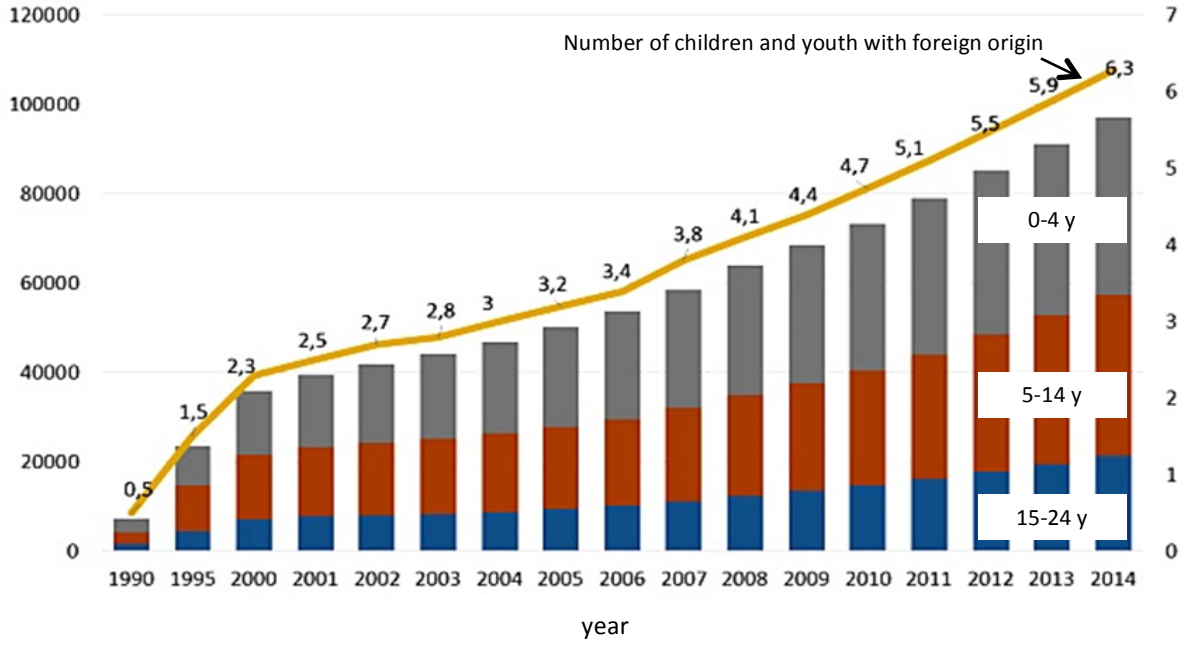


Actually, in year 2017, the number of children born in Finland will be lower than ever since the last famine years 1866-68, although the size of the population has more than doubled. This development will have severe consequences for the dependence ratio in the future. The share of people with foreign background as been very low compared to other European countries. In this sense, Finland has been an isolated country.

In 2014, there were about 97 000 children and young people (aged under 25 years) with mother tongue other than Finnish or Swedish (**Figure 6**). The share of foreign origin in the age group 0-24 year olds was 6.3 %. (Statistics Finland.) The biggest populations with foreign origins are Estonians and Russians, which is quite natural as Estonia and Russia are the neighboring countries of Finland.

According to Statistics Finland's latest population projection, there would be 882,000 persons aged under 15 in Finland in 2030. The number of persons aged under 15 has last been this low in 1894. At the beginning of the 1980s, one in five Finns were aged under 15. According to the projection, the share of persons aged under 15 in the population would decrease to 14 per cent by 2060. The main reason for the declining share of young people is a low birth rate.

Figure 6. Number of children and youth with foreign origin by age group (0-4 years, 5-14 years, 15-24 years) (left axis), and percentage of children and youth (0-24 years) with foreign origin of the whole age group (right axis) in Finland in 1990-2014

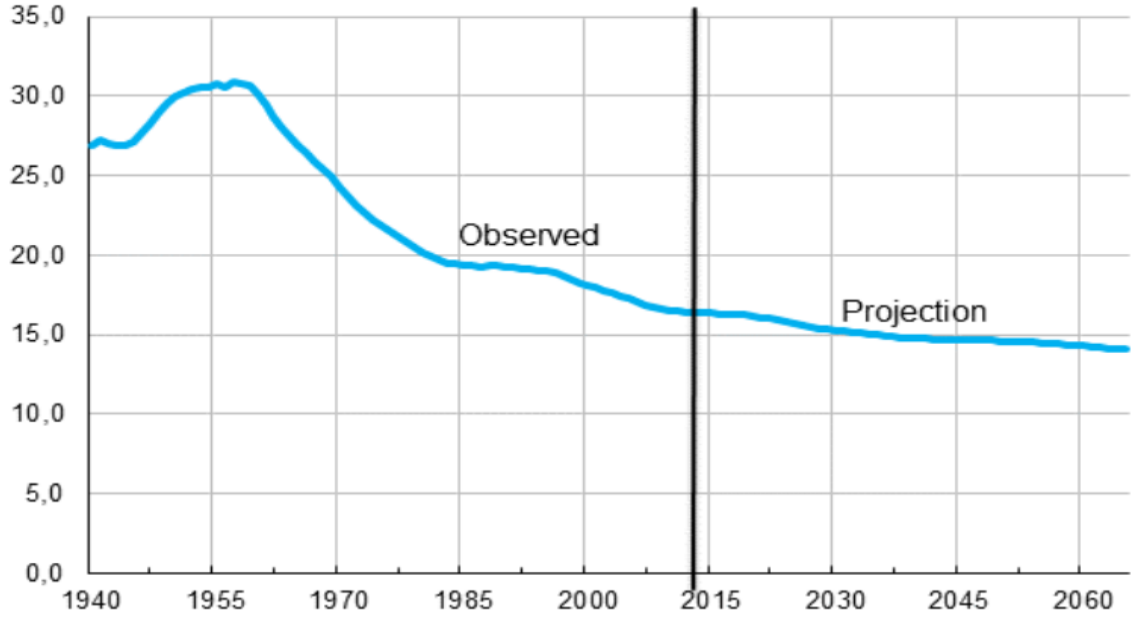


Source: Väestöliitto.

The number of the population of working age (aged 15 to 64) was highest in 2009, when there were 3.55 million such persons in Finland. During 2010 to 2014, the number of working-age people has fallen by 69,000 persons. According to the population projection of 2015, the number of working-age people would decrease from the current 3.48 million to 3.41 million, or by 75,000 persons, by 2030. After this, the number of working-age people would recover slightly, and by 2045 they would number 3.46 million. Then, the number of working-age people would again start declining and, according to the projection, they would number 3.40 million in 2060. The proportion of people of working age in the population will diminish from the present 64 % to 59 % by 2030 and to 57 % by 2060.

The so-called self-sufficiency forecast describes a situation where there would be no immigration and emigration at all and only the birth rate and mortality would influence the age structure. According to the self-sufficiency forecast, the number of working age people would go down by the year 2030 by 300,000 persons and by the year 2050 by 550,000 persons (**Figure 7**).

Figure 7. The share of persons aged under 15 in the population in Finland, in 1940 to 2065 (%)



Source: Population Statistics, Statistics Finland

The proportion of persons aged 65 or over in the population is estimated to rise from the present 19.9 to 26 per cent by 2030 and to 29 per cent by 2060. The demographic dependency ratio, that is, the number of children and pensioners per one hundred persons of working age, will go up in the near future. At the end of 2014, the demographic dependency ratio was 57.1. According to the projection, the limit of 60 dependents would be reached in 2017 and that of 70 dependents by 2032. In 2060, the demographic dependency ratio would be 76. (Statistics Finland.)

To summarize the findings on demographic changes in Finland, and as it has been shown above, young generations have been shrinking in size for some time now and the number of elderly people is growing fast. Young people born in peripheral regions of the country (like FR Kainuu) tend to move to metropolitan area and other regions in southern Finland. Finnish family policy has failed badly in raising the fertility rate and the number of children. Dependency ratio is getting higher. At the same time hostility towards people with foreign background has increased among native population.

1.2 General state of the economy

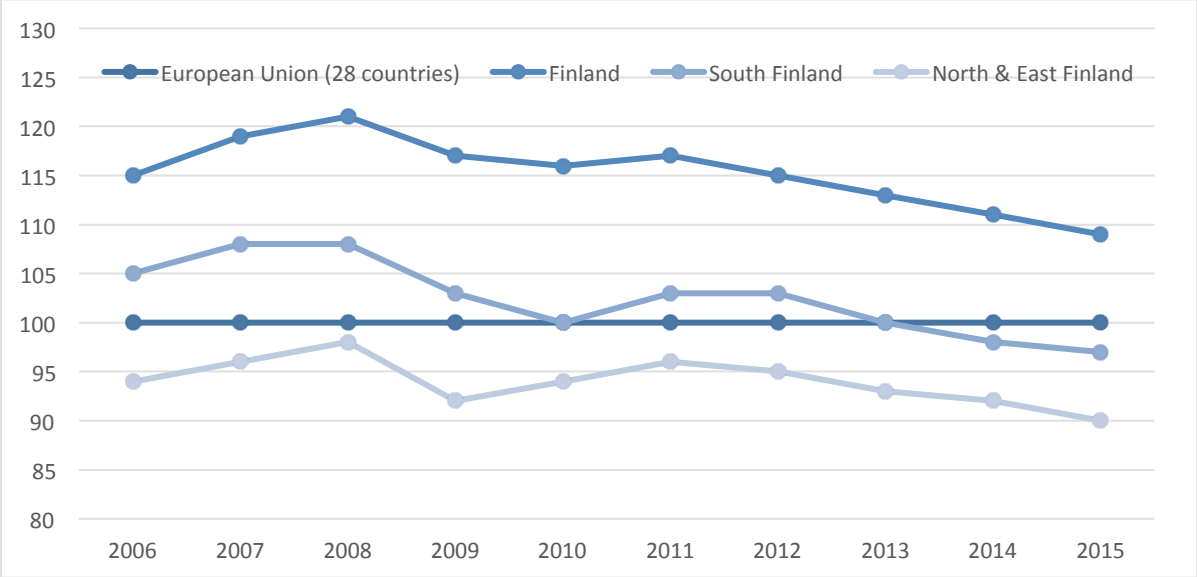
Finnish economy has suffered two severe crises since the 1980's, first in the early 1990's and then as an effect of the global financial crisis from 2008 onwards. **Figure 8** reflects the damage the 2008 global financial crisis made on Finnish economy. Not only did gross domestic product

(GDP) fall due to the crisis, but also labour productivity relative to EU average decreased substantially. The Finnish economy suffered from the crisis for much longer than did many other Western countries. In 2016 there finally were some signs of recovery to be seen, e.g., GDP grew 1.9 percent relative to year 2015.

Figure 8. GDP at current market prices, Euro per inhabitant

As is presented in **Figure 8**, the fall of GDP per capita from 2008 to 2009 was much steeper in Finland than it was in EU28. After the crisis the GDP per capita gap between EU28 and North & East Finland got wider. Before the crisis GDP per capita was higher in South Finland than in EU28, but after 2010 South Finland has been lagging behind EU28 and the gap has even grown in 2015 (see **Figure 9**). Although we do not have appropriate data at hand, it is highly likely that the figure for FR Southwest Finland would look more positive than these figures for NUTS2 are South Finland. Probably the GDP per capita in FR Southwest Finland would be higher than Finland on average.

Figure 9. GDP at current market prices, Euro per inhabitant in percentage (%) of EU28 (=100), 2006-2015

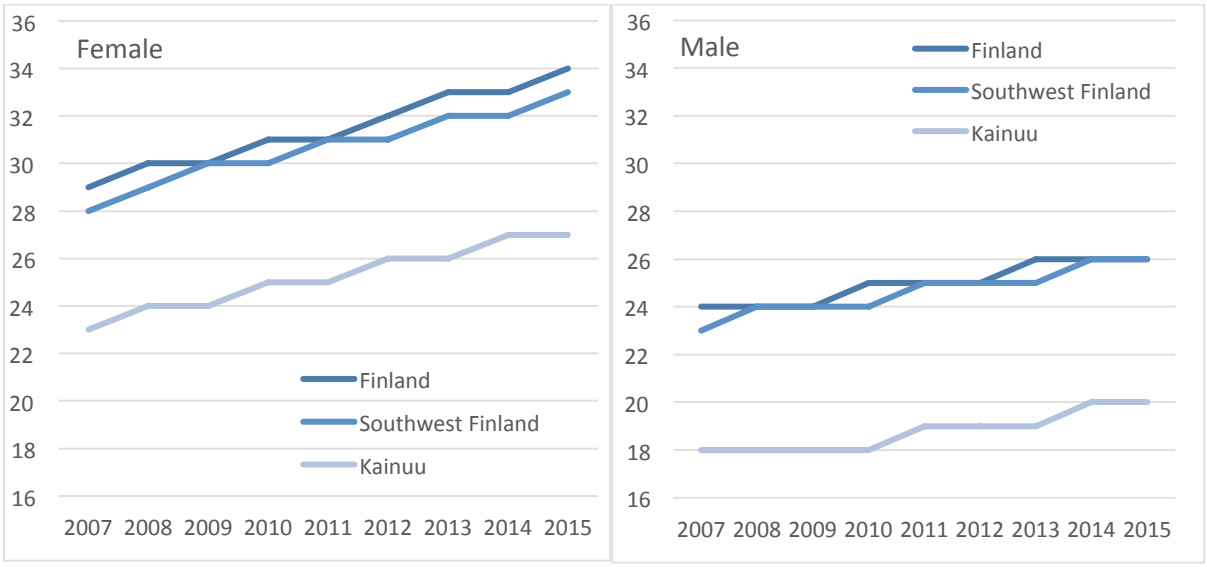


To summarize the findings on the state of economy, it needs to be emphasized that during the past 25 years the economy of Finland has suffered two deep economic depressions, first in the early 1990s and then after the global financial crisis after 2008. The crises hit hard on Finnish economy and had severe consequences on the gross domestic product (GDP) and labour productivity of the country, which both decreased substantially. The consequences of these crises materialized, e.g., in shrinking employment and increasing unemployment. But they also have had a huge impact on the mentality and subjective future prospects of Finnish people.

1.3 Education and training system

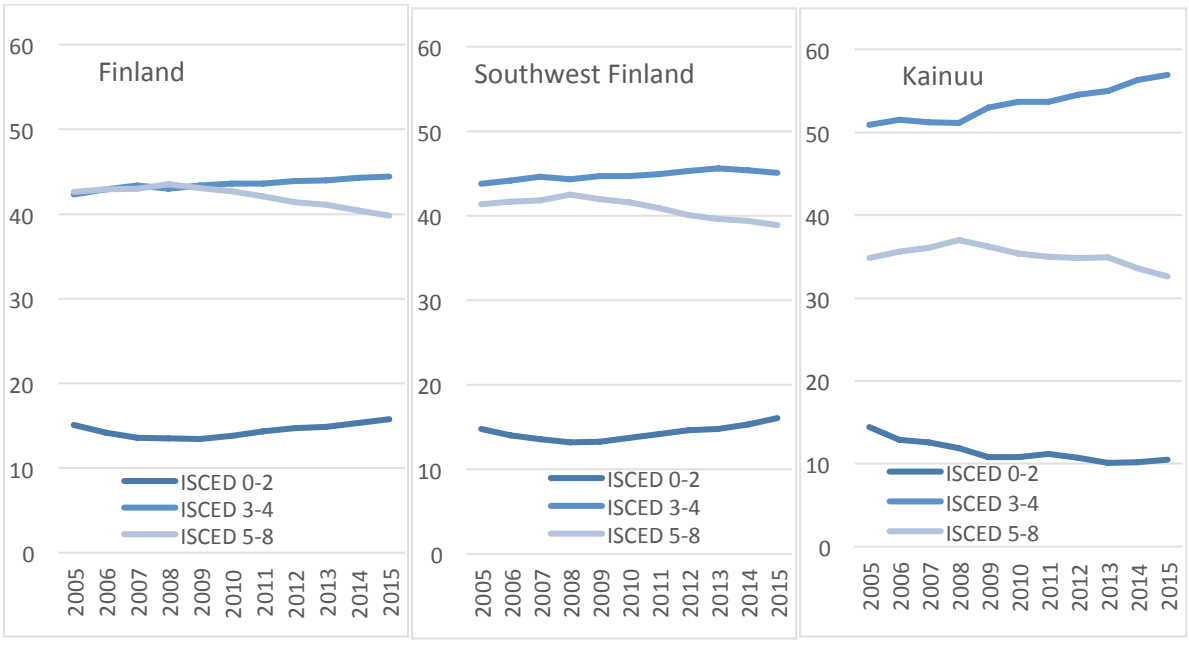
In Finland, education is very much a gender related phenomenon. The fields of education as well as occupations in working life are strongly segregated by gender. In school, girls clearly outperfom boys in reading and languages. The most recent PISA assessment shows that girls do better in mathematics and sciences as well (OECD 2016a). Girls' better success in school is also reflected later on in life by the fact that women have higher educational attainment level than men: 34 % of the female population has completed ISCED 5-8 level of education, whereas only 26% of men have attained the respective level of education (**Figure 10**). The share is about the same in FR Southwest Finland as it is in Finland on average. However, population in FR Kainuu has a remarkably lower rate of ISCED 5-8 educational attainment. In Kainuu 27 % of women and 20 % of men have ISCED 5-8 level education.

Figure 10. The share of ISCED 5-8 level education of population aged 15 years or more by gender in Finland, FR Southwest Finland, and FR Kainuu, 2007-2015 (%)



Young people naturally have a higher educational level than the population in general. About 85 percent of the population aged 30-34 years have completed some post compulsory education (**Figure 11**).

Figure 11. Young adults' (30-34 year olds) educational attainment by ISCED levels in Finland, FR Southwest Finland, and FR Kainuu, 2005-2015



About 40 percent have completed ISCED 5 level education or higher. The change pattern within ten years time, from 2005 to 2015, look much the same in Southwest and in Finland on average. There is a small difference in the relative proportions between ISCED 3-4 and ISCED 5-8 levels so that on FR Southwest Finland young adults with ISCED 3-4 level have increased their share at

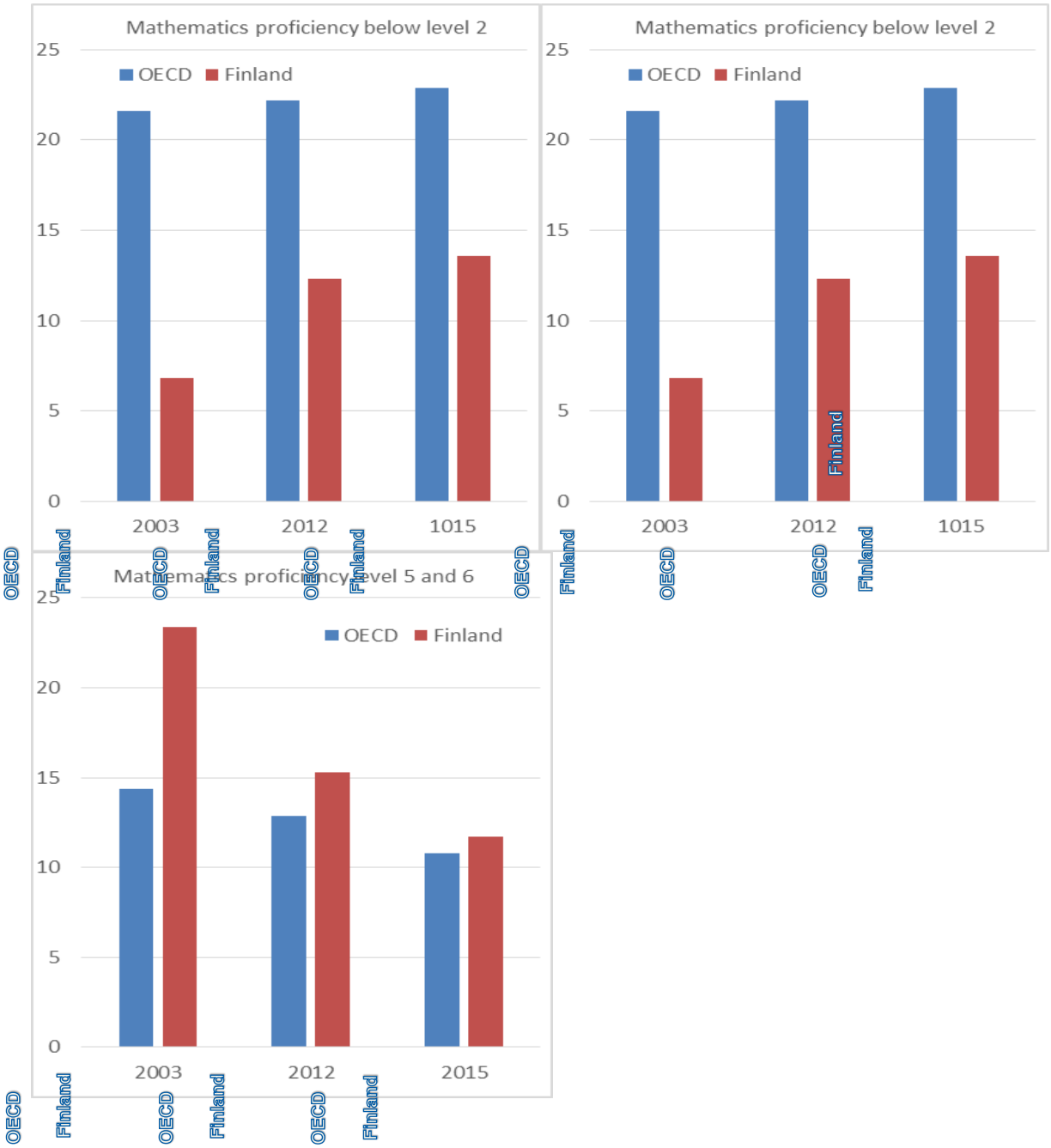
the expence of young adults with ISCED 5 or higher. The share of 30-34 year olds with only basic level education (ISCED 0-2) has increased in FR Southwest Finland and in Finland on average. There are clear differences between FR Southwest Finland and FR Kainuu: in Kainuu the share young adults having only ISCED 0-2 level education has decreased in ten years time and was about 10 percent in 2015. In FR Southest Finland the share of respective group has increased since year 2008. Most young adults in FR Kainuu attain ISCED 3-4 level education, and that percentage has incresed quite rapidly. The growing percentage of ISCED 3-4 level people has come at the expense of higher level attainment (ISCED 5 or higher).

PISA results from the early 2000's on have shown that not only is the average level in reading, mathematics, and sciences high in Finland, but also the share of low achievers is comparatively small. This is a very important sign of an equalitarian and effective school system. The other important sign is that the Finnish school system has been successful in compensating for the poor socioeconomic background of pupils. The effect of social class on learning outcomes has been proven to be weaker in Finland than in most countries participating in PISA. Also, the between school variation in learning outcomes is one of the smallest in the OECD world. The school system has proved to be homogeneous in quality.

However, according to recent developments in PISA assessments, all these positive results of the Finnish school system have been deteriorating. The effect of socioeconomic and cultural background on learning outcomes has gotten stronger.

The average proficiency levels in literacy, mathematics, and sciences has weakened substantially, and the proportion of pupils with low level of skills has grown significantly. As can be seen in **Figure 12**, the share of low performers in mathematics has grown on average in OECD countries (from 21.6 % to 22.9 % from year 2003 to year 2015), but in Finland the proportion has doubled in twelve years, from 6.8 % to 13.6 %. The percentage of low performers in Finland is still well below OECD average but the change is remarkable and has caused a lot of discussion on the causes behind these developments.

Figure 12. The share of low performers (below test level 2) and high performers (test levels 5 and 6) in mathematics of the 15 year olds: OECD average and Finland, in years 2003, 2012 and 2015 (%)

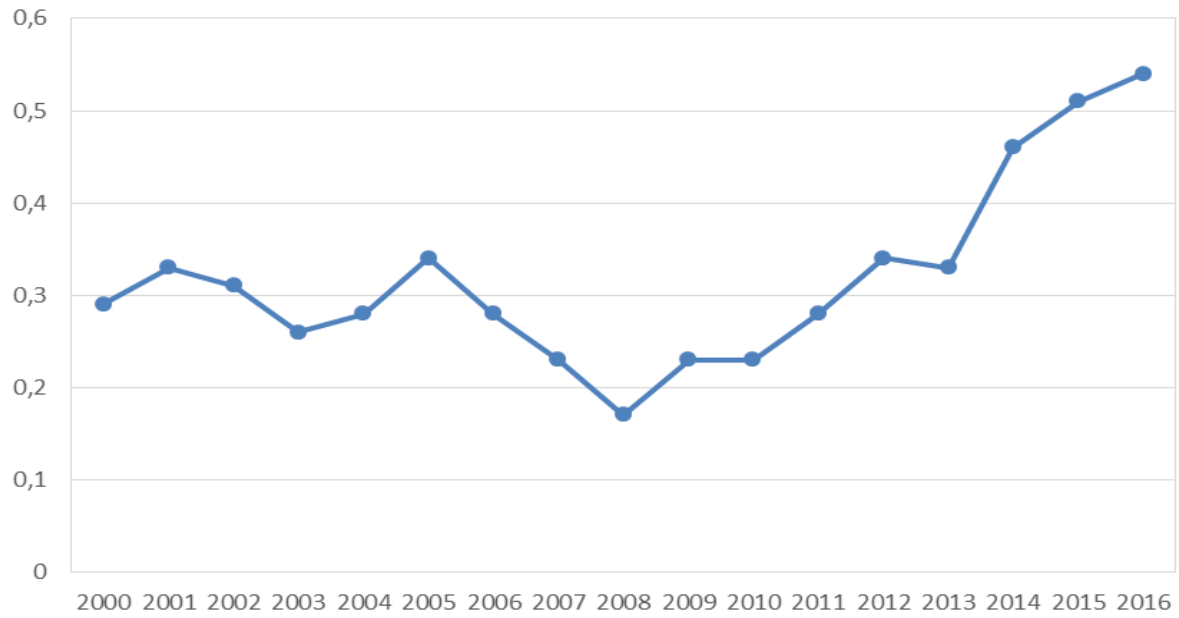


Besides the growing proportion of low performers there has also been a significant decline in the proportion of high performers in reading, mathematics, and sciences in Finland. The same trend can be seen in the OECD average as well, but, again, in Finland the change has been bigger than in any other country. For example in mathematics, the proportion of high performers has halved in twelve years' time, from 23.4 % to 11.7 %.

PISA results reflect the undesired development that more and more pupils are having difficulties in obtaining decent level of mathematical and reading skills in schools. Later on they will have difficulties in attaching to labour market and getting a decent job.

Despite growing difficulties in coping with the competition in school and education system, dropping out of comprehensive school has been very rare in Finland. Almost all students complete their compulsory education and get a certificate. However, the share of pupils leaving school without a leaving certificate from comprehensive school has been increasing since 2008 (**Figure 13**). A total of 409 students had discontinued studies in one way or another in comprehensive school during the 2015/2016 academic year. The number of those who had completely dropped out from compulsory education in the spring term was 94 and those over the age of compulsory education having left school without a leaving certificate from comprehensive school was 315. More than one-half of school drop-outs were boys. The number of boys among those who had completely dropped out from compulsory education was 53, and 185 among those having left comprehensive school without a leaving certificate. (Statistics Finland.)

Figure 13. Pupils having left comprehensive school without a leaving certificate in Finland, 2000-2016 (%)

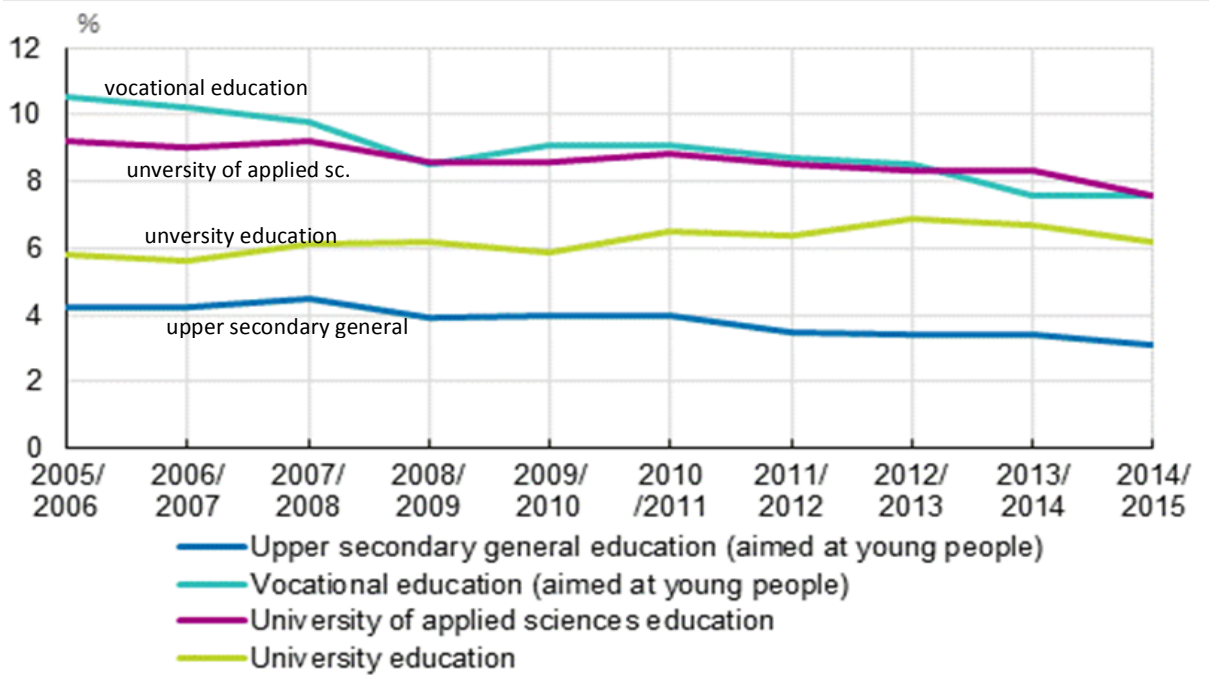


Source: Statistics Finland

Dropping out of education has been considered a big problem especially in secondary level vocational education. In all, 5.1 per cent of students attending education leading to a qualification or degree discontinued their studies and did not resume them in any education leading to a qualification or degree during the 2014/2015 academic year (**Figure 14**). Compared to the past 10 year period, discontinuation has decreased in upper secondary general and

vocational education, and universities of applied sciences and remained relatively unchanged in university education. (These data derive from Statistics Finland's Education Statistics. Students who have changed their sectors of education, e.g., students who have switched from upper secondary general school to vocational education, are not calculated as discontinued students.) Men discontinued completely their education leading to a qualification or degree in the academic year 2014/2015 more often than women in all sectors of education. Men discontinued their university of applied sciences education most commonly and women their vocational education. Women discontinued their studies in their own sectors of education more often than men only in vocational education. (Statistics Finland.)

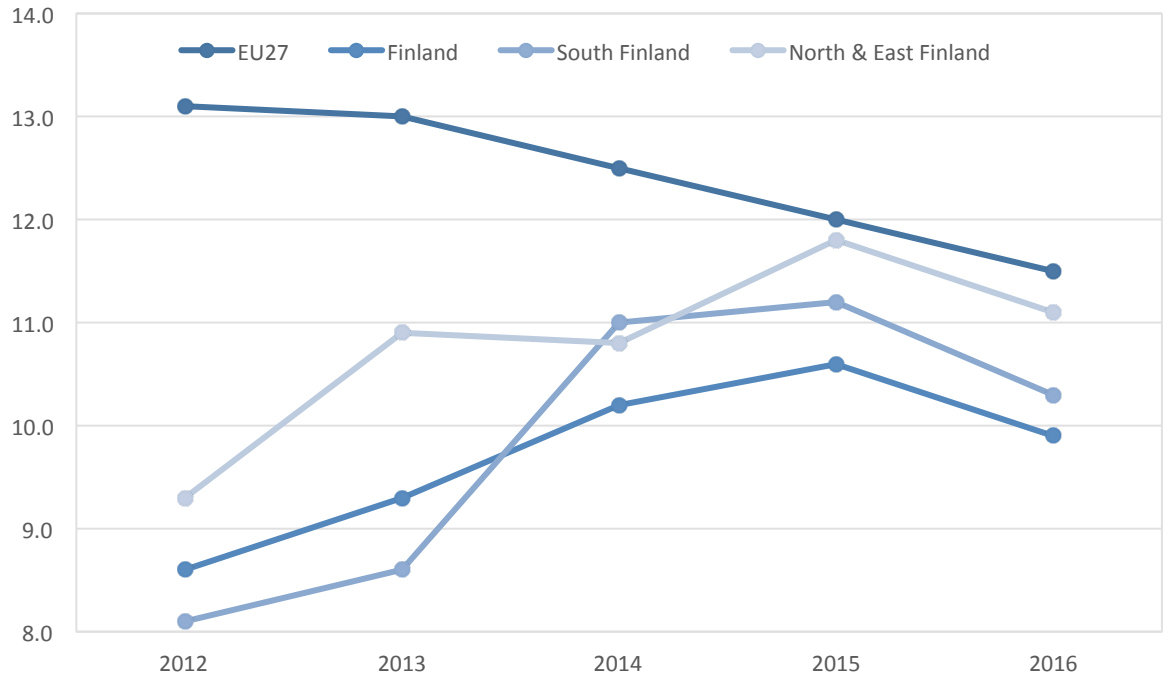
Figure 14. Discontinuation of education in upper secondary general, vocational, university of applied sciences, and university education in academic years in Finland, from 2005/2006 to 2014/2015 (%)



Source: Statistics Finland

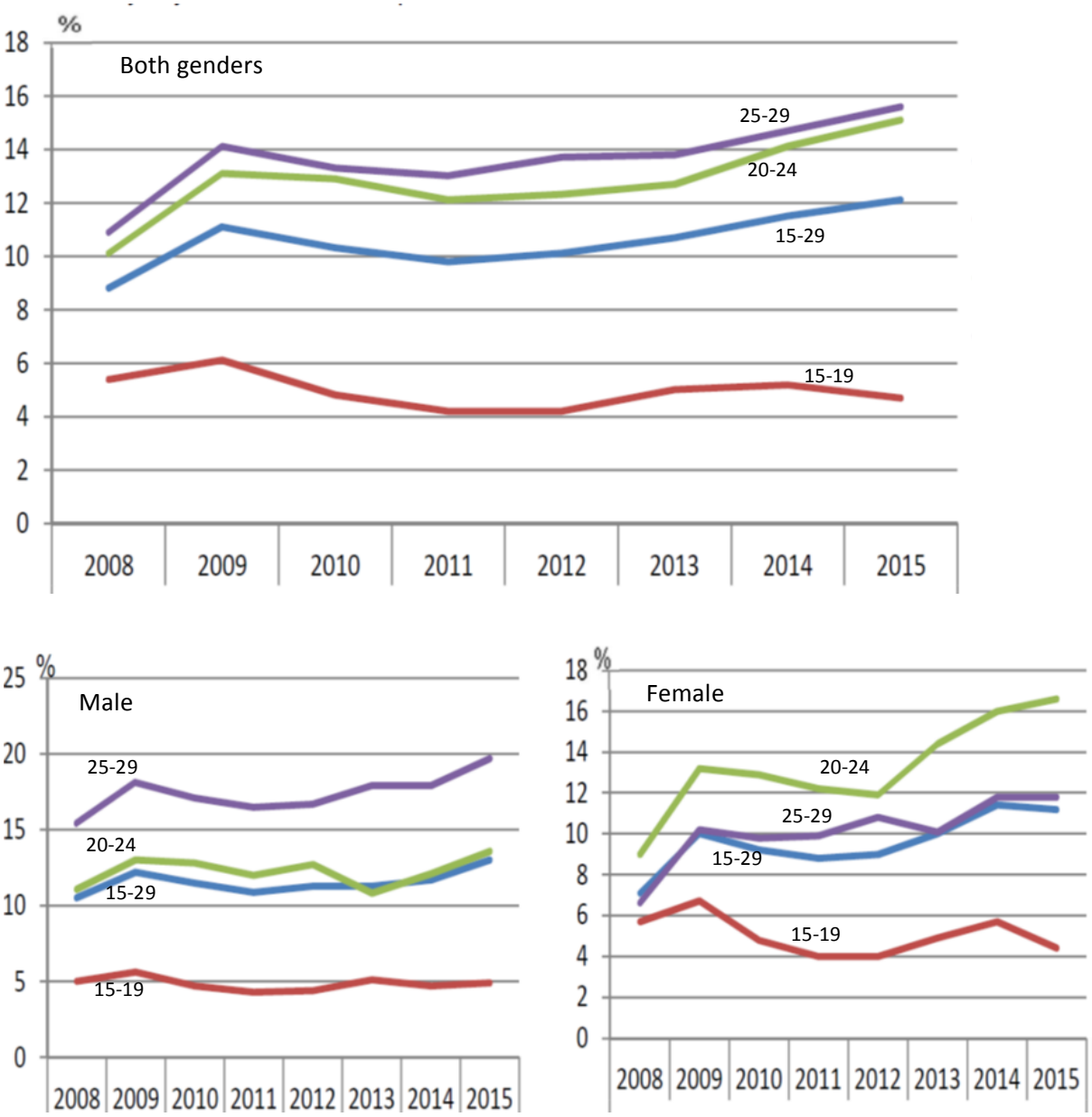
The trend in the percentage of NEET young has been downwards in Europe since 2012. At the same time the percentage of NEET young has been increasing in Finland. However, year 2016 there seems to be a turning point for the growing NEET figures in Finland (**Figure 15**). The share of NEET youth of all young people diminished a bit in both NUTS2 areas in Finland as well as in Finland on average. The share of NEET youth is bigger in North & East Finland than in South Finland or in Finland on average. However at NUTS2 level the differences between areas are rather small, less than one percentage point.

Figure 15. Young people neither in employment nor in education and training in EU27, Finland, South Finland, and North & East Finland, 2012-2016 (%)



There is also recent research on the so called NEET group made in Finland with interesting statistics by age group and gender. Young people not in employment, education or training or conscripts has increased after 2010 for the young cohorts except those aged from 15 to 19 (**Figure 16**). The NEET rate for 20 to 24 year-old males has increased especially significantly. The educational attainment of young males is not as good as for females, which explains the difference for its part. The percentage of NEET women aged 20-24 has almost doubled between 2008 and 2015, from nine percent to about 16.5 percent. At the same time percentage of NEET men aged 25-29 has increased from 15 percent to 20 percent.

Figure 16. Young people not in education or employment (NEET) by age group and gender in Finland, 2008-2015

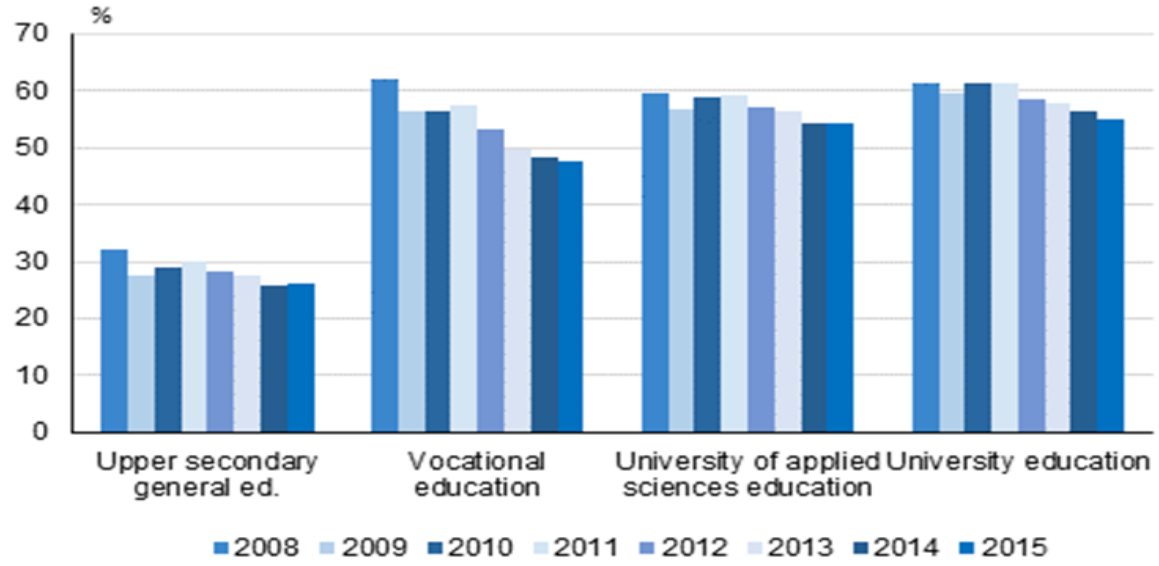


Source: Alatalo, Mähönen & Räisänen 2017.

The age of graduation from universities is comparatively high in Finland. One crucial reason behind long study times and late graduation is that it is very common for students to work while studying. In 2015, slightly less than one-half of students were employed during their studies (**Figure 17**). Since 2004, the share has been highest in 2008 when nearly six out of ten students were employed during their studies. Working was most common in connection with university and university of applied sciences studies. Fifty-five per cent of university students and 54 per cent of university of applied sciences students had an employment contract while studying. Close to one-half of the students attending upper secondary vocational education were

employed during their studies. In 2015, the share of employed students in university education decreased the most, by around one percentage point from the year before. (Statistics Finland.)

Figure 17. Shares of employed students aged at least 18 of all students in Finland, 2008–2015 (%)



Source: Statistics Finland

Women worked while studying more frequently than men: 53 per cent of women and 46 per cent of men had an employment contract while studying. The proportion of employed women in upper secondary general education and in university of applied sciences education was ten percentage points higher than that of men. Thirty per cent of women in upper secondary general education were working alongside studies and 56 per cent of women in university of applied sciences education. Fifty-one per cent of women in upper secondary vocational education worked, which was seven percentage points more than for men. Employment during studies grew clearly the older the students were. While 22 per cent of students aged 18 were working, the share of employed students aged at least 25 was nearly triple. Of 21-year-old students, 39 per cent and of 24-year-old students, 49 per cent had an employment contract. Among students aged 25 or over, 61 per cent were employed during their studies. (Statistics Finland.)

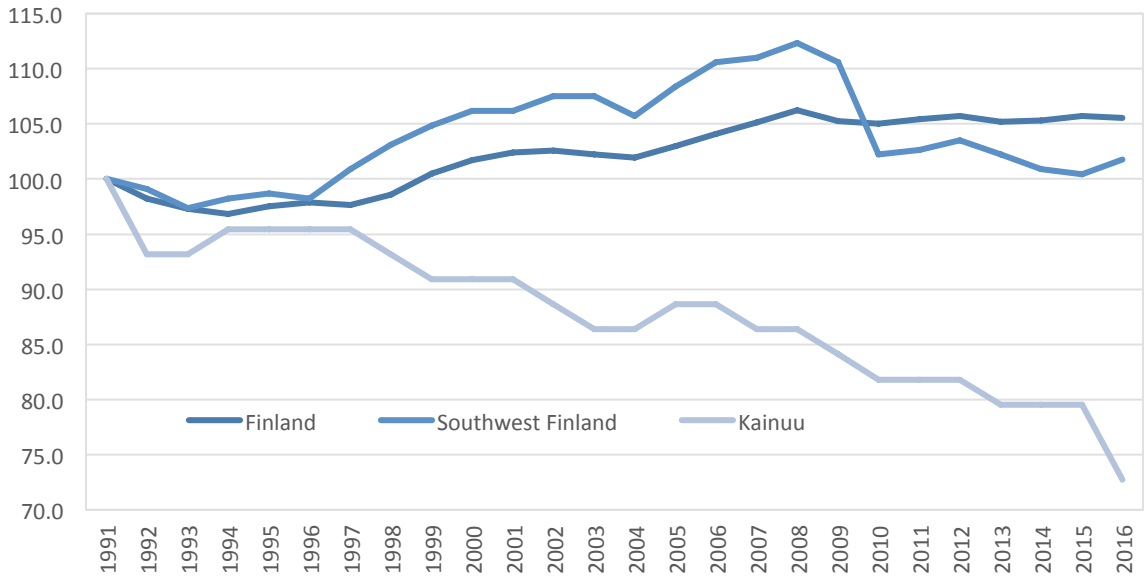
To summarize the findings on learning and education, we can say that despite the recent downturn in learning outcomes in PISA assessments, on average Finnish 15-year-olds are very good in mathematics, literacy, and sciences. However, the increasing percentage of low achievers is a national concern in Finnish education policy. Share of pupils having left comprehensive school without a leaving certificate is very low in Finland, but it has been increasing since 2008. It is most likely that more young people with poor educational qualifications and poor skills will

enter labour market in the future. Low educational attainment (below ISCED 5) is more typical to male than female, and more common in FR Kainuu than FR Southwest Finland. From 2012 to 2015, the statistical trend in the percentage of NEET young was downwards in Europe but upwards in Finland. Probably, the number of vulnerable youth (especially boys) will increase in Finland.

1.4 Labour market

The 1990's started in Finland with a rapidly deepening economic depression. The average unemployment rate increased up to 20 percent, and employment rate with the number of people in labour force decreased (see **Figure 18**). During the whole of the 1990's the number of people in labour force continued to stay at a lower level than at the turn of the decade. FR Southwest Finland recovered earlier than Finland on average, not to talk about FR Kainuu where the size of the labour force has been decreasing for the whole period examined in the **Figure 18**. Year 2016 seems to have witnessed a new dramatic downturn in labour force in FR Kainuu. The global financial crisis in 2008 hit especially hard FR Southwest Finland where the number of people in labour force dove dramatically.

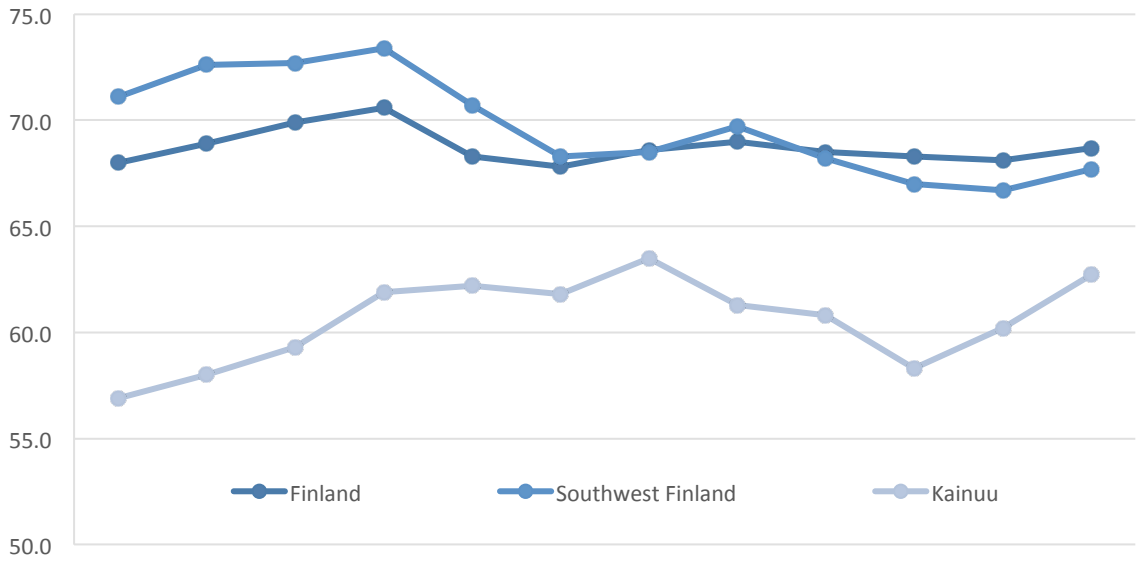
Figure 18. The development of number of people in labour force in Finland, FR Southwest Finland, and FR Kainuu, 1991-2016 (year 1991=100)



Due to relatively high structural unemployment and increasing share of elderly people (in retirement) in the Finnish population the employment rate has been estimated to be unbearably low. Before the 2008 crisis employment rate was rising for several years. But after

2008 with increasing unemployment and discouraged workers leaving labour market altogether the employment rate rapidly got to a lower level and has not recovered. Employment in FR Southwest Finland has been at a higher level than in Finland on average (**Figure 19**). Respectively employment rate in FR Kainuu has been much lower than the Finnish average.

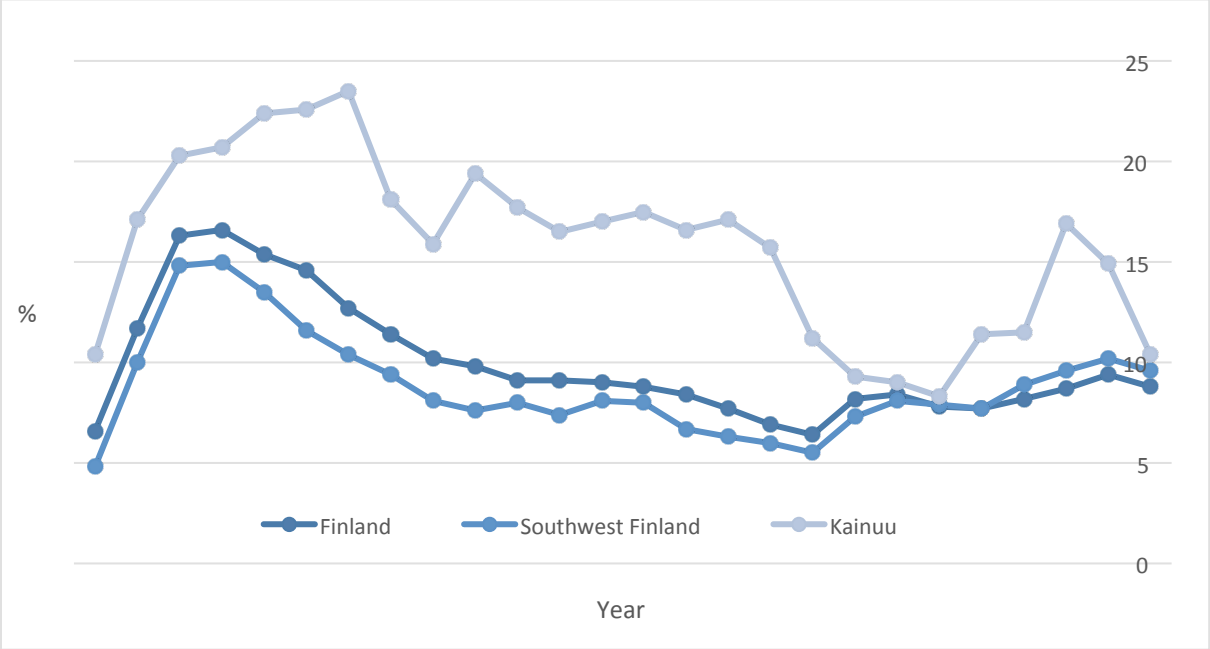
Figure 19. Employment rates in Finland, FR Southwest Finland, and FR Kainuu, 2005-2016 (%)



The present Finnish government has set the target at having the employment rate at 72 percent in 2019. There have been various measures taken, but 72 % employment rate will be beyond reach in two years' time. Year 2017 has been the first positive year in Finnish economy since the downturn in 2008. Thus, recovering from the worldwide financial crisis of 2008 took about ten years in Finland. And still the economic future is full of uncertainties.

In 1991 unemployment begun to rise drastically. The worst years were 1993-1995 when the unemployment rate was at the highest level it had ever been in the history of Finland. After that the unemployment begun a steady fall till the year 2008 after which the unemployment rate begun to rise again. For FR Kainuu the year 2014 was the peak in unemployment rate with about 17 percent of labour force being out of work (**Figure 20**). In FR Southwest Finland, unemployment rate has usually been at a lower level than in Finland on average. However, in 2013 unemployment rate in FR Southwest Finland rose above the country average.

Figure 20. Unemployment rate in Finland, in FR Southwest Finland, and FR Kainuu 1991-2016 (%)



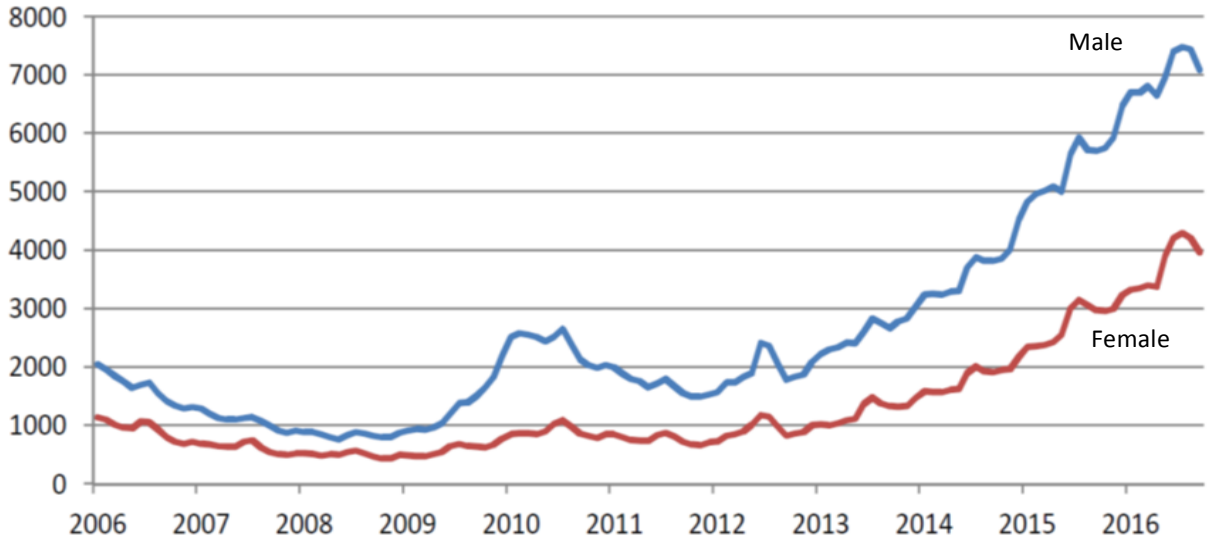
Just recently there was a descriptive analysis of statistical nature published which discusses working life and being outside of it for young people and young adults. The target groups of the analysis are young people aged 15-24 and for some parts, young adults up to the age of 34. The issues discussed are employment and job tenure, the occupational and branch level developments in the labour market, working conditions, occupations of job-seekers, unemployment and those outside of employment and education or training, all focused on young people. According to the analyses, participation in the working life has changed in many respects in the 2000s for young people and young adults. After the financial crisis 2008, employment rates have decreased, with the exception of the youngest cohorts. Males aged from 20 to 24 have a decreasing trend in the employment rate, unlike females. Employed young women participate more often in education compared to employed young men. The average job tenure for young people is usually low; the emphasis of Finnish young people´s jobs is in the short duration, also in international comparison.

What is crucial, is that it is more difficult than before for young people and young adults to get into a salaried professional position. The labour market position of young adults has worsened as a whole during the prolonged recession period in comparison to older cohorts. The share of 25-34-year-old men in the positions of workers and dependent clerical workers is increasing. The share of these cohorts has decreased in the field of information and communication, and increased in mining, construction, finance and insurance as well as in electrical, gas and heating services. According to academic studies, the deteriorating labour market positions are also visible in terms of income. Job-seekers aged between 20 and 24 are

often unclassified in terms of occupation. The highest share of occupations are found in construction, repair and manufacturing work, while also service and sales occupations are found for over 20 per cent of the jobseekers in the cohort. For the five years older cohort, the share of expert occupations is higher.

After the financial crisis, unemployment for young people has increased, more heavily for males than for females. Youth unemployment has already turned downwards this year, but long-term unemployment is still rising (**Figure 21**).

Figure 21. The number of long-term unemployed 20-29 year olds in Finland by gender, 2006-2016



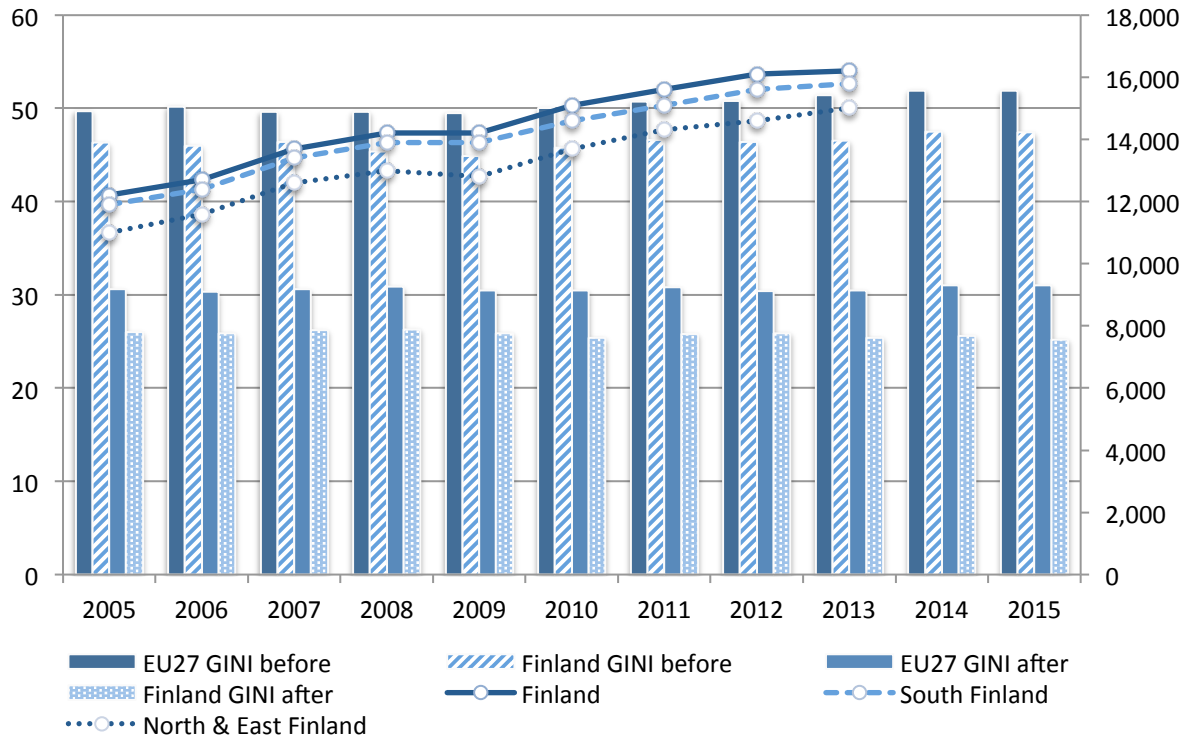
Source: Alatalo, Mähönen & Räisänen 2017.

To summarize the findings on labour market situation in Finland, we conclude that differences in employment rates between regions and age groups are large. Average employment rate is much higher in FR Southewest Finand than FR Kainuu, and respectively, unemployment rate is higher in FR Kainuu than in FR Southwest Finland. The labour market position of young adults has worsened as a whole during the prolonged recession period in comparison to older cohorts. The average job tenure for young people in Finland is usually short in duration, also when compared internationally. It is more difficult than before for young adults to get into a salaried professional position. Young people have a hard time in planning their future especially in economically regressive regions.

1.5 Redistribution and social inclusion

In international comparisons, Finland has had relatively narrow income differences. Socioeconomic and cultural inequalities have been smaller than in most European countries. The cultural gap between social classes is not nearly as wide as, e.g., in Great Britain or France. One of the reason is the cultural homogeneity of the population, but also implemented policies have certainly had an impact on the size of the class differences. However, OECD statistics (OECD 2015; 2016b) show that income differences in Finland have grown since the beginning of the 1990's (Silvennoinen, Kalalahti & Varjo 2016), and, as can be seen in **Figure 22**, the regional differences in disposable income are significant in Finland – when remembering that comparing NUTS2 level areas hide a lot of regional and local differences and inequalities. Disposable income has increased in both NUTS2 areas but the relative difference between the areas has remained almost unchanged.

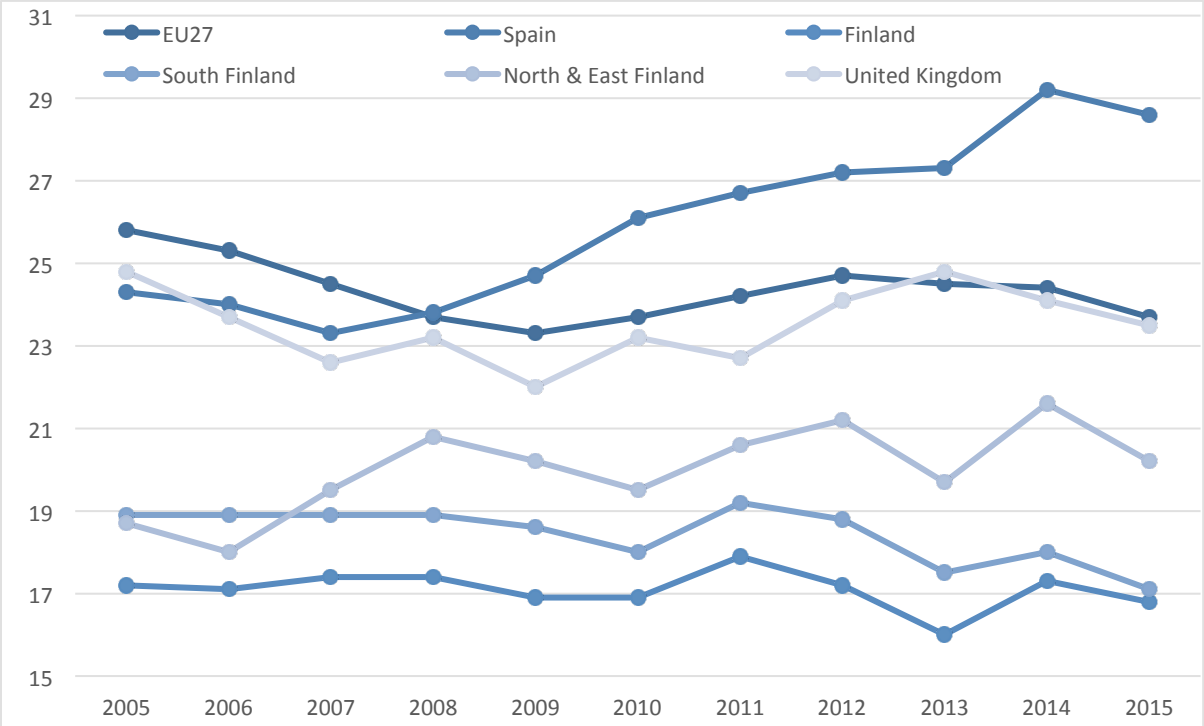
Figure 22. GINI Index before and after transfers (left axis), disposable income in the households in PPS (right axis), in EU27, Finland, South Finland, and North & East Finland, in 2005-2015



The GINI index before and after transfers are lower in Finland than in EU27 countries on average. It seems from figure 21 that mechanism of transfers has been effective in Finland: GINI index before transfers increased from 44.9 % in 2009 to 47.4 % in 2015. At the same time, GINI index after transfers decreased slightly from25.9 % to 25.2 %.

Being at risk of poverty and social exclusion is lower in Finland than it is in EU27 countries on average but it is certainly not non-existent, although the risk is much lower than, e.g., in the U.K., not to talk about Spain. About 17 % of the population has been at risk of poverty or exclusion between 2005 and 2015. There is some variation between the years during that period, but with a long term examination the rate is quite steady (**Figure 23**). The gap between different parts of the country has been growing during the past decade. The risk of poverty and social exclusion has grown bigger especially in northern and eastern regions of Finland.

Figure 23. People at risk of poverty and social exclusion, in EU27, Finland, South Finland, and North & East Finland (plus Spain and the U.K.), in 2005-2015 (%)



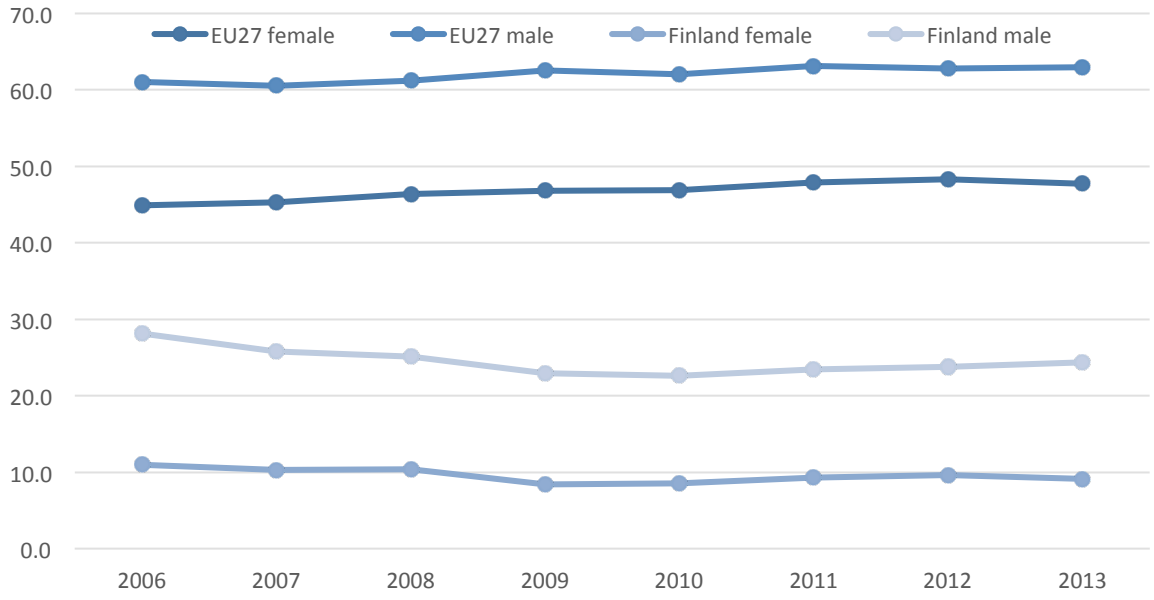
It is agreed that the proportion of people at risk of poverty and social exclusion is substantial in Finland, and especially in northern and eastern regions of the country. However, severe material deprivation rate is at a substantially lower level than in other countries participating in *Young Adulllt* research. The rate has been 2-3 percent in both NUTS2 level areas and in Finland on average.

In summary, income differences, as well as risk of poverty, are smaller in Finland than in most European countries. GINI Index has increased since the year of financial crisis 2008. However, mechanism of transfers seems to have been effective in Finland, since although GINI index before transfers has increased and GINI index after transfers has decreased slightly.

1.6 Health and well-being

According to PISA 2015 study Finnish 15 year olds are among the most satisfied youth in the OECD world (OECD 2016a). Nearly half of Finnish pupils (45 %) say they are very satisfied with their life whereas the OECD average is 34 %. Among 49 participating countries only the youth in Dominican Republic, Mexico, Costa Rica, and Croatia felt were more satisfied with their life than Finnish young people.

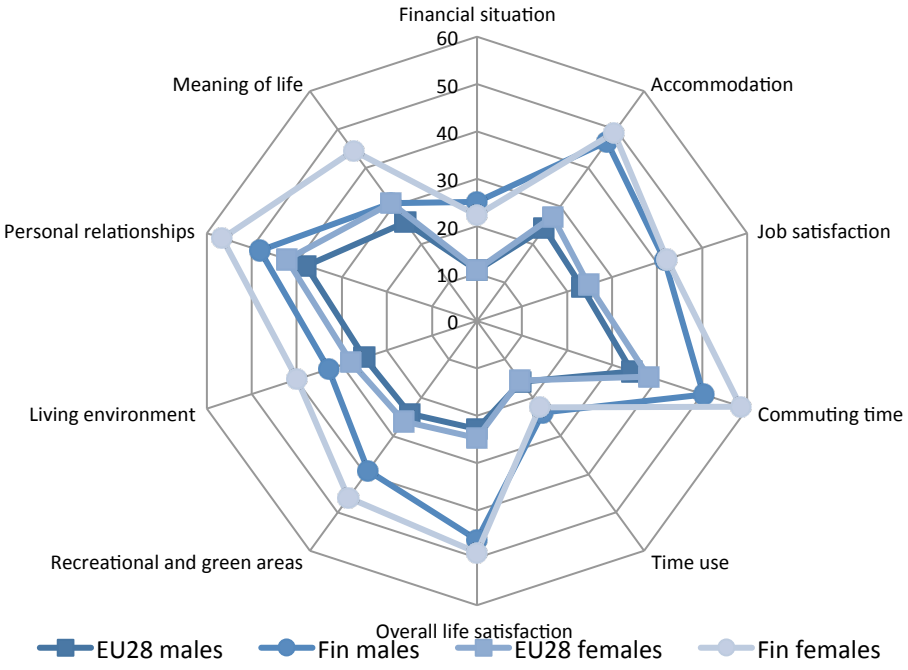
Figure 24. Rate of youth (20-29 years) living with their parents by gender, EU27 and Finland (%)



One feature in coming to age in Finland is that young people move away from their childhood home at a relatively early age. In some European countries young leave their childhood home as late as at the age of 30. This would be considered as some sort of personal failure in Finland. Finnish youth think that having an own apartment (rented or owned) is a crucial step in gaining independence as a person and a citizen. In the age group 20-29, only 10 percent of Finnish women live with their parents (**Figure 24**). That has not changed in the past ten years or so. Of the respective group of Finnish men about 25 percent live with their parents. The percentage has been slightly decreasing since 2006. The development is quite the opposite compared to their EU27 peers of which 63 % lived with their parents in 2013. The difference in percentage points between genders is about same in Finland and in EU27. The share of young men living with their parents is about 15 percentage points higher than among young women.

Finnish young people are clearly more satisfied with several areas of their life than their peers in Europe on average, as can be seen in **Figure 25**.

Figure 25. High satisfaction in various life domains of population aged 25-34 by gender, EU28 and Finland



Especially large differences between Finnish youth and European average are in accommodation, job satisfaction, and overall life satisfaction (**Figure 25**). Areas with the lowest level of satisfaction are the same in Finland as the European average: time use and financial situation. It seems that in Finland young women are more satisfied than young men. Especially the sense on meaning of life makes a difference between genders in Finland.

To summarize the findings in health and well-being it suffices to say that Finnish young people are relatively satisfied with their life in most areas of life. However, in many respects young women tend to be more satisfied than their male counterparts. On feature typical to Finland is that young cohorts leave their childhood home to live on their own at a relatively early age. This probably increases their felt autonomy and independence and affect their well-being as well.

2. Concluding remarks

The school system in Finland has proved to be homogeneous in quality. Differences between schools are growing but still relatively small. Young people have relatively good educational

opportunities at the upper secondary and tertiary level. However, there are about 10 percent in each age cohort young people who do not continue in education or training after basic education. Their situation is getting worse while the competition in the labour market gets tighter. A new development in Finnish school system is the steadily decreasing level of average learning outcomes tested in PISA, TIMSS, and PIRLS. During the past decade, the share of high performers has been decreasing and low performers has been growing. Low performance in compulsory school has far reaching consequences on young person's ability to climb in the hierarchies of education system and labour market.

Finnish economy has suffered two severe crises since the 1980's, first in the early 1990's and then as an effect of the global financial crisis from 2008 onwards, which have had drastic effects on youth employment. Long-term unemployment of 20-29 year old males was seven times higher and females eight times higher in 2016 than in 2008. Uncertain employment prospects have also discouraging effects on educational motivation especially for low achieving young. In certain regions of the country, including FR Kainuu, getting a job without work experience and vocational training is practically non-existent.The number of NEET young has been slightly increasing during the past decade or so. Actually, young adults living in the two functional regions (FR), FR Southwest Finland and FR Kainuu, live in quite different realities what comes to their future prospects. People born in northern and eastern parts of the country tend to move to southern cities after completing compulsory or upper secondary education. The overall employment in FR Kainuu has decreased quite dramatically within the past decades: the number of employed in FR Kainuu is only about 70 percent of the level it was in the beginning of the 1990's. However, Finnish young people are clearly more satisfied with several areas of their life than their peers in Europe on average. Especially large differences between Finnish youth and European average are in accommodation, job satisfaction, and overall life satisfaction. Being at risk of poverty and social exclusion is lower in Finland than it is in EU27 countries on average. About 17 % of the population has been at risk of poverty or exclusion between 2005 and 2015. The gap between different parts of the country has been growing during the past decade. The risk of poverty and social exclusion has grown bigger especially in northern and eastern regions of Finland.

The number of children born in Finland will be lower than ever since the last famine years 1866-68, although the size of the population has more than doubled. According to the projection, the share of persons aged under 15 in the population would decrease to 14 per cent by 2060. The share of people with foreign background has been very low compared to other European countries. Hostility towards people with foreign background has increased during recent years among native population. These developments will have severe consequences for the dependence ratio in the future.

In this report, the basic statistics have been presented at NUTS2-level ('larger areas' South Finland and North & East Finland). Related to the basic problematics and the approach of *Young Adulllt* -project this is a problem. There are substantial differences between NUTS3 level regions included in the same NUTS2 level areas. This concerns also our two functional regions, especially FR Kainuu. Suitability of NUTS2 level statistics indicating the realities at NUTS3 level - at the level of our functional regions – is disputable. Statistics on NUTS2 area 'North & East Finland' do not represent properly the situation in FR Kainuu. However, crucial information at NUTS3 level, whenever available, has been added so that the functional regions Southwest Finland (part of NUTS2 area 'South Finland') and Kainuu (part of NUTS2 area 'North & East Finland') would be described more properly.

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young adullt

Work Package 4

Quantitative Analysis Young Adults' Data

Germany National Report

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Executive Summary

Life Long Learning (LLL) policies across Europe have been repeatedly described as highly fragmented and often conflicting in their objectives in relation to their target groups and means of implementation. Although aiming to improve economic growth and social inclusion for young adults, they might produce unintended effects when they are not well suited to the highly diverse target groups. In particular regarding the high fragmentation of LLL policies different effects in different contexts can be observed, which raises the question as to their fitness of these policies to the targeted groups.

The project YOUNG_ADULLLT aims at identifying necessary parameters for future decision-making support systems by understanding LLL policies for young adults in their interplay between economy, society, labour market and education and training systems at regional and local levels, including discussing issues of fragmentation and discrepancies affecting young adults' life course. Thus, the objectives of the project are:

1. To understand the relationship and complementarity of LLL policies in terms of orientations and objectives to their specific target groups including (intended and unintended effects);
2. To enquires into policies' fit and potentials from the perspective of the young adults to explore hidden resources of young adults building their life projects;
3. To research LLL policies in their embedding and interaction in the regional economy, the labour market and individual life projects of young adults to identify best practices.

In the context of the overall objective of YOUNG_ADULLLT, this sub-study (WP 4) focuses on the analysis on how the regional context shapes the young adults' living conditions. As LLL policies become effective at the regional/local level, the sub-study aims to provide insights into the different local contexts LLL policies are embedded in and how these regional settings under study provide different living conditions for young adults. Thus, each regional context can provide (or preclude) specific opportunities for young adults' lives, leaving untapped the plentiful resources for individual growth and social inclusion. The aim is to pay particular attention to the structural characteristics of the regions, such as the infrastructure, education and work opportunities, to describe the different social realities of young people and how those realities are constructed in statistical data collection. This allows us to understand how the context can mediate and influence LLL policies in each region.

The living conditions are most adequately analysed by means of quantitative data. Thus, WP 4 contributes to the multi-method approach in YOUNG_ADULLLT and *first*, informs about the living conditions of young adults and *second*, provides contextual data for embedding the qualita-

tive data collection approaches in the qualitative analysis of young adults (WP5) and the analysis of the skill supply and demand on the labour market (WP6).

This national Briefing Paper, *first*, provides an overview of the living conditions of young adults, *second*, explains how relevant statistical sources describe their realities, and, *third*, identifies gaps for further data collection for the two Functional Regions of Germany in this study, Rhein-Main and Bremen, by disentangling various risk profiles from the context they are embedded in.

In order to describe and understand the local living conditions of young adults as well as the limitations and constraints of the given national/ local statistical data in both FR, four main tasks were performed:

1. Identifying and collecting of local data for complementing and enriching the national data sets provided by international data sources.
2. Analysing the living conditions of young adults and their implications by identifying local risk profiles along the following dimensions: the economic, demographic, education and training, labour market, social inclusion and participation, and health and well-being.
3. Assessing the quality of the available statistical data (availability, classification of the target group, etc.) by addressing context specific data gaps.
4. Report and assess the particularities and conditions of the regions, which can exacerbate risk for young adults for building their life projects.

In this study, the research object has been conceptualised along the living conditions of young adults in their regional settings (chapter 2). Young adults are a heterogeneous group regarding their social realities, life projects and perspectives and thus are differently affected by structural developments as different regions provide differing socio-economic opportunities and limitations. This requires us to distinguish between heterogeneous contexts they are embedded in, such as the demographic characteristics of the population, the structure of the economy, the inputs and outputs of the education and training system, the labour market, the material living conditions and civic participation as citizens in political and social life and, finally, the health conditions and individual well-being.

Based on this conceptualisation the living conditions are described as followed:

- *First*, the living conditions describe regional variations of structural and socio-economic conditions, as the resources on site may vary and can enhance risks for young adults building their life projects. In doing so, we describe local risk profiles according to the particularities and conditions of the regions, which can produce and/or enhance vulnerable situations for young adults. In particular since being a young adult itself implies vulnerable life phase as pivotal decisions are being made.

- *Second*, data gaps in local statistical sources are assessed, as the data collection for the regional context varies. Comparative surveys are widely used in the process of describing, coordinating and implementing LLL policies for young adults, however, often construct their target group along their individual deficits not along structural deficits.

The results of this Briefing Paper are based on secondary analysis using statistical data collated from national administrative sources and comparative surveys compiled by international organisations such as the EU and the OECD such as EU-SILC, Eurostat. The data provided by international survey is challenging, as the regional data classification does not always cover the selected two Functional Regions Rhein-Main and Bremen. As the data is aggregated along territorial administrative responsibilities, the so-called *Nomenclature des Unités Territoriales Statistiques* (NUTS), it differs from the projects' adopted concept of functional region. In order to avoid overlaps of the data units with other regions not included in our conceptualization, only the smallest NUTS 2 level per Functional Region was used. As those units are a lot smaller than the two regions, we take loss of data into account, however, they represent their metropolitan core.

The living conditions of young people (chapter 3) are described along the following six dimensions: (1) demographic characteristics of the population and its subgroups; (2) structure of the economy, (3) inputs and outputs of the education system; (4) labour market situation; (5) redistribution and social inclusion, and (6) health conditions and individual well-being.

The main results are as followed:

- ***Demographic structures****:* Overall, the German society is undergoing demographic changes due to an aging society and an inflow of migrants. However, the growth of the two regions differs immensely, as the FR Rhein-Main is constantly growing due to worker inflow, whereas the population in FR Bremen is shrinking. There also seems to be an interlinkage between labour market possibilities and family planning: While in FR Bremen young adults are more likely to be responsible at a young age for children, interrupting training and work in early career stages, in the FR Frankfurt, especially in the metropolitan core, young people are more prone to postponing life projects of family and own children. The data shows that today's young adults grow up under different circumstances and deal with different limitations (high living costs, uncertain career path, prolonged educational trajectories, etc.), which hinders them from moving out of their parents' home and achieving financially independent lives. Specifically, young adults under 25 – who are recipients of welfare benefits (Harz IV) – are further prevented from gaining autonomy by the legal regulations of social programs and labour market policies.
- ***Structure of the economy****:* Wealth and economic productivity is unevenly distributed in the researched locales: While the core of both regions is rather wealthy, its periphery

hardly profits from the economic turnover. At the same time, the high living costs in the core areas hinder young adults from living and work in the more profitable core areas. As a result, a mismatch of economic opportunities and financial limitations arises, especially concerning young adults living in FR Rhein-Main. Simultaneously, the regions face structural changes creating risks for career paths, particularly affecting young adults in FR Bremen. While traditionally dominant sectors are on the decline (such as logistics), other low-wage sectors are growing, which could lead to a rethinking of young adults' career choices: instead of investing time in a low-paid apprenticeship with prospects of a low-paid job in the service sector it could lead them directly into the labour market.

- ***Education system****:* The German education system is characterised by a tight coupling of certificates and occupational biographies. With the increasing trend towards academisation, young adults face a prolongation of formal education. However, this follows a peculiar institutional fragmentation due to the multi-tiered school system which caters to labour markets with substantially different needs (for instance as indicated by a prevalent discourse about an alleged skilled work shortage (Fachkräftemangel): Although 40% in the FR Rhein-Main and 30% in the FR Bremen have an Abitur, which qualifies them for the university, they are trained as Fachkräfte leading to a competition with graduates from other school tracks. The opportunities for education, and thus occupation, are largely determined by the region in which the young adults grow up: Growing up in the neighbouring parts of Frankfurt am Main as for instance the city of Offenbach or Aschaffenburg (the Bavarian part of the FR) or in the rural areas of FR Bremen exponentially increases the odds of achieving at most the lower secondary education certificate (Hauptschule). Young adults living there are especially at risk of exclusion, as this school track is continuously reduced in Germany thus also diminishing their chances in the transition into the labour market.
- ***Labour market:*** Although youth unemployment rates are under the EU average, for young adults living in the FR Bremen the risk is higher than in the FR Rhein-Main. Particular regional differences in contrasting labour markets promote and foster the need for specific jobs as consequence of the regional structural changes. Especially the FR Bremen has a highly dynamic and contrasting labour market, however still offers a large number of jobs in production plants. As a result, the labour markets are highly polarised, with focus on high and low skilled workers constantly reducing the medium skilled workers. In contrast, the FR Rhein-Main offers a broader variety of jobs in finance, air transportation, service and media, however, attract workers all over Germany and worldwide who compete with the potential workers on site. Particularly as both Func-

tional Regions attract high skilled worker in the core spreading the remaining skilled jobs in its periphery causing precarious situations for NEETs and early school leavers.

- ***Redistribution and social inclusion**:* Being at risk of social exclusion and poverty varies remarkably within and across both Functional Regions. Living in the core of both regions enhances the risk of receiving benefits for long term-unemployment. However, the risk varies with the regions. For example, the chances for a child receiving social transfers – an often-used poverty indicator –in the cities Bremerhaven, Delmenhorst (FR Bremen) or Offenbach (FR Rhein-Main) are three times higher than in the cities Cloppenburg, Osterholz (FR Bremen), the city of Fulda (FR Rhein-Main). Thus, the region itself seems to be a strong predictor of poverty, forcing young adults to be mobile.
- ***Health and well-being conditions:*** The above-mentioned poverty risk profiles are similar in terms of health, as growing up in poor families leads to a decreased health status. This risk rises for young adults living in more rural areas, as the access to health care is limited. As detailed local data is missing, we concluded based on data on poverty and unemployment, that the health risk is also high in the cities of Bremerhaven and Wilhelmshaven (both FR Bremen) and Worms and Offenbach (both FR Rhein-Main).

The assessment of the data quality (chapter 4) provides an overview of the possibilities and limitations of the available data for describing the living conditions of young adults. Statistical data is often a base for policies processes concerning young adults. Therefore, the implementation and matching of LLL polices is also a question of the information on which policy-making is based. In order to achieve this objective two main tasks were performed:

1. Description of data gaps at national and local level which are context specific, and
2. Assessing the limitations and constraints of the analysis in relation to the context specific of the functional region and our target group.

In short, most databanks (e.g., EUROSTAT, INKAR, DESTATIS) do not collect and analyse data on the indicators used in our research at NUTS 2 level, which would provide for a more tailored and customized information source. For this reason, it has been difficult to access data describing the target group at hand; also, data on young peoples' attitudes towards labour and political life is largely missing on a local level. Finally, available indicators reduce young adults' information sources to education and employment.

As a result, young adults are mainly invisible in within the statistical data sets as an independent age group. Therefore, the question arises, how current LLL policies are fitting into young adults' social realities as the statistical basis of information is not tailored along the needed information.

The chapter on **Emerging issues** (chapter 5) deals with specific issues that came up during the analysis and are relevant for the context of the project and provides concluding remarks:

1. We can observe a divergence between the data quality and availability on national and international level, especially regarding local data, the age of the target group as well as health indicators.
2. Although the role of the family is relevant for the young adults living conditions and steered by the German welfare system (principle of subsidiarity), their contribution is rather invisible in the data sets.

In conclusion, statistical data available on the living conditions of German young adults is mainly collected at national level and usually restricted to education and employment indicators, glossing over other crucial aspects of their life courses. Against this background, based on the data reviewed the German context can be described as an employment-centred transition regime where young adults' autonomy is characterised by a low level of state support but high family support. Therefore, young adults' citizenship can be described as a 'monitored citizenship', with the overall aim to expedite their transition into work along highly institutionalised education and training systems.

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1. Introduction

Life Long Learning (LLL) policies have different and often-competing objectives affecting young adults' life courses. As LLL policies unfold on the national level, however, play out differently in local contexts, they provide distinct opportunities or constraints in young adults' lives affecting their social realities. Local contexts are important as they shape their living conditions, hence vary and are socially constructed (cf. Bartlett & Vavrus, 2017, p. 14): First, regional settings vary, as structural characteristics (e.g. infrastructure, educational and working opportunities etc.) are not evenly distributed within one country. Second, regional settings are constructed along the "social interactions, political processes, and economic developments" (ibid.) shaping the living conditions in a specific way. Thus, describing the structural settings highlights to what extend and how these living conditions of young adults are interceded and influenced by LLL policies.

In the context of the overall objective of YOUNG_ADULLLT, this sub-study (WP 4) focuses on the quantitative analysis of regional context shaping the young adults' living conditions in the interplay with LLL policies at macro, meso and local level, which support or hinder growth and social inclusion. As LLL policies become effective at the regional/local level, the sub-study provides insight into the different local contexts LLL policies are embedded in. First, by describing the different living conditions for young adults in the Functional Regions (FR) under study and, second, by assessing how the specificities of national data collection itself creates a description of young adults living conditions (Functional Regions, cf. Kotthoff et al. 2017; Weiler et al. 2017a). This allows to assess the policies' fit and potentials in the regional contexts by describing the tension between the social realities and the official description of young adults.

In order to do so, this Briefing Paper identifies local risk profiles describing the structural implications on young adults living conditions as different regions have different risks for their young adults living, learning and working there, and thus, can create vulnerable situations for them. Growing up in a specific region can be make-or-break for young adults in creating their life course as some regions make it easier to create 'successful' life projects than others do. The analysis of regional risk profiles has two aims: First, to analyse the socio-economic particularities of the living conditions in the regions, which can exacerbate risk for young adults building their life projects. Second, the specificities of data collection, as comparative surveys on structural data is widely used as an information system for LLL policies themselves. As statistics are used to steer processes of definition, coordination and implementation of LLL policies for young adults, the data itself provides a 'data-lens' on young adults shaping the policy processes, yet – not necessarily matching their social realities. An assessment of databases is provided to identify data gaps that should and could be filled in order to inform LLL policies, as their implementation is not only a question of policy coordination and matching of the different contexts and interests, but rather a question of the assessment of the information on which policy-making is based on.

Against this background, the sub-study provides a quantitative analysis of young adults' social and living conditions (WP 4) which focuses on the regional/ local socio-economic particularities of the regions under study. These were reviewed and mapped in the previous sub-study (WP3) (cf. Kotthoff et al., 2017) and this national Briefing Paper provides a short overview of the living conditions of young adults in Germany and its two selected regions, Rhein-Main and Bremen (cf. Bittlingmayer et al., 2016a). The quantitative analysis identifies risk profiles of young adults in their specific context and gathers information for embedding the data conducted in the qualitative analysis with young adults (WP5) and the analysis of the skill supply and demand on the labour market (WP6). The analysis follows three approaches: First, this sub-study conducts desk research on regional risk profiles as a secondary analysis of quantitative data at national and local level. Second, analysing the regional living conditions of young adults by identifying local risk profiles. Third, assessing the quality of the available statistical data (availability, classification of the target group, etc.) by addressing context specific data gaps. The analysis used different data sources on national (e.g. Eurostat) and local level (e.g. German Microcensus).

This national Briefing Paper is divided into three parts: First, a short overview on the methods of local data collection including a description of mismatches of the data classification used in common international databases with the German regional conceptualisation of the Functional Regions. Second, an analysis of the living conditions along the following dimensions: the economic, demographic, education and training, labour market, social inclusion and participation as well as health and well-being. In our analysis, we are able to identify several and different risk factors for young adults, which are closely linked to:

- *first*, the available personal resources in terms of the social background, the social position, the personal labour market and educational status, and
- *second*, regional dimensions like the housing situation and the status of the regional apartment market, the access to health care, the regional share of poverty or the situation of the regional labour market.

The German case in general and the two Functional Regions Bremen and Rhein-Main in particular clearly show that these dimensions are influenced by social policy. Furthermore, the available data reveals that, depending on the indicator, a stable share of 10-30% of the population is not well socially integrated and dependent on social transfers.

Subsequently to the findings, the data assessment along the availability, representation and quality of the data is described. Finally, the report concludes with emerging issues.

The following sub-chapter provides an overview on the data gathering process.

2. Methodology and description of the data collected at local level

Based on the overall theoretical perspectives of the project (cf. Weiler et al., 2017a) the research object has been conceptualised along the living conditions of young adults in their regional settings. As young adults are heterogeneous groups regarding their living conditions, such as socio-economic stratification, their life projects and perspectives (cf. Weiler et al., 2016) they are differently affected by structural developments. Each setting can provide (or preclude) specific opportunities for young adults' lives, as LLL policies fit differently in the local contexts, which can reveal hidden resources or hindrance for individual growth and social inclusion. Therefore, growing up in a specific region can be make-or-break for young adults, especially as they have different needs, in creating their life course as some regions make it easier to create their life projects than others do. Against this background, the analysis of the socio-economic living conditions allows to assess the particularities and conditions of the regions, which can exacerbate risk for young adults building their life projects.

The phase of being a young adult is a key period of transition as pivotal decisions are being made. Some might pursue further education and training or start their working careers, engage with society, develop health habits and create their live course (cf. Wutzkowsky & Weiler, 2016). However, being in between youth and adulthood can also increase vulnerability and risk: Poverty, migration, lack of job opportunities, access to health care etc., can produce and/or enhance vulnerable situations for young adults, especially by the regional context (cf. Weiler et al., 2016). As the resources on site may vary so does the risk for young adults living in those regions. For instance, a lack of working opportunities in spite of an extensive formal education can lead to long-term unemployment, thus enhancing vulnerable situations and can even cause exclusion of participating in the society. This affects young adults already constructed by LLL policies as being in vulnerable positions even more, as they differ from a notion of a standardized life course. The target groups of LLL policies are mainly described along their deficits, for instance in need for financial support, having left education too early or facing inequalities (cf. Bittlingmayer et al., 2016b; Wutzkowsky & Weiler, 2016). As a result, *being at risk* can put young adults in a disadvantage in creating their life course and *being constructed as potentially being at risk*, can exacerbate inequalities and hinder social inclusion. LLL polices can make a difference for the young adults by levelling out structural risks when they take the construction of their target groups into account and pay attention to the policies fit with the regional possibilities and limitations. Thus, this Briefing Paper of regional risk profiles informs future policy decision-making.

Departing from this conceptualisation, the report provides regional risk profiles of young adults along social, regional, gender and ethnic based inequalities creating life opportunities or obstacles and manifesting in educational and school-to-work transitions. This means to distinguish between different contexts they are embedded in such as the demography, the structure of the economy, the inputs and outputs of the education and training system, the labour market,

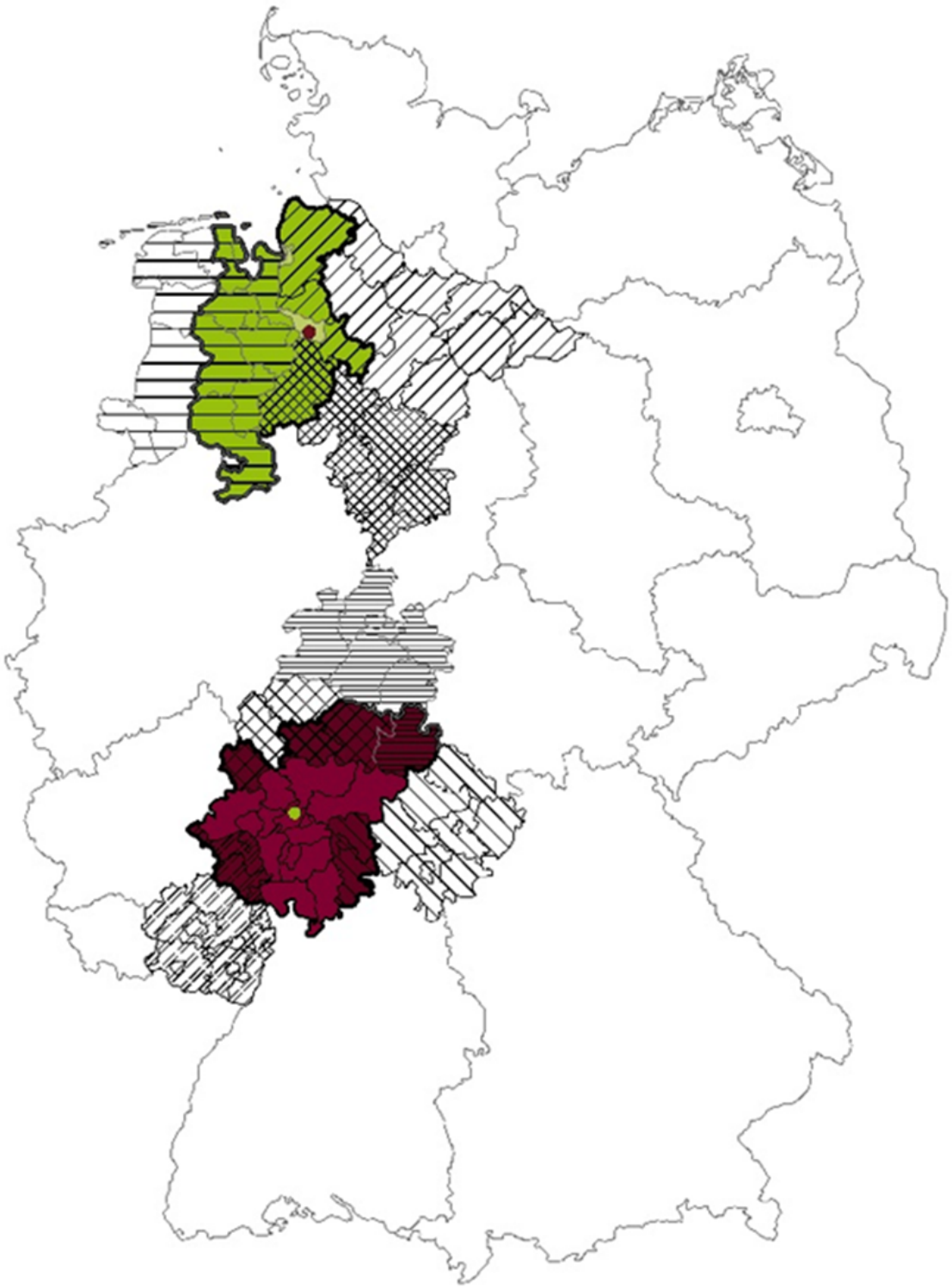
the material living conditions and civic participation in political and social life and, finally, the health conditions and individual well-being. As this transition is steered by LLL policies, the skills and formal/ non-formal qualifications of young adults in the selected regional contexts are central, especially the effects of educational attainment qualification in relation to the entrance to the labour market.

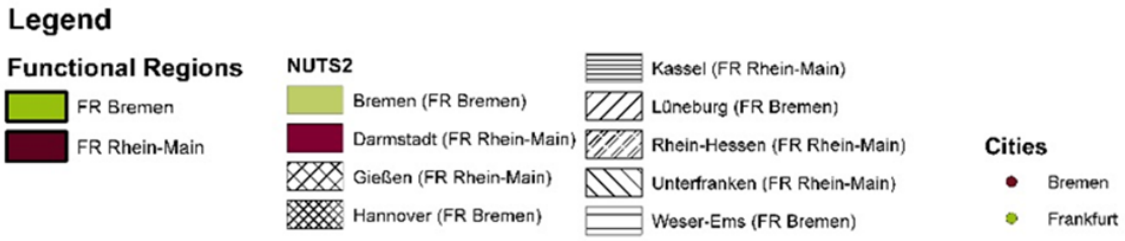
The risks profiles are informed by statistical data which are also widely used in LLL policies processes as part of the description, coordination and implementation of LLL policies for young adults. This leads to the question which kind of data is available and how does it construct the target group as potentially being at risk, such as early school leavers (ESL) and young persons 'Not in Education, Employment or Training' (NEET). The implementation of LLL policies is not only a question of policy coordination and matching of the different contexts and interests, but rather a question of assessing the information on which the policy-making is based on.[1] Challenges arise, as the statistical data is not always available to provide the required information or, the available data is comparable across the EU, yet has regional gaps. This can cause difficulties for policy-making processes, as it is not always clear what data could tell about the living conditions. Therefore, we also critically analyse the perspective on the data gathering process (data availability, protection, etc.), data operationalisation (age groups, target groups, etc.) as well as overlapping level of governance (research unit, administrative unit, etc.) as a (re)construction of young adults living conditions. For a detailed assessment of the quality of data please see chapter 4.

For the secondary analysis of regional risk profiles, a core set of data (Eurostat, UNESCO, OECD etc.) was provided. However, these databases aggregate the data in regional units along territorial administrative responsibilities, the so-called *Nomenclature des unités territoriales statistiques* (NUTS), aiming to provide comparable data based on hierarchical structures, which differs from the projects concept regional units (cf. Parreira et al., 2017b, p. 10ff.). This is challenging in the case of the two German FRs as the provided regional data classification does not fit our case (see Fig. 1 below): Either we have to assemble each FR along several NUTS units or, we only use the smallest NUTS 2, which is a lot smaller than our FRs. The former implies an overlap with other regions not included in our conceptualization, which sustainably distorts data values and would generate different risk profiles. Choosing a smaller unit takes loss of data into account, however, it represents the FRs' core: for the FR Bremen the NUTS2 level unit 'Bremen' (including the city of Bremen and Bremerhaven) and respectively for the FR Rhein-Main the unit 'Darmstadt' was used (including the cities Darmstadt, Frankfurt a.M., Offenbach a.M. and Wiesbaden and their surroundings).

[1] In YOUNG_ADULLLT, two sub-studies focus on the coordination and matching of the context and the interests. First, a qualitative sub-study (WP 5) with perspective on the young adults' perception and expectations and second, a comparative analysis (WP 6) with perspective on the policy coordination of local actors (cf. Weiler et al., 2017b).

Figure 1 Functional Regions in Germany

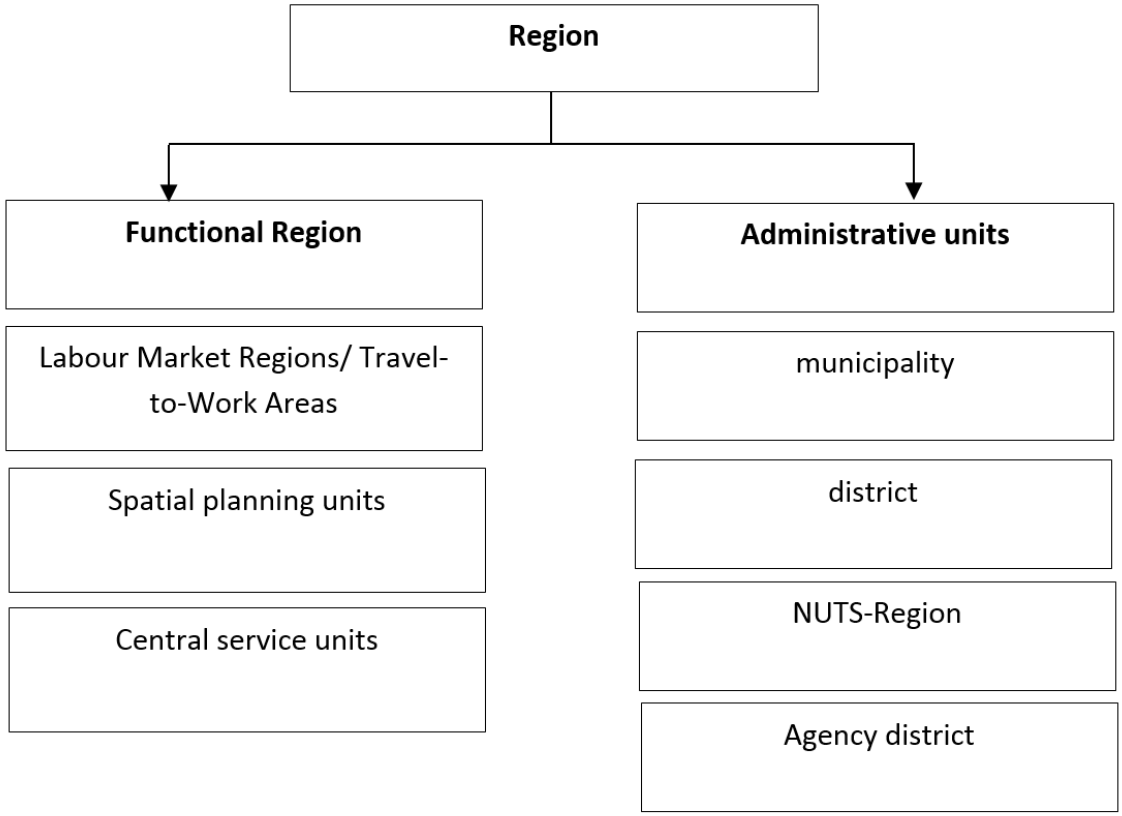




Source: Own elaboration

As the data collected with Eurostat, UNESCO and OECD is available mostly on NUTS 2 and rarely on NUTS 3, the data is represented in administrative units and thus has limited use for the describing the two FRs. The different conceptualisation of regions either collect data along political, social, and economical units (Functional Region) or along jurisdictional rights (administrative unit) (see Figure 2 below).

Figure 2 Different Forms of Regions



Source: translated from Eckey, Schwengler & Türck (2007, p. 7)

However, to ensure the comparability in the project, the figures in the Briefing Paper were drafted on NUTS 2 basis, and then complemented with local data on the district level. Thus, the local data reconstructs the landscape of our research unit and represents each Functional Regions as close as possible to the local level along districts and cities (see Table 1 below). The different data units are labelled as followed in the subsequent data analysis: When the data refers to the NUTS 2 level, we use the label 'NUTS 2 level Bremen' respectively 'NUTS 2 level Darmstadt';

when the data is collected along the local district level and represents the spatial unit of our Functional Regions, we use the label 'FR Bremen' respectively 'FR Rhein-Main.

On the national level, the main source for the local data collection are registers. Especially the interactive online-atlas of the Federal Institute for Research on Building, Urban Affairs and Spatial Development (INKAR, Online-Atlas des Bundesinstituts für Bau-, Stadt- und Raumforschung)[2] was used, as it not only collects data from other national registers in Germany, but also provides data that encompasses metropolitan cities as well as municipality districts.

Table 1 Overview on the data collation for the two Functional Regions Rhein-Main and Bremen

Administrative cities and districts	**FR Rhein-Main**	**FR Bremen**
Cities	Frankfurt a.M.	Bremen
	Offenbach a.M.	Bremerhaven
	Wiesbaden	Delmenhorst
	Darmstadt	Oldenburg
	Mainz	Wilhelmshaven
	Worms	
	Aschaffenburg	
Districts	Bergstraße	Ammerland
	Darmstadt-Dieburg	Cloppenburg
	Groß-Gerau	Cuxhaven
	Hochtaunuskreis	Diepholz
	Main-Kinzig-Kreis	Friesland
	Main-Taunus-Kreis	Oldenburg
	Odenwaldkreis	Osnabrück
	Offenbach	Osterholz
	Rheingau-Taunus-Kreis	Vechta
	Wetteraukreis	Verden
	Gießen	Wesermarsch
	Limburg-Weilburg	
	Vogelsbergkreis	
	Fulda	
	Alzey-Worms	
	Mainz-Bingen	
	Aschaffenburg	
	Miltenberg	

Besides the spatial restriction of the research units, data for additional indicators had to be gathered in order to describe the German context, as risk is mainly understood as a financial risk, such as poverty, its interrelation to a lack of skills, such as literacy (cf. Autorengruppe Bildungsberichterstattung, 2016, p. 6, p. 17) or as a health risk (cf. Robert Koch-Institut, 2016). However, additional sources of risk are important as well: For example, due to the sovereignty of the *Län-*

[2] Available under: http://www.inkar.de/Default [last access: 10 July 2017]

der in Germany[3], the educational system is characterised by different school tracks providing different opportunities for the transition into work. In turn, finding work is highly linked to the qualification gained in the educational system as the labour market couples qualification with occupation, stressing the relevance of certifications over skills. Therefore, the description of regional risk profiles has to focus on the regional embodiment of institutions as different regions provide different educational systems and labour market opportunities (cf. Weiler et al., 2017b).

Both, the data collection on national and regional level conforms to ethical standards and data protection regulations. The target group for the data collection are young adults in the age of 18 to 29, however different age ranges were considered when suitable as the data sources comply both with national and European legislation. Therefore, data collection below and over the age range of 18 and 29 complies with Standards of Ethical Conduct (cf. Parreira do Amaral et al., 2017a).

The following sub-chapter provides the findings the living conditions of young adults in the two Functional Regions.

3. Findings

The following sub-chapters describe the contextual living conditions of young people in the two Functional Regions Rhein-Main and Bremen along the following dimensions: (1) demographic characteristics of the population and its subgroups; (2) structure of the economy, (3) inputs and outputs of the education system; (4) labour market situation; (5) redistribution and social inclusion, and (6) health conditions and individual well-being.

3.1 Demographic structure

Germany is the fourth largest country in the EU with 357,000 km^2. Both FRs vary geographically and structurally, with the FR Rhein-Main being the larger region, both geographically and in terms of population density, spreading across several main locations and cities. While the smaller FR Bremen covers an area of 3.8% of Germany (13.750,97 km^2) with 3.3% of the German population (approx. 2.7 million inhabitants), the FR Rhein-Main covers a larger area of 4.1% (14.755,3 km^2) with 6.5% of the German population (approx. 5.3 million inhabitants) (Statistische Ämter des Bundes und der Länder, Deutschland, 2017; Zensus, 2011). The contrasting population structure is reflected by the population density: while in the FR Bremen 1.413,16 live in each km^2, the amount almost doubles for the FR Rhein-Main with 2.440,96 inhabitants per km^2. However, the population in Rhein-Main is spread in its core over five cities with a total of 716,96

[3] In Germany, the policy is organized differently in the 16 federal states resulting in different jurisdictions, struc-tures, and legislations affecting education and training, welfare and sets different frameworks for policymaking (cf. Parreira et al., 2017b, p. 36f.).

km² – Offenbach a.M., Frankfurt a.M., Mainz, Darmstadt and Wiesbaden – while in FR Bremen the population is mainly located in the three cities Bremen, Bremerhaven and Delmenhorst, covering together an area of 482,2 km² (INKAR, 2017).[4] The differences within Bremen corresponds to the expected difference between urban and rural areas in Germany – a small core with sparsely populated agricultural surroundings – while in the FR Rhein-Main the core is formed by its tightly knit urban metropolitan area with an intensive social mobility.

Current population development shows an overall population decrease of an older growing society, which demographically benefits from the migrant inflow (see Fig. 3 below). In Germany, the population decreased from 2005 to 2014 from 82.5 million to 80.8 million inhabitants, a development mirrored in the FR Bremen, however not in the FR Rhein-Main. While Darmstadt[5] is continuously expanding as their inhabitants are growing from 3.77 to 3.82 million, Bremen[6] is shrinking from 663 thousand to 657 thousand inhabitants (NUTS 2 Level). It seems that the urban metropolitan area is growing faster by attracting more inhabitants than the more urban-rural area of FR Bremen.

In the last years, migration has become an important aspect of the development of the population, affecting both Functional Regions evenly, as the crude rate of net migration increased from 1 per 1,000 inhabitants in 2005 to 4.9% in 2009, and in 2015 to 14.3% (see Fig. below). One reason for this development is the inflow from crisis regions, in Germany the so called, "refugee crisis". Migrants live mostly in the metropolitan cities, notably Frankfurt a.M. with 20.1%, 133,530 of all its inhabitants, opposed to an overall smaller share in FR Bremen with 82,910 migrants; however, they still constitute 15.4% of its overall population (Statistische Ämter des Bundes und der Länder, Deutschland, 2017; Zensus, 2011). The naturalization rates mirror a similar, yet rather uneven distributed inflow as FR Rhein-Main faces a higher inflow (in 2015: FR Rhein-Main 11,545 persons and FR Bremen 3,529 persons). However, this affects the metropolitan core Frankfurt a.M. with 22% to a lesser extent than the city of Bremen with 43.5% (ibid.).[7] This could be due to the high living costs in Frankfurt a. M., as the average renting price is 14 EUR/m², one of the highest in Germany, especially compared to the city of Bremen with 9,06 EUR/m² and the German average (7,97 EUR/m²).[8]

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[4] The population in the 5 largest cities in the FR Rhein-Main area distributed as followed: Offenbach am Main: 5.499,50; Frankfurt am Main: 4.961,90; Mainz: 4.206,20; Darmstadt: 3.556,30; Wiesbaden: 3.437,70. The population in the 3 largest cities in the FR Bremen distributes as followed: Bremen: 2.878,30; Bremerhaven: 2.499,60; Delmenhorst: 2.486,20) (INKAR 2017).

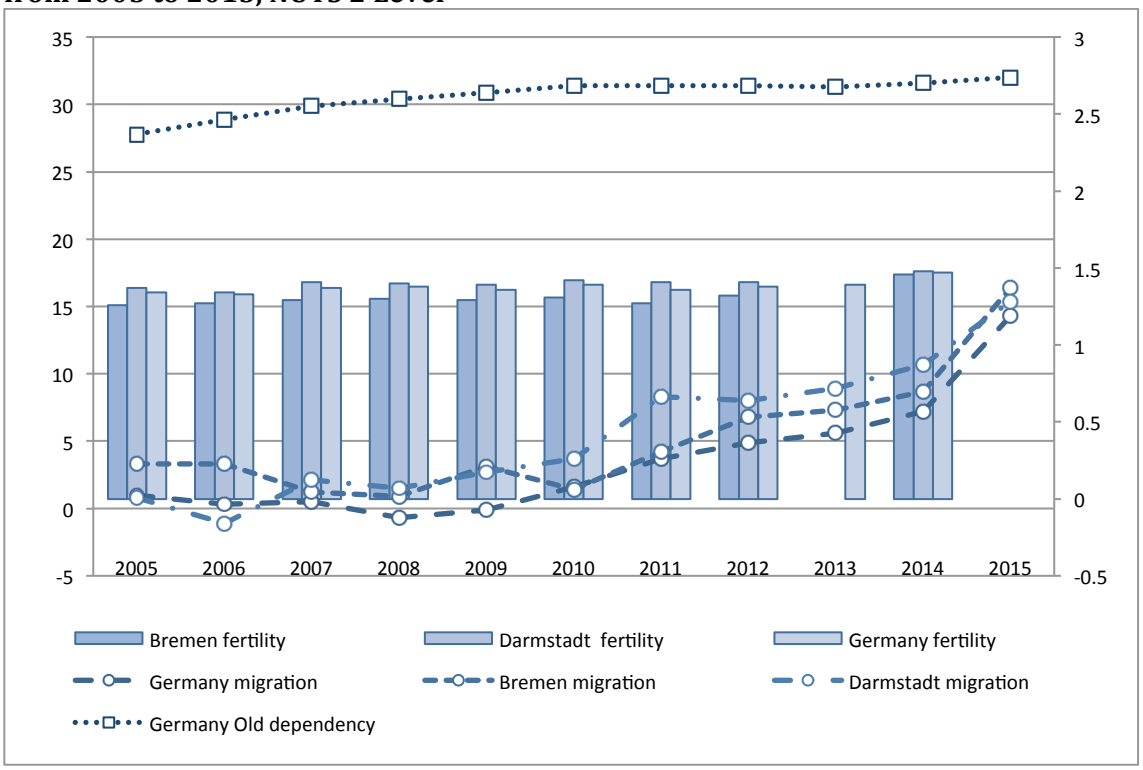
[5] The administrative unit 'Darmstadt' includes the cities Darmstadt, Frankfurt a. M., Offenbach am Main, Wiesbaden and its surrounding areas.

[6] Including the city of Bremen and Bremerhaven.

[7] For both regions, the main immigration region is Europe, followed by Asia: In 2015, in the FR Bremen 54.29% (1,916) from Europe and 30.32% (1,070) became naturalized, while in the FR Rhein-Main 56.65% (6,540) from Europe and 24.99% (2,885) from Asia became naturalized (ibid.).

[8] For Bremen: https://www.wohnungsboerse.net/mietspiegel-Bremen/3193 For Frankfurt a.M.: https://www.wohnungsboerse.net/mietspiegel-Frankfurt/3242 [last access: 20 Aug. 2017].

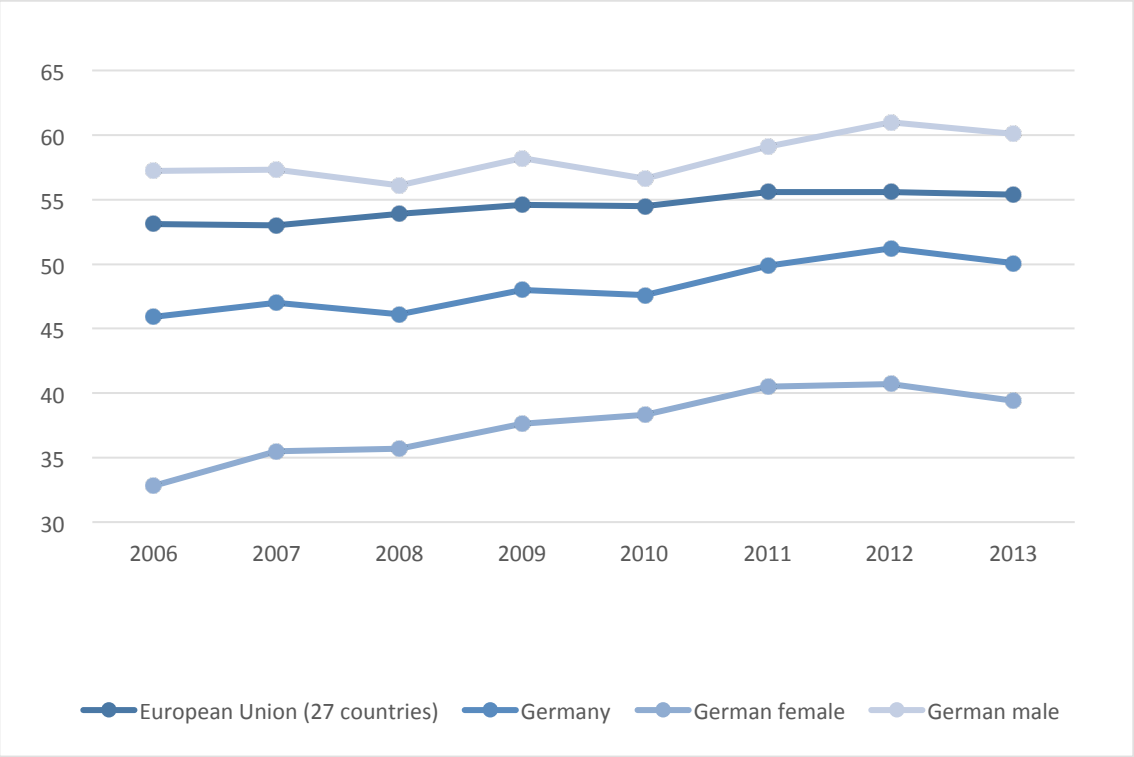
Figure 3 Crude rate of net migration (1 per 1000), fertility rate and old dependency rate from 2005 to 2015, NUTS 2 Level



Source: Eurostat Demography and migration database

The high living costs also restrict young people from creating a financially and socially a-self determined life as the high costs prevent them from competing on the housing market. Instead, the rate of young adults living with their parents rapidly increased over the last decade. In 2013, this rate was 50.1% (20-29 years), which is under the European average (55.4%), however, highly stable over time (2005: 45.9%; see Fig. 4 below). The data shows that today's young adults grow up under different circumstances and deal with different limitations (high living costs, uncertain career path, prolonged educational trajectories, etc.), which hinder them from moving out of their parents' home and achieving financially independent lives. Specifically, young adults under 25 – who are recipients of welfare benefits (Harz IV) – are further prevented from gaining autonomy by the legal regulations of social programs and labour market policies. Since 2005, young people are hindered from moving out of their parents' home without the agreement of the Jobcenter if they or their parents receive welfare benefits (cf. SGB II - § 22 Abs. 5). The changed household structures reflect gender differences, as more young males are living with their parents as opposed to young females. Over a half of the male generation between 20 and 29 is living at home (2006: 57.2%; 2013: 60.1%) opposed to women (2006: 32.8%; 2013: 39.4%) (EUSILC). Therefore, demographic changes and the risk of social exclusion are closely interlinked to social and labour market policies.

Figure 4 Rate of young adults (20 -29) living with their parents by gender from 2006 to 2013; national Level



Source: EU-SILC microdata

While the numbers of migrants are on the rise, the fertility rate is only moderately increasing, both in Germany and the two regions: While in Germany, from 2005 to 2014, the fertility rate increased from 1.34 to 1.47. It rose in the FR Bremen from 1.47 to 1.57 and in the FR Rhein-Main from 1.38 to 1.47 (INKAR, 2017), however, still under the EU-28 average from 1.51 to 1.57 (Eurostat). As career choices and founding a family are main biographical decisions for women (Keddi & Pfeil, 1999, p. 13) the different opportunities for their compatibility between rural and urban areas becomes obvious. It seems, that the cities rather attract workforce than people planning families, as the fertility rate is stable on a low value in large cities, such as Bremen, Bremerhaven Frankfurt a.M. and Darmstadt, however, rises in more rural areas, such as the district Verden in the FR Bremen (from 1.52 to 1.73, INKAR, 2017). However, there seems to be an interlinkage between the structures, opportunities for education and work and the family planning process, as living in big cities seems to have an effect on women to postpone this life decision as this provides different opportunities. The average age of women having their first child is increasingly postponing from the age of 28.7 in 2005 to the age of 29.5 in 2015 – a development slightly above the EU-28 average of 28.9 in 2015 (UNIDEMO).[9] While in FR Frankfurt postponing motherhood is prominent, most likely due to a prolonging of formal education, in FR Bremen early motherhood under the age of 20 is observable – the age where mostly transitions from

[9] The data sets for the EU 28 countries are only available from 2013 to 2015. Available under: https://data.europa.eu/euodp/en/data/dataset/aahacCLN1mWh03eaNJSMjA [latest access: 26 Sept. 2017].

education into work take place (cf. Goebel, 1996, p. 144ff.). For instance, in Frankfurt a.M. the motherhood from age 40 to 45 rose between 1995-2014 from 7.4% to 17.6% – surpassing the German aver-age of 4.4% respectively 10.9%. In contrast, during the last decade Bremerhaven had an average 21.8% of young mothers, doubling the German average of 10.5% (INKAR, 2017). In the case of Bremen, this could reveal a risk profile that is shaped by socioeconomic disadvantages and low educational expectations in their future and a low prospective on job opportunities as early motherhood can be used as a substitute for lack of other opportunities (cf. Wittel-Fischer, 2000, p. 111).

Despite this moderate rise of the fertility rates, as well as the rise of late motherhood, the German population is ageing: from 2005 to 2016, the old-dependency rate[10] increased from 27.8% to 32% and the life expectancy rose between 2005 to 2014 from 79,4 to 81,2 years – a development mirrored in the two Functional Regions.[11] However, at the same time the young-age dependency is going down in Germany, from 21.6% to 20.2%, a development also mirrored by both FRs. Thus, Germany faces demographic changes as the population is getting increasingly older, however is overall growing through an increasing migrant inflow.

Regarding a comprehensive perspective on risk factors caused by the demographic structure, the situation is ambivalent for young adults. On the one hand, there are undoubtedly recent developments that cause stressful situations for young adults like the high rents in urban areas that come along with a forced prolongation to live with the parents or the uncertainties of career planning leading to a postponement in family building. On the other hand, recent public discourses renew the claim for better adult education because of the forecasted lack of skilled workers in the near future as a consequence of a shrinking population. However, this ambivalence materializes differently in our two regions. While the population of Frankfurt a.M. increased, due to worker inflow, the population in Bremen decreased and its inhabitants postpone their life projects of having own children – which contains in itself medical risks (e.g. stillbirth, miscarriage, and ectopic pregnancy; cf. Stein & Susser, 2000). The life course opportunities described along the demographic structure shows interlinkages to the economy, which is described in the following chapter.

[10] The old old-dependency rate is the ratio between population aged 65 and over to population 15-64 (Definition by Eurostat).

[11] For the administrative unit on NUTS 2 Level 'Darmstadt', representing the core of the FR Rhein-Main, an increase from 26.0% to 29.6% can be observed, while the two units 'Bremen' and 'Weser-Ems', representing FR Bremen, Raise from 29.9% to 32.2% respectively from 26.7% to 30.4% (Eurostat).

3.2 State of the Economy

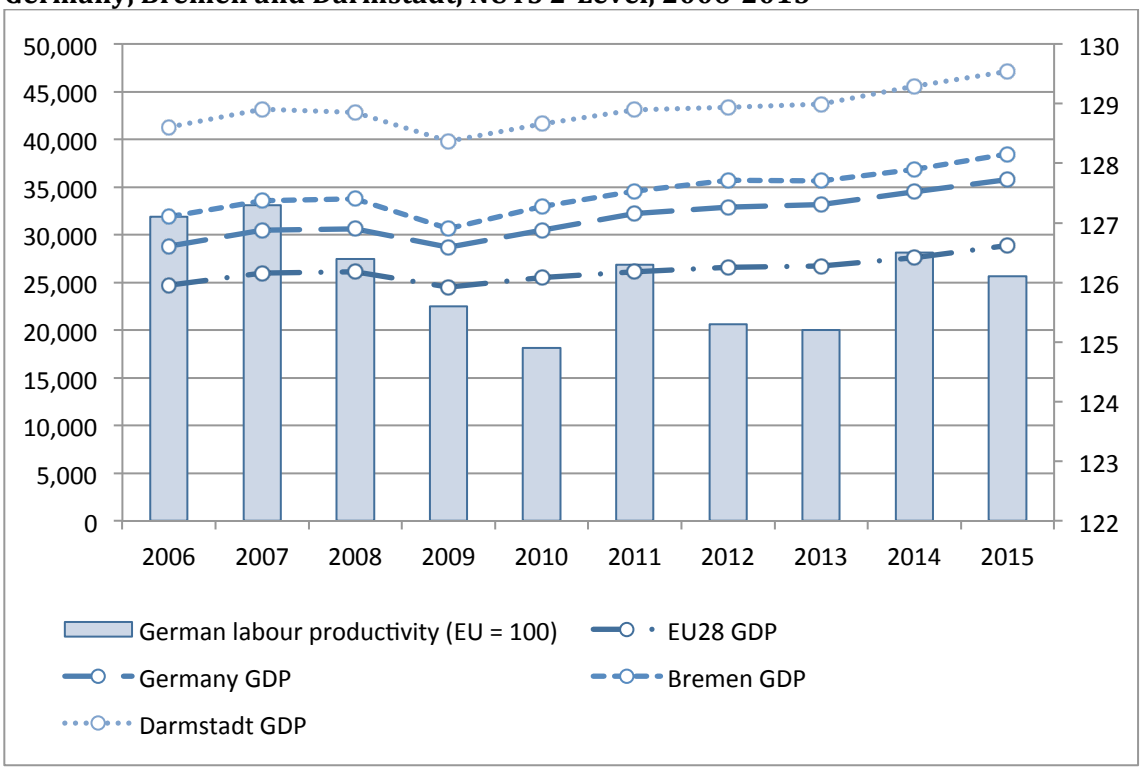
In Germany and both FRs the state of the economy is over the EU-28 average; however, the distribution of the productivity and wealth is highly fragmented (see. Fig. 5 below). Particularly the FR Bremen is facing structural changes due to the re- and deindustrialisation elevating the difference between its rural and urban areas. Its main economic driver is the logistics sector due to its several harbours. However, the shipbuilding sector faces severe changes as a consequence of the automation in the harbour industry using progressive systems for operating processes which minimize the need of workforce. As a result, the number of warpings are reduced, although simultaneously the export and import-oriented trade and industries, for instance its car manufacturers, are expanding. Additionally, its more rural areas gain their economic profit mainly in the agricultural sector. Thus, FR Bremen is faced with a changing profile of its main industries with a changed demand of workers (cf. Weiler et al., 2017b, p. 49f.). These fragmentations are mirrored by the distributions of the high gross domestic product per capita (GDP) as the labour force is concentrated in the core of the region profiting from the economic productivity. However, the amount varies depending if local data is used or data on NUTS 2 level. Bremen's GDP on NUTS 2 level is approx. 2,500 EUR above the national average (see Fig. 5 below), while using regional data reveals the FR is below national average – although it slightly raised in recent years (2006: 24,320 EUR to 2014: 29,690 EUR). Thus, the wealth is unevenly distributed, providing financial risk for those living and working in more rural areas.

In contrast, FR Rhein-Main, and especially its core around Frankfurt a.M., is one of the wealthiest regions in Germany – and most likely in Europe (cf. Bittlingmayer et al., 2016a). Its unique economic density on services and industry, due to its financial district, airport, trade fair and media sector, attracts the settling from large national and international companies. This results in an economically growing urban territory, however mainly in its core not in its periphery. The economic performance of the FR Rhein-Main is remarkable with 38,830 EUR, as it exceeds the national average (GDP 35,900 EUR/ capita) and let alone the city of Frankfurt a.M. is with 91,300 EUR up to 330% of the EU-28 average (27,600 EUR/ capita). The region around Darmstadt (NUTS 2 level), including the cities Frankfurt a.M., Darmstadt and Wiesbaden, are with continuously approx. 10,000 EUR up to 130% above national average– widening the economic disparities to its peripheral regions. In contrast, the city of Bremen has with 47,300 EUR the highest amount in the FR Bremen, exceeding the German average of 130% – however, this is not even half of the amount of the city of Frankfurt a.M. (Euostat, INKAR, 2017).[12]

[12] As the data provided by Eurostat uses different research units, which are smaller than our FRs, the data was completed by local data, which shows overall the same trend, however the absolute numbers vary positively for Germany with 1000 EUR per inhabitant. For this completion calculation from INKAR (2017) were used which analyse GDP in Euro per inhabitant at current market prices using Eurostat Regio Datenbank as well as the working group »Regional Accounts«.

As a result, these data reveal both, fragmentations between the Functional Regions as well as within them: The economic difference between both FRs reveals economic disadvantages based on the regional settings, most likely resulting from labour productivity in specific sectors. Only a specific proportion of labour force gains from the material wealth by living in a specific area and working in a specific field. The material wealth of both FRs is concentrated in its core cities and widens the gap to its peripheral regions, leaving those behind who cannot afford to live or to work thein these cities (cf. sub-chapters 3.1 & 3.4).

Figure 5 GDP in euro per inhabitants PPS and labour productivity (right ax, EU=100), Germany, Bremen and Darmstadt, NUTS 2-Level, 2006-2015



Source: Eurostat Economy and finance database

Although the economic prosperity of both regions is above the EU-28 level, they were evenly negativly affected by the financial crisis in 2008/2009 as both, the GDP per inhabitant and the gross value added rate (GVA), decreased and recovered after 2010: The GDP dropped from 30.600 EUR to 28.700 EUR (see. Fig. 5) and the GVA decreased 56.4% to 54% (FR Bremen from 50.3% to 48.2%; FR Rhein-Main from 61.6% to 58.6%; cf. INKAR, 2017). The labour productivity measures the amount of GDP produced by an hour of labour and a high amount means, that the economy is able to produce more goods and services for the same amount of work; this was the case in Germany before the financial crisis with its peak in 2007 (127.3%, i.e., 27.3% higher than the EU-28 average, counted 100%) and levelling off between 2010 (124.9%) and 2015 (126.1%). The recovery of the labour productivity can also indicate a shift of the labour formation per se, for example as automated processes of work or specialization of the workforce –

especially as the GDP is still growing in the same time span. As a result, the workforce – especially young adults – either are replaced by new technologies or are forced to compete with higher specialized workers on the labour market.

The economic strength affects the two regions differently, as the share of the GDP is not closely linked to a specific structure of economic sectors. Especially the rural and agriculture areas in the FR Bremen, have little economic strength, as this sector contributes remarkably little to the overall GDP (0.76% compare to 1.8% EU-28 average). Its strength rather derives from the contributions to the second (industry) and third (services) sectors, which hardly diverges from the EU-average (share of industry on GDP for Germany: 29.4%, EU-28 average: 26.46%, World Bank). However, these sectors are, as mentioned above, located in specific areas of each region promoting disparities due to limited access.

Table 2 Size of enterprises in Germany and EU-27 from 2010 to 2014, %

Size of enterprises	Total	From 0 to 9 persons employed	From 10 to 49 persons employed	From 50 to 249 persons employed	250 persons employed or more
EU-27 in 2010	21,801,180	92.45%	6.22%	1.02%	0.19%
Germany 2010	n.a.[13]	89.68%	8.12 %	1.88%	0.31%
FR Bremen 2010	n.a.	88.05%	9.68%	1.98%	0.28%
FR Rhein-Main 2010	n.a.	90.78%	7.26%	1.66%	0.28%
Germany 2012	2,189,737	82.31%	14.68%	2.53%	0.49%
FR Bremen 2012	n.a.	87.55%	10.02%	2.12%	0.30%
FR Rhein-Main 2012	n.a.	90.31%	7.65%	1.72%	0.30%
Germany 2014	2,497,694	83.57%	13,74%	2.24%	0.44%

Source: Eurostat Economy and finance database & INKAR 2017, own calculations

Compared to the other EU countries, the economic crisis had a short-term impact on the German economy as both the real estate prices and the disposable income for households was relatively stable (cf. sub-chapter 3.5). However, as the German economic strength mainly from its export, the overall global crisis had severe effects on its economic strength deriving from the export of consumer goods (e.g cars, investments) (cf. Roos, 2009, p. 392f.). Its economic strength is mainly produced by enterprises with more than 250 employees (2010 EU-27: 0.19%, Germany: 0.31%) – all in all above EU average (see table 2 above). They produce 68.2% of the turnover and 52.9% of the GVA opposed to a turnover of 6% by micro- enterprises, 12% of the GVA (cf. Söllner, 2016, p. 3). As both regions have the same share of large enterprises, their economic differences most likely derive from the regional differences along the sectors. However, due to a lack of regional data, we can only assume those difference, for instance in the sector of manufacturing

[13] No data available.

(4,112,399 empl./ 1,614,474 EUR) opposed to transportation and storage (1,084,732 empl./ 181,210 EUR) (Statistisches Bundesamt Destatis, 2017).[14]

Correspondingly, the number of micro-enterprises is significantly lower than the EU-27 average, even decreasing since 2010 – a development not necessarily mirrored by the two FRs: they are more successfully implemented in the outer rim of the FR Rhein-Main, while in the FR Bremen small to medium-sized companies are more prominent (INKAR, 2017).[15] It seems, that the "Small Business Act" passed in 2008 fosters the growth of small business in those regions. Nonetheless, Germany's economic strength derives from its export sector by larger companies participating in foreign trade size (cf. Söllner, 2016, p. 4). However, the smaller enterprises produce a lower economic strength and provide lesser job opportunities. In 2014 in Germany, only 20% of all employees worked for micro-enterprises compared to 39% hired by large enterprises (cf. Statistisches Bundesamt, 2016). [16]

As the proportions per sector vary, the regions provide different possibilities to be hired. While the public-sector is declining (2008: 7.3%, 2014: 7.1%), the number of employees in the tertiary sector as well as educational and health sector are increasing. Since the unification of Germany, the number of public servants was reduced by one third (bpb, 2013), a development mirrored by both FRs marking a structural change concerning the government as employer. In both regions the employment rate declined between 0.7% and 1.1% between 2008-2014 (NUTS 2 level, Eurostat). Thus, heading into a career in the public sector can develop into a career risk. This reveals gender problems, as the public sector has one of the smallest gender pay gap of 8% with rather high wages (19.24 EUR/ hour). On the contrary, the educational and health sector provide vacancies, however with different wage opportunities (Education: 20.08 EUR/ hour; Human health and social work: 16.87 EUR/ hour).[17] Both sectors are fostered by a change in social policies focusing on early childhood education. Since 2005 the staffing conditions have changed by implementing the *Tagesbetreuungsausbaugesetz* (TAG, day care expansion act) respectively *Kinderförderungsgesetz* (KiföG, law for the support of children), guaranteeing the legal

[14] Available under: https://www.destatis.de/EN/FactsFigures/EconomicSectors/Service/Tables/SiD_01_EnterprisesPersonsTurnoverCapitalformation.html [last access: 20 July 2017].

[15] The data provided by Eurostat is limited, both in its availability as in its representation. Eurostat only provides data for the EU-27 for 2010, and for Germany for 2012 and 2014. Therefore, the data is complemented with data from INKAR. However, the data representation varies, as Eurostat distinguishes between company sizes from 10 to 19 and 20 to 49; classification that is summed up in the German data gathering process, most likely to the German definition of the Mittelstand were small and medium-sized companies, most-often family owned, gain importance for the German economy. Therefore, the provided Eurostat data was summed up in order to be comparable to the German data representation.

[16] Available under: https://www.destatis.de/EN/FactsFigures/NationalEconomyEnvironment/EnterprisesCrafts/SmallMediumSizedEnterprises/Current.html [latest access: 26 Sept. 2017].

[17] Available under: https://www.destatis.de/EN/FactsFigures/NationalEconomyEnvironment/EarningsLabourCosts/EarningsEarningsDifferences/Tables/GPG_ByEnterprise.html [last access: 20 July 2017].

claim on a day care place after the age of one year. Especially in Bremen this segment has grown more than one third in seven years, from 6.7% to 8.8% marking a dramatic shift in the regional labour market (2008-2014,). On the contrary, the health and social work sector is increasing in Darmstadt (2008: 9.2%; 2014: 10.7%; NUTS 2 level, Eurostat).

The economic conditions of the two regions provide different risks for young people, as the wealth and economic productivity is unevenly distributed: While the core of both regions is rather wealthy, its periphery hardly profits from economic prosperity as especially the large enterprises are in the core of these areas. At the same time, the high living costs in the core areas preclude its inhabitants living and working in the highly profitable core areas, producing a mismatch of economic opportunities and financial limitations. Gaining a profitable job opportunity means spending most of the wage for the living costs or commuting (see sub-chapter 3.1). Thus, autonomy and financial independence seems to be at stake for young adults starting into their careers. Simultaneously, the regions face structural changes providing risks for career paths: Three of the prominent sectors in the FR Bremen, agriculture, water transport and logistics, are on a decline, however, rather low wages sectors (e.g. health, social work) provide a stable, or in the case of FR Rhein-Main, increasing job market. The decoupling between the overall development of wealth in Germany and the stagnation of wages in industries is part of the explanation why significantly more young adults stay longer with their families (cf. sub-chapter 3.4). These conditions can lead to a rethinking of young adults in making their financial living decision: instead of investing time in a low-paid apprenticeship with prospects of a low-paid profession in the service sector, it could lead them directly into the labour market. This can cause long-term consequences for them on the occupational labour market (see sub-chapter 3.4 below).

The following chapter describes the education system context for young adults promoting or hindering opportunities in their life course.

3.3 Education system

The education system as a context of young adults' living conditions, describes the positions and settings in which they are embedded in view of the access, attainment, outputs and policies of education and thus paves the way into the labour market (Checchi et al., 2014; Allmendinger & Leibfried, 2003; Pawson & Tilley, 1997). One characteristic of the German education system is the focus on qualifications, rather than on skills or on-the-job-training in firms, with a tight coupling of certificates to the labour market (cf. Weiler et al., 2017b, p. 12). This highlights the formation in the school system and its output in the form of qualifications providing opportunities or obstacles for the labour market transition as the regions require different specific qualifications: high and low qualified workers in the more industrial Bremen opposed to a high variety of workers in the more service-orientated area around Frankfurt (cf. chapter 3.4 below).

The strong German federal political system is important as the education system is organised under the sovereignty of the federal states, particularly affecting the two regions as they are spread over five different federal systems with heterogeneous policies, access and output rates.[18] The verticalisation and stratification of the school systems leads to different highly segmented tracks and a high standardisation of the educational and training system (cf. Parreira do Amaral et al., 2017b, p. 11f.) This structure is also influenced by the amount of educational expenditure (Biggart et al., 2015). Within the last 15 years, the expenses on the Germany system increased from 4.3% to 4.94% of the national GDP (UNESCO), with approx. 60% in primary and secondary (ISCED 0–4) education (Autorengruppe Bildungsberichterstattung, 2016, p. 38). This rise is not surprising, as Germany can be characterised as a social-conservative state with moderate to high public funding. Additionally, the media-stirred 'PISA-shock' discussions in Germany led to several reforms changing the educational system (cf. Parreira do Amaral et al., 2017b, p. 11; Bittlingmayer et al., 2016c; Grek, 2009, p. 29ff.), especially regarding the early education system. The policies aim to provide childcare under the age of three (cf. sub-chapter 3.2); therefore, by 2005 84.6% of the 4-years-old were in education nationwide (by 2012: 95.8%) and in Bremen 93.1%.[19]

The early tracking leads to early decisions under high uncertainty as the different highly segmented tracks offer different opportunities of qualifications for young adults. Like Austria, the German education system has a first division at the age of 10 at the beginning of lower secondary education. After that, pupils can transition into three general school tracks: *Hauptschule*, *Realschule*, and *Gymnasium*. For students with special needs there is a separated and in itself highly fragmented school track (*Sonder- or Förderschulen*; ~ 4% of each cohort) (cf. Powell & Pfahl, 2012). Besides the characteristic of a vertical differentiation, the system has a tradition of separating between academic and vocational education (cf. Bittlingmayer et al., 2016a, p. 5f.), both attained by pupils in almost equal shares in upper secondary education: in 2015, 53.2% were enrolled in the general program and 46.8% in the vocational program (Eurostat).

These upper secondary school levels play an important role in the transition from school to labour market as they provide different qualification options, paving the way into different careers. Especially the *Gymnasium* provides the general higher education entrance certificate (*Abitur*), which enables students to enter university. Since 1995, the number of graduates with an *Abitur* has increased about 9.15% to 33.4% in 2014, mirrored in both FRs, however to a different extent: While the FR Rhein-Main is continuously above German average (1995: 25.63%, 2014: 38.58%), the FR Bremen increases its number at a slower pace, remaining under the na-

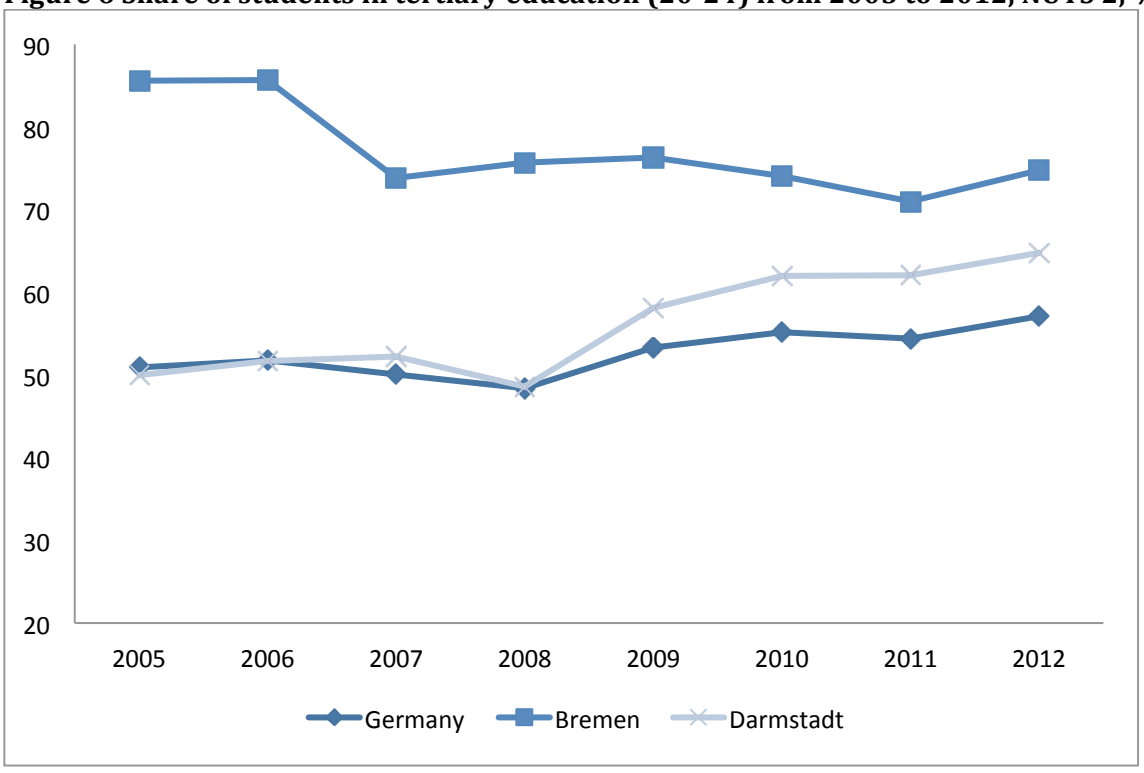
[18] Due to the federal states system, the school for supply structure is heterogeneous and varies with a minimum of three up to six different school forms. The FR Rhein-Main overlaps 3 federal states all have each 6 different school forms, while FR Bremen overlaps two federal states with 3 respectively 5 different school forms (cf. Autorengruppe Bildungsberichterstattung, 2016, p. 74).

[19] The data refers to Bremen on NUTS 2 Level. No data is available for Darmstadt.

tional average (1995: 22.28%, 2014: 28.5%). However, the *Gymnasium* is not the only way of reaching the Abitur as the structure of the upper secondary system is changing nationwide offering new integrated school tracks either substitute or integrate *Haupt-* and *Realschule* as well as to open new paths to the Abitur (Autorengruppe Bildungsberichterstattung, 2016, p. 73).

The *Hauptschule* in particular has been the target of reforms, leading to its steady decline of around 10% since 1995, both nationwide as well as in the two regions, due to demographic changes and the increased importance of the *Abitur* as a prerequisite for entering the labour market. In the FR Bremen, the school has the highest attainment levels in its very northern and rural district Friesland (over 20%) while in the FR Rhein-Main the highest attainment levels over 20% are in its regional core with the city of Offenbach, the close neighbour to Frankfurt a.M., and the Bavarian part of the FR (INKAR, 2017). This change has led to a creaming out-process[20] and attending a *Hauptschule* is meanwhile linked with stigmatisation and stereotypes (Solga & Wagner, 2001; Kraemer & Bittlingmayer, 2001; Ditton, 2013). It marks a risk factor of its own as the transition from the lower secondary school system into the dual systems of VET has become marginal, mostly due to labour market demands (cf. Weiler et al., 2017b).

Figure 6 Share of students in tertiary education (20-24) from 2005 to 2012, NUTS 2, %



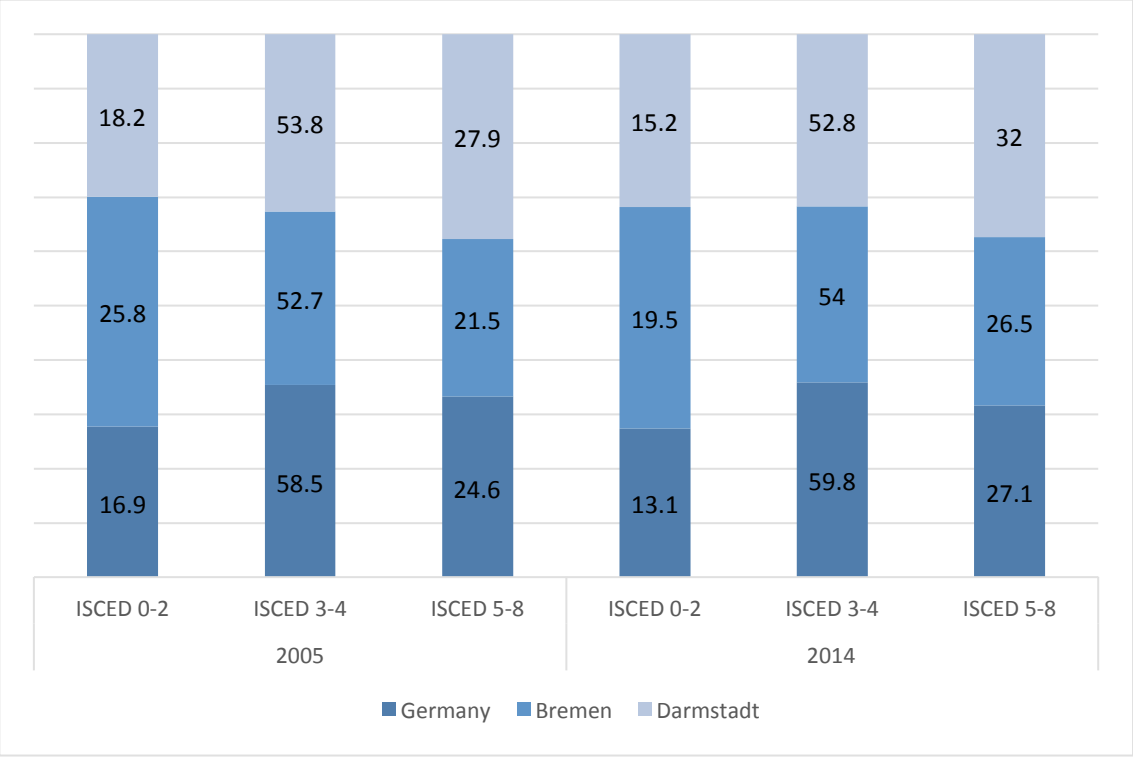
Source: Eurostat Education and training database

[20] The 'creaming-out-process' describes the transition of top-performing students into higher education institutions, leaving those behind from socio-economic unstable families. As a result, the education opportunities only improve for a certain group of students, however, creating educational limitations for the already financially disadvantaged students.

The VET consists of three systems: the dual system (*Duales System*), the school-based training system without an in-firm training in vocational schools (*Schulberufssystem*) and a transitions system (*Übergangssystem*), which does not lead to a qualification to enter into a profession but rather improves the opportunities to enter the other two VET school systems (cf. Kohlrausch, 2012). This leads to a postponement of their entrance into the labour market, with a stable share of approx. 28% NEETs since 2000 (Autorengruppe Bildungsberichterstattung, 2016, p. 103ff.). In contrast, a steadily increasing number of 20% of students with an *Abitur* enters the dual System (ibid., p. 105) competing in the VET system with students from the other school tracks.

The development of tertiary education (20-24 years) is dynamic, as the share of students rose between 2005 and 2012 (see Fig. 7), also mirrored by Darmstadt. On the contrary, in Bremen the numbers decline, however, the attainment level was higher to begin with (NUTS 2 level, Eurostat). Compared with local data, we can observe that the number of students enrolled in universities in both regions has fairly remained on the same stable level over the last 20 years (cf. INKAR, 2017).

Figure 7 Comparison of the ISCED (0-8) education levels (25 - 64) of 2005 and 2014, NUTS 2 level, %



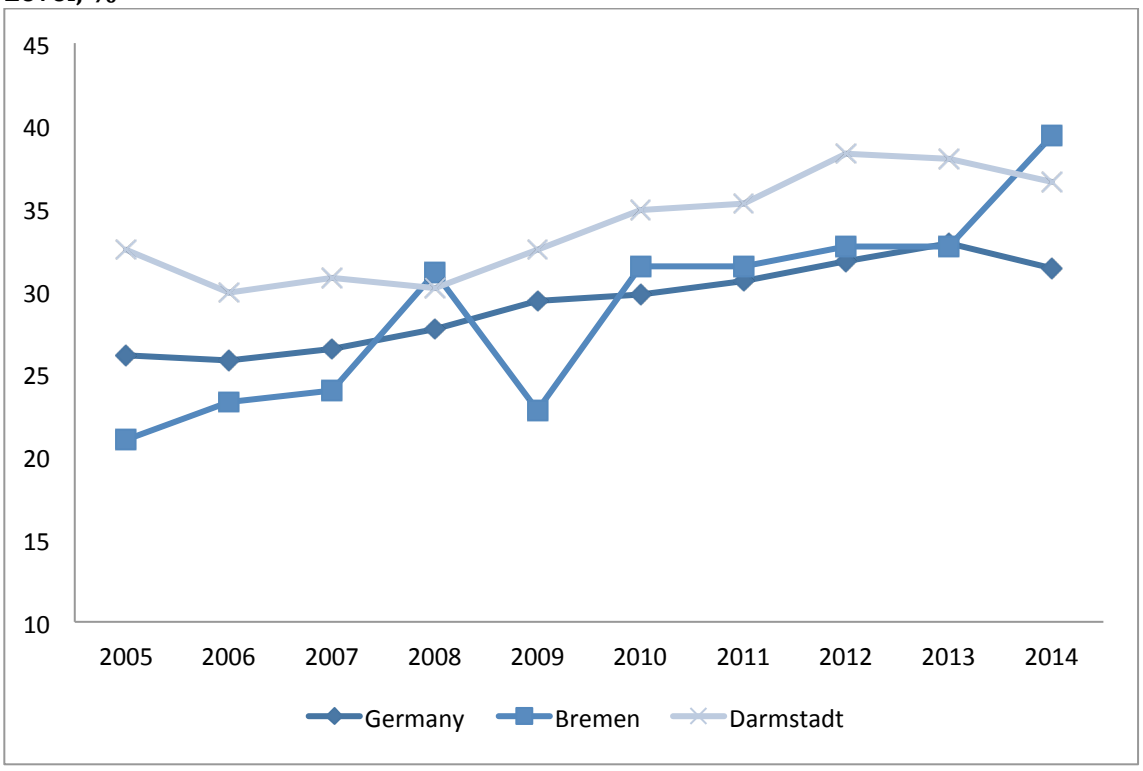
Source: Eurostat Education and training database

Contrary to tertiary education, the participation rate in adult education is rather low. In 2005, 16.7% of the Germans (age 25 to 34) participated in adult education or training, slightly increasing until 2016 (18.8%), still being above EU average (EU-27 in 2005: 15.8%; 2016: 17.7%).

However, slight differences between the genders can be observed: While 20.2% of the male in this peer group participate in education or training, just 17.3% of the female participated. However, these differences seem to be limited to adult education and training, as the educational level generally rose in Germany, equally attended by both genders. While the share of low-educated students (ISCED 0-2) decreased from 16.9% to 13.1%, we notice a static situation with regard to the amount of people with upper-secondary education (ISCED 3-4: in 2005: 58.5%; in 2014: 59.8%). However, the share of the highly-educated people rose in this time period from 24.6 to 27.1%.

In contrast, the secondary education attainment between the ages of 30-34 (ISCED 3-4), slightly decreased between 2005 and 2014 from 58.5% to 56%, equally for both genders (men: from 58% to 55.9%; women: from 59% to 56.2%), however increased for the same age group in the tertiary education attainment (ISCED 5-8) from 26.1% to 31.4% (see Figures 7 & 8 below). Both regions are increasingly adjusting in their tertiary education attainment, prolonging the formal education opportunities for their young adults. Especially women profit from this development as they steadily increase their attainment levels from 24.1% to 30.8% compared to 28% to 32% of men (Eurostat).

Figure 8 Tertiary education attainment (ISCED 5-8) (30-34) from 2005 to 2014 NUTS 2 Level, %



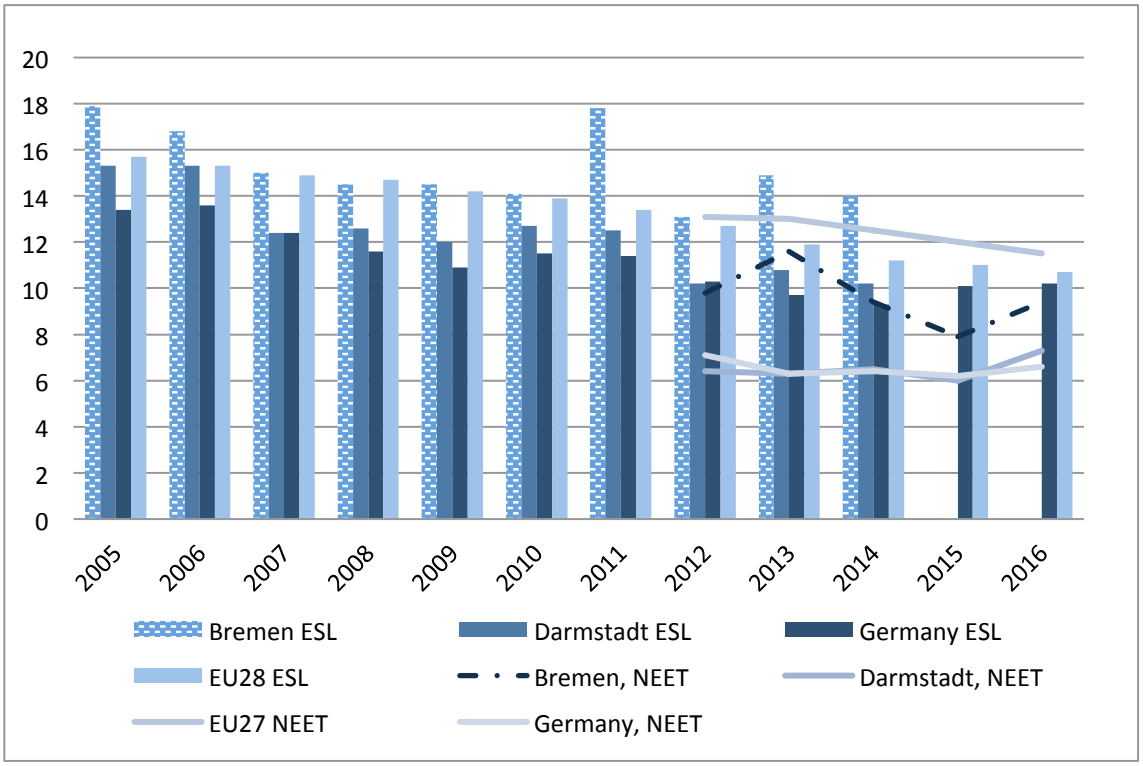
Source: Eurostat Education and training database

Besides the structure and the expenses, the quality assessment of the education system also plays an important role, for which especially PISA is a commonly used denominator. In 2015,

German pupils gained a mean score of 505 in numeracy and 491 in literacy (EU average were respectively 491 and 492). However, the group of young adults (20-29) is notably above EU average: In 2012, young people had a mean score in literacy of 290 (EU: 272) and in numeracy of 288 (EU: 262) (Eurostat), well above EU average in the measured competence levels.

Those that are neither in employment nor in education and training (NEETs) are perceived as belonging to a particularly vulnerable target group (cf. chapter 2). In Germany, the rate of young NEETS (15 to 24 years) is comparably low to the EU-27 (see Fig. 9 below). However, the rates vary locally: In Bremen, the share of NEETs was slightly above German average with 9.4% in 2016 opposed to a slightly increase in Darmstadt from 6.4% to 7.3% (cf. LSF, NUTS 2 level). Compared to the educational attainment levels, it seems that Bremen improved the rates of tertiary education, however, has fluctuating rates of NEETs. In contrast, the FR Rhein-Main already has high tertiary attainment levels and seemingly stable rates of NEETs.

Figure 9 NEET rate (15-24) and early school leaving rate (18-24), from 2005-2015 NUTS 2-Level, %



Source: LSF microdata

In sum and with a view to the risk profiles of young adults, the German education system is characterised by a tight coupling of certificates and building occupational biographies. This is discussed under the label 'academisation' as an increasing number of students continues their formal education after upper secondary school, both in Germany as a whole as well as in the two regions. Firstly, the rates of students gaining the school leaving certificate (*Abitur*) for entering higher education is steadily on the rise. Secondly, the restructuring of the German school system

has led to a reduction of lower secondary school tracks (*Hauptschule*), however hardly to an integration of Schools for Special Needs Education (*Sonderschulen* or *Förderschulen* or *Förderzentren*) into the general school tracks. Thirdly, a high number of students is enrolled in the transition system (*Übergangssystem*), waiting to enter the VET system, competing, however, with the students from higher school tracks. The prolonging of formal education is closely linked to the occupational labour market, as certificates are a precondition for an occupation (see sub-chapter 3.4 below). In this sense, being at risk is paved and reinforced by the school system young adults attend, both-for the subsequent chances being included in the labour market and for facing stigmatisation.

The obstacles they face are hardly levelled out by LLL policies or the VET system and thus, enhance the risk of facing fragmented occupational biographies. *Firstly*, the overarching significance of educational certificates for the employers and the comparatively little significance of adult education and further training exacerbates the creation of a stable and predictable life course for students below higher formal education. These groups build the core of the so-called "functional illiterates" in Germany, which is one of the most important target groups of LLL-policies (Grotlüschen, 2012; Bilger, 2012; Riekmann & Buddeberg, 2016). *Secondly*, even successfully finishing dual vocational education and training can lead into occupational risk-careers as jobs which are high in demand can lead to a surplus of workers. The main available and continuously expanding qualifications lead to jobs that are in the low wages sector, such as hairdresser, motorcar mechanic (besides the big enterprises of the famous German car industry), butcher, or nurse, with nearly no chances of advancement (cf. MAIS, 2017; Lohnspiegel, 2017). Thus, the discourses on the lack of skilled workers seems neither to be filled by students of higher education nor by apprenticeships, as the matching of the certificates and the needs of the labour market are tightly knit. As a result, the low permeability of the institutional arrangements of the German education system hardly enhances the equality of opportunities for young adults at risk.

The following chapter describes the structure of the youth and labour market for young adults promoting or hindering opportunities in their life course.

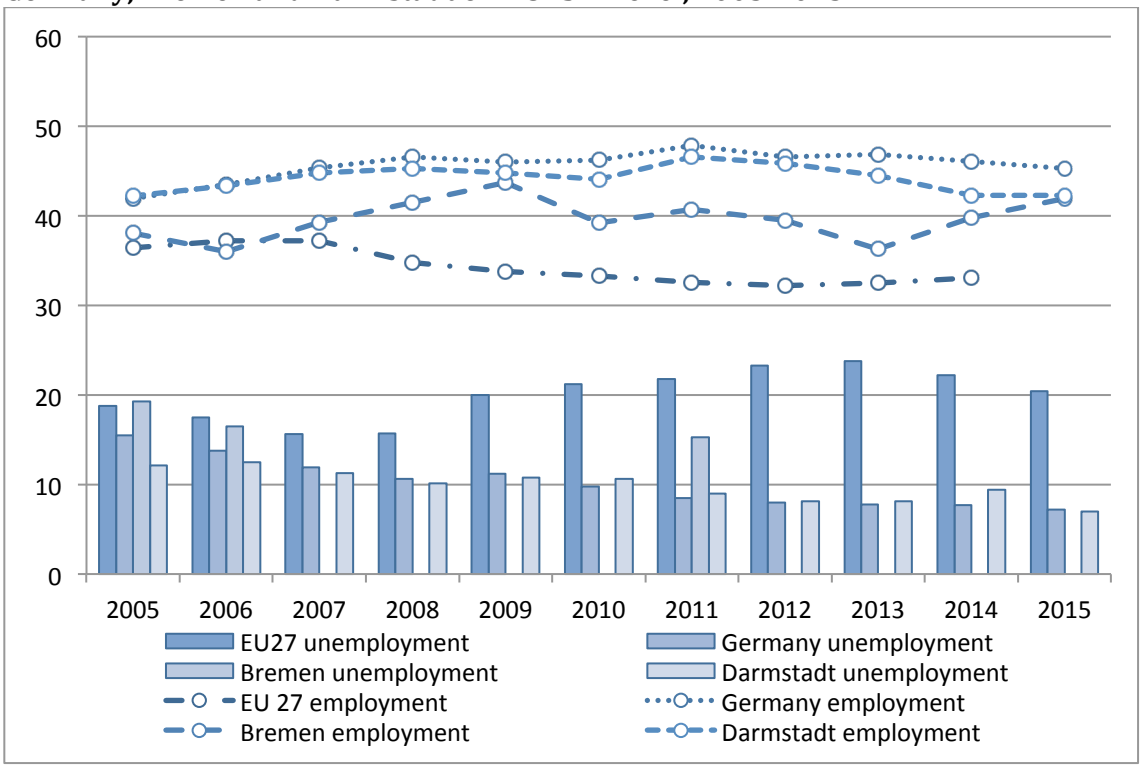
3.4 Labour market

The different ways in which young people can participate in labour markets affects their life opportunities and social identities (cf. Höfer & Straus, 2001, p. 91f.). In the German discourse, 'being in work' is not necessarily equated with having a job, rather an occupation shaping the life course: While a job describes a temporary limited activity allowing a high flexibility, an occupation aims to provide long-term, systematically trained and qualified activity, shaping one's identity ("Berufsträger" Straus & Höfer, 1998, p. 280). Thus, in Germany, the qualifications gained in

the education systems are a precondition for an occupation. In this sense, the stratification of the educational system is mirrored by the occupational system causing a low permeability (cf. Shavit & Müller, 1998).

Against this backdrop, the fragmented yet distinct labour market structures and opportunities (cf. sub-chapter 3.2) of the two regions affect young people. The opportunities are highly coupled to the education system: the 'wrong' certificate can lead into unemployment, no certificate surely will. The system does not intend a 'switch' between occupations, which is accompanied by presumed loss of productivity (cf. Kambourov & Manovskii, 2009). As a result, the Dual System, being the most important strain of the VET system, provides employers with a notion of what to expect from a certain type of training (Hall & Soskice, 2001) and is a precondition for its occupational labour market (cf. Parreira do Amaral et al., 2017b, p. 15). Therefore, the rather low unemployment rate, especially compared to other EU-27 countries (see Fig. 10 below), could lead into long-term unemployment or precarious working situations. Within the past ten years, the rates decreased remarkably (2005: 11.2%; 2015: 4.6%, age 20 to 64). Although the rates for young people (15-24) were slightly higher to begin with (2005: 15.5%) the numbers have been reduced by half (2015: 7.2%). The reduction of the rates is also mirrored by the two FRs: in Bremen, from 16.8% to 5.6% and in Darmstadt from 8% to 4.1% (NUTS 2 level, LSF). Complimentarily, the employment rates (age 20-64) are high, both in Germany and in the two regions and remained unaffected by the financial crisis in 2008 and 2009 (LSF).

Figure 10: youth employment and unemployment rates for young people (15-24), EU-27, Germany, Bremen and Darmstadt on NUTS 2-Level, 2005-2015



Source: Eurostat Labour market database, LFS microdata

Although the unemployment rates are decreasing for both genders, the unemployment rates of women are lower as opposed to men (e.g. in Germany 2015, males: 5.0%, females: 4.2%). However, the data covers a high number of undetected cases, for example housewives and persons willing to work but unregistered as searching for work (cf. Hahn et al., 1995; Beck, 2008). In the national statistical data gathering process, these groups are considered inactive and thus not included in the statistics. The unemployment rate can cover risk of precarious living conditions, as pausing from employment causes a reduced payment in pension schemes. Especially women are affected by old-age poverty, as their fragmentation of the life course through pauses is highly encouraged by the German government, for instance for childcare, being a housewife or having a part-time job (cf. Statistisches Bundesamt, 2016, p. 38f; cf. Parreira do Amaral et al., 2017b, p. 17, sub-chapter 3.5). Opposed to women in the retirement age, the current generation of working women (18-64) is facing these precarious living conditions later in life as they already face financial strains due to unemployment, part-time employment and low income resulting in material deprivation (ibid.). This especially effects the FR Bremen, as the gender differences in the employment rates have only begun diminishing since 2014, while Darmstadt already has a stable employment rate for both genders of over 40% (NUTS 2 level, LFS). This could lead to limited possibilities for partaking in the labour market, for instance if a car is necessary for commuting or a move to another city is too expensive yet a precondition for a job.

Against this background, the youth unemployment rates visualize the internal heterogeneity within the regions as the more tightly knit urban areas of FR Rhein-Main have lower rates than the FR Bremen. While in Darmstadt (on NUTS 2 Level) the unemployment rates are shrinking (2005: 12.1% 2015: to 7.0%) in Bremen the rates are rather high (2005: 19.3%). Especially the cities of Bremerhaven (2014: 13.6%) and Wilhelmshaven (9.7%) have high rates, even more obvious in contrast to the highest rates within the cities of FR Rhein-Main (Worms: 8.6%, Offenbach: 8.2%) (INKAR, 2017). It seems, the unemployment rates in FR Bremen fluctuate, while FR Rhein-Main slowly but steadily reduced its rates. Although the long-term-unemployment and the youth unemployment ratio[21] shows a very positive trend in the last ten years it reveals a stable share of vulnerable young adults most likely heading into adult unemployment between 3,1% in the age of 15 to 29 (long-term, unemployment; 2008) and 4,8% in the age of 20 to 29 (Eurostat).

The exclusion of young people from the labour market causes various debilitating effects. The financial strains result in an overall decrease of lifetime earnings enhancing the risk of poverty (cf. Statistisches Bundesamt, 2016, p. 40f). Early unemployment can have long-term negative "scarring effects" (Øivind & Holm Reiso, 2011, p.3) by missing early career experience and being perceived, or 'scarred', with a lack of individual skills or productivity as opposed to perceive structural obstacles hindering them to participate in the labour market. As a result, access

[21] The youth unemployment ratio measures the share of unemployed young people among the whole youth population (either 15 to 24-year-old persons or 20 to 29-year-old persons).

to unemployment can be decisive for subsequent long-term success as they most likely face unemployment again (ibid.). Especially the FR Bremen is confronted with the effects of early unemployment, both on the individual level (e.g. stigmatisation, health issues, lack of motivation, etc.) and structural level (e.g. higher costs social welfare system, loss of labour market productivity).

It is assumed that there are four contributing factors to the differences in the youth unemployment/ employment rates:

1. The interlinkage of social and labour market policies linking unemployment benefits and social welfare.
2. Weaker legal employment protection for young workers.
3. Longer formal education postponing the entrance into the labour market.
4. Regional differences in contrasting labour markets leaving those behind with a mismatch of training and job opportunities.

First, since 2005 the so-called "Hartz-laws"[22] were implemented, reforming the unemployment benefits by linking them to welfare benefits as an overall strategy of labour market policies. Due to this reform of activation (workfare policy), receiving benefits payment for long-term unemployment is bound to a contract with public law: the beneficiaries of the payment are obliged to agree to improve their job situation in accepting any kind of job – a refusal can otherwise lead to reduction/ complete suspension of the benefits. This interlinkage also explains the overall reduction of expenditures in labour market policies as they are partially substituted with social policies (cf. Lessenich, 2009; Gerdes & Bittlingmayer, 2012). In 2005, Germany spent slightly more than 3% of the GDP for labour market policies – the highest value across all the countries analysed in YOUNG_ADULLLT and 50% above the EU average (EU-28: 2.0% of GDP). However, this expenditure decreased around 50% within the following 10 years (2015: 1.5% of GDP).

Second, the legal employment protection is weaker, particularly for young workers. With the Employment Promotion Act from 1985 companies have the possibility to extend fixed-term contracting for new entrants to the labour market (cf. Buchholz & Kurz, 2008, p. 54; cf. Parreira do Amaral et al., 2017b, p. 13). This leads to a 'yo-yo-effect' with phases of employment and unemployment, promoting a fragmented life course with the constant search for the next employment bypassing uncertainty. Thus, labour market policies contribute to a fragmentation of life courses– regardless of skill sets, certification or labour market sector.

[22] The Hartz-laws try to redefine the role between state and subject and limit civil rights of unemployed persons and establish a labour policy of activation, i.e. that unemployed persons need to prove permanently that they are willing to work, accepting for instance worse working conditions, time contracts and so on (cf. Lessenich, 2009; Dörre, in press). As one consequence of the Hartz-IV-law, the amount and duration of unemployment benefits were shortened to one year and 60 to 67% of the previous net salary, regardless the age and work history. There are many similarities to the British Workforce policy under Toni Blair (cf. Dixon, 1999, 2000).

Third, the participation in higher education is constantly increasing which leads to a postponement of the entrance into the labour market (see sub-chapter 3.3). And fourth, regional differences in contrasting labour markets promote and foster the need for specific jobs as a consequence of the regional structural changes (cf. sub-chapter 3.2) leaving those behind with a mismatch of training and job opportunities (Parreira do Amaral et al., 2017b, p. 24f.). Especially the FR Bremen has a highly dynamic and contrasting labour market, however still offers a large amount of jobs in production plants. As a result, the labour market is highly polarized, with focus on high and low skilled worker constantly reducing the medium skilled workers (cf. Autor et al., 2003). In contrast, the FR Rhein-Main offers a broader variety of jobs (e.g. finance, media), however with a worldwide job competition who compete with the potential workers on site. In this sense, the German labour market creates an interlinkage of life course and career path which leads into a high precarity for those choosing or forced to choose a non-matching vocation. Particularly as both regions attract high skilled workers in the core spreading the remaining skilled jobs in its periphery causing precarious situations for NEETs and early school leavers.

Despite the overall positive economic situation in Germany and employment rates, the problems for – a comparatively smaller amount – of young adults are more or less the same like in the other EU-countries. In terms of the interplay between youth and labour market, *to be young is a risk factor of its own* given the significant age differences in all the relevant indicators mentioned above (e.g. unemployment rate etc.). However, there is a relatively new risk factor for young adults, particularly for Germany: a successfully acquired vocational certificate does not prevent unsecure occupational biographies. Since the 1980's, the wages in twelve traditional industries are in the low-pay sector (MAIS, 2016). Thus, receiving training and working in those industries is a risk in itself. We assume that not vocational training per se lowers the risk for young adults, but rather vocational training in specific areas, both available and with a reasonable compensation. This is particularly a challenge for young adults living in urban areas like the cities Frankfurt a.M. or Bremen with high rents on a highly competed apartment market.

The following chapter describes the material living conditions for young adults along the redistribution and social inclusion in the two Functional Regions.

3.5 Redistribution and social inclusion

In every country, certain groups face barriers preventing them from participating in the social, economic and political sphere of society. However, social participation is even more difficult under conditions of poverty as it can lead to social exclusion and, as a consequence prevents citizens from creating an autonomous life (Eurofund, 2015, p. 5). Thus, from a social-economic perspective, social inclusion and redistribution of wealth are closely linked, as the material living conditions are a crucial minimum requirement to avoid poverty. The welfare state is a govern-

mental concept of protecting its citizens by promoting social, economic security and social rights by ensuring the redistribution of wealth (cf. Esping-Andersen, 2014, p. 140).

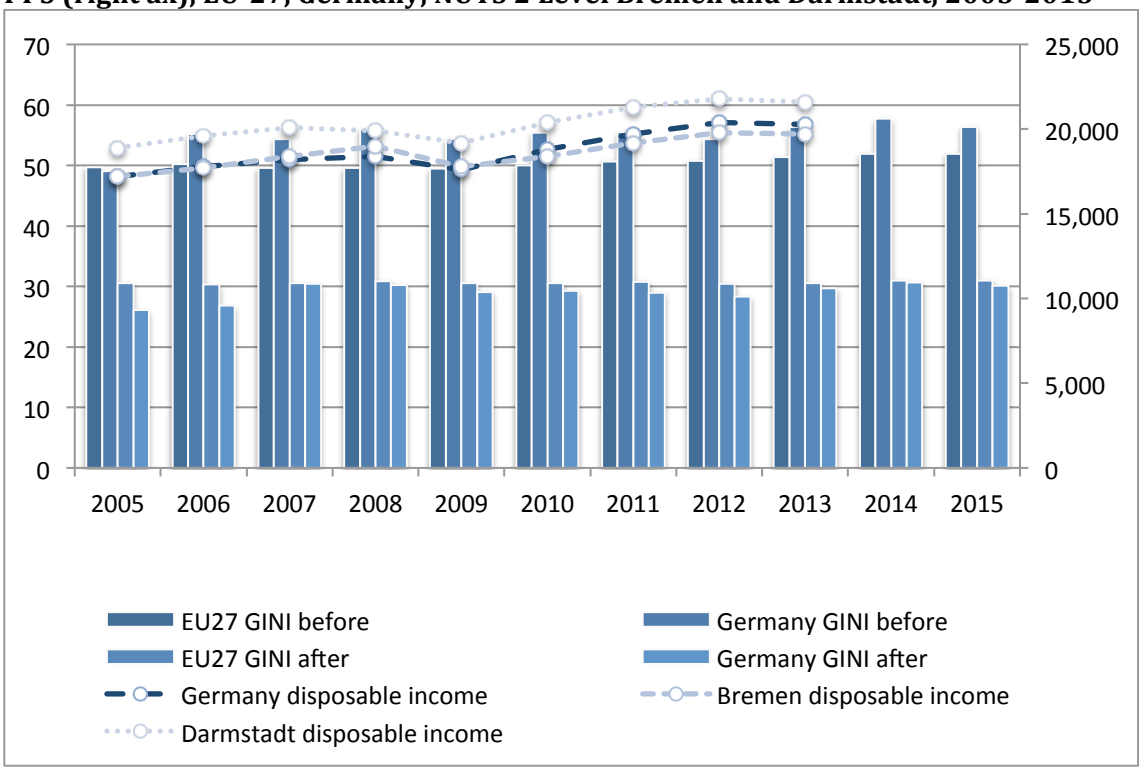
In Germany, the welfare state is rather conservative as it operates along the principle of subsidiarity, however, only after the families' possibilities for support are exhausted. The benefits system is constructed along former contributions to the system that have been made through employment. This perpetuates gender differences, as women are encouraged to support the family opposed to join the labour market (cf. Parreira do Amaral et al., 2017, p. 17; cf. sub-chapter 3.4). Here, regional differences can be observed as the legislations unfolds differently amongst and within the regions. First, the possible wealth is dispersed differently. Although those living in the core are more likely to participate in the wealth of the region as the periphery, those living in the FR Rhein-Main are more likely to face a divergence of rich and poor (cf. sub-chapter 3.1). Second, the benefits systems have different short- and long-term target groups, as in the FR Bremen the youth unemployment rate is higher than in FR Rhein-Main. In the long-term, this contains the risk of future phases of unemployment leading to recurrently payment of benefits and subsequently reduced payment into the social system (taxes, insurances, pension etc.). This perpetuates women even more, as the double pressure of making a living and starting a family can cause several pauses from employment and has negative effects on their pension plan, however, is highly encouraged by the state (cf. sub-chapter 3.4).

Against this background of the principle of subsidiarity the high expenditures of social protection have to been read. The German overall net expenditure in social protection rose from 24.8% to 26.6% of the overall GDP between 2007-2014. This rather moderate rise was however influenced by the financial crisis, as the strongest increase took place between 2008 and 2009 (from 25% to 28% of GDP).[23] In Germany, the spending is rather high: in 2014, the government spent 10.324,72 EUR/ inhabitant, being 130% well above EU-28 average of 7.904,73 EUR/ inhabitant (Eurostat; ESSPROS). In line with the German welfare state, and its state-based health care insurance providing accessible health care (cf. sub-chapter 3.6), the main share of social protection is spent here (2005: 7.9%; 2014: 9.7%). Due to the strong notion of the family support system before governmental benefits, there is only a slight rise in the expenditures on family and children (from 3.0% to 3.1%) and social exclusion (from 0.1% to 0.2%) – however, continuously under the EU-27 average of 0.5% and the lowest of all participating countries in the project. On the contrary, the spending for pension and retirement (9.6% to 9.0%) as well as social protection benefits to counteract unemployment (from 2.0% to 1.1%) decreased. Thus, family, social inclusion and pensions are not on the forefront of the expenditure of social protection, although Germany faces demographic changes of an ageing society (cf. sub-chapter 3.1).

[23] According to ESPROSS, expenditure on social protection is provided to households and individuals affected by a specific set of social risks and needs. Available under: http://measuring-progress.eu/social-protection-expenditure-current-function-gross-and-net-espross [latest access: 14 Aug. 2017].

The disposable income for households describes the material conditions of the regions, as the amount of money earned each year after taxes and transfers, and thus, representing the money available for spending on goods or services. In Germany, it is relatively stable and amongst the highest in the EU. However, due to the economic crisis, the amount stagnated between 2008-2009 (see Fig. below). Living and working in the core of the Functional Regions has a positive impact on the wealth of its inhabitants, although, not all inhabitant's profit from it, due to Germanys increasing income inequality (Darmstadt: 21,600 PPS, Bremen: 19,700 PSS, NUTS 2-Level). Since 2006, it surpasses the EU-27 average consistently (Germany: 56.4%; EU-27: 51.9% in 2015), following the general trend of widening the gap between rich and poor (cf. OECD, 2011; Piketty, 2014). In the time span 2005-2015 the Gini coefficient[24] of equivalised disposable income (Fig. 11 below), which shows the concentration of income went from 45% to 56.4%, surpassing the EU average (EU-27: 2005: 49.7%; 2015: 51.9%). Also, household wealth is much more unequally distributed than income. In 2012, the richest 10% of German households owned 59.2% of overall household wealth, the fourth highest share of 17 countries studied by OECD. (cf. OECD, 2016, p. 102f.).

Figure 11: GINI index before and after transfers, disposable income in the households in PPS (right ax), EU-27, Germany, NUTS 2 Level Bremen and Darmstadt, 2005-2015



Source: Eurostat Living conditions and welfare database, EU-SILC microdata

[24] The Gini coefficient measures the extent to which a distribution deviates from a perfectly equal distribution. In this case, GINI is applied to equalised disposable income within a country. In general, it ranges from 0 to 100, however it could also be expressed on 1-point scale. A coefficient of 0 expresses perfect equality where everyone has the same income, while a coefficient of 100 expresses full inequality where only one person has all the income.

The risk of poverty and social exclusion is under the EU-27 average and one of the lowest amongst the projects countries (only Finland and Austria are lower). However, its increase seems not an effect of the financial crisis, but occurred before it. The risk mainly increased in 2005 from 18.4% to 20.2% in 2006 and remained on that stable level throughout the crisis, even recovering shortly after the crisis in 2010 (19.7%) (Eurostat; EU-SILC).[25] Thus, the severe material deprivation rate, the inability to pay for basic living supplies[26], was affected by the crisis (2005: 4.6%, 2009: 5.4%).

These developments can particularly be a risk for receiving long-term unemployment welfare benefits, due to the coupling social and labour market policies (cf. sub-chapter 3.4). The so called 'Hartz-IV-law' refers to the Unemployment Benefit II, which all people "capable of work and eligible for benefits can receive" (Bundesagentur für Arbeit, 2017). These can be for persons who are unemployed longer than one year (or in special cases one and a half year) or people who enter the labour market after school/VET without successfully getting a job. On average, persons being on unemployment benefits receive 399 EUR/ month, plus 440 EUR for housing, with slightly different distributions per region (Statistik der Bundesagentur für Arbeit, 2017).

To sum up this subchapter in terms of risk profiles: Germany has undoubtedly a very strong economy and a stable democracy but on the other hand, a constant share of people depends on social welfare. Germany failed in the last ten years to reduce this rate substantially; on the contrary, the income inequality increased significantly as well as the number of people who are working on a low-income base. Being at risk varies remarkably along the regional differences, especially within the Functional Regions. For instance, in 2014, for a child the chances of receiving social transfers –an often-used poverty indicator – are three times higher in the cities Bremerhaven (37.2%, FR Bremen) or Offenbach (34.8%, FR Rhein-Main) than in the cities Osterholz (9.3%, FR Bremen) or the city of Fulda (9%, FR Rhein-Main). The risk for those in Bremerhaven or Offenbach is even five- to six times higher than in the Bavarian part of FR Rhein-Main Aschaffenburg with 6.1%(INKAR, 2017). Thus, the region itself seems to be a strong predictor of poverty, forcing young adults to be mobile. However, if they are forced to stay in disadvantaged districts like Bremerhaven or Offenbach for several reasons – for instance, as the qualifications are only accepted locally or they are responsible for the health care of their parents – then the neighbourhood turns directly into a risk factor for their biographies as well as for their participation in LLL-policies.

[25] There is no data available on NUTS 2 Level for German regions.

[26] Severe material deprivation rate is defined as the enforced inability to pay for at least four basic items such as: 1. to pay their rent, mortgage or utility bills; 2. to keep their home adequately warm; 3. to face unexpected expenses; 4. to eat meat or proteins regularly; 5. to go on holiday; 6. a television set; 7. a washing machine; 8. a car; 9. a telephone.

The following chapter describes the health and well-being conditions of young adults along the redistribution and social inclusion in the two Functional Regions.

3.6 Health and well-being conditions

In Germany, local data on health is hardly available. Most of the data is highly aggregated on the national level, however, rarely on the level of federal states or on regional level, as centralized health data collection hardly exists. Thus, data from international surveys, as in Eurostat, aggregates the German health data on a comparatively high level. As a result, this sub-chapter differs from the others regarding the illustration of the indicators as we refer more to data on the national level compared to the five subchapters above.

Against the background of a steadily growing life expectancy (cf. sub-chapter 3.1), public health interventions and medical care improved. During the last decade, the total health expenditure in Germany increased steadily touching 321 billion EUR in 2014 – the highest expenditure amongst EU member states – which equals 3.973 EUR per inhabitant (EU-28 average: 2.235 EUR/ per inhabitant). Yet in relative terms, other countries have similar ratios of current healthcare expenditure to GDP of 11% as Germany (Eurostat). However, during the last 20 years governmental healthcare reforms have been implemented in Germany aiming to reduce the governmental expenses in healthcare favouring a compulsory contributory health insurance system. This lead to the introduction of a health care insurance as well as the introduction of economic principles (e.g. regulations by outcomes in the health sector). In 2014, the health expenditures in Germany were 6.6% of government schemes – one of the lowest of the EU-28 – while 78.0% were covered by compulsory contributory health insurance schemes and saving accounts – the highest within the EU (260 compared to 3.059 PPS per inhabitant) (Eurostat). As a result, the access to a health care is granted, however, the standard and quality of health care can vary on the wealth of the inhabitants.

These changed health policies had strong effects on the field of health and medical care as well as health care access in Germany. The introduction of a state-based health care insurance led to an increasing number of people profiting from this insurance, simply because of the ageing society. In the FR Bremen, the number of officially registered care recipients increased significantly from 6,089 in 2009 to 6,476 in 2013, which has enormous consequences for the federal expenditures in health care (FHB, 2015). Furthermore, of the nine participating countries in the project, Germany has the highest number of available beds in hospital in the last decade. They faced only a moderate reduction in the last ten years (2005: 846,7 beds/100,000 inhabitants; 2015: 822,8 beds/100,000 inhabitants, Eurostat).[27] The available healthcare staff mirrors these developments. However, the improvement of the ratio of medical doctors (2005: 339,5/100,000

[27] Data for the long-term curative beds per 100.000 inhabitants is not available via Eurostat.

inhabitants, 2015: 410,8/100,000 inhabitants) as well as nurses and midwifes during the last decade (2005: 1.137,3/100.000 inhabitants, 2015: 1.342,2/100.000 inhabitants) is most likely not a consequence of an improvement of the health care system, but rather through a stable quota of medical students (Eurostat). These quotas are highly regulated in Germany by the states (Bremen has a large Medical Faculty at the University of Bremen) and a negative demographic trend in Germany.

These changes in the structure and access to the health care system maybe the reason why Germans have a lower perception of their health than the EU-27 average. When asked in 2015, "How is your health in general?" 64.6% of people in Germany reported to be in good health, slightly under EU-27 average of 67%. However, the ratio between people who have a good and very good perception of their health and those who have a bad perception is rather high with 9.3% and in comparative perspective over the EU-27 average of 8.7% (cf. Eurostat; EU-SILC). Not surprisingly, young people in Germany, aged 16-29, have a better self-perception of their health than the overall population, as in 2015 89.1 % of them perceived their own health as good or very good yet slightly under the EU-27 average of 90.8% (ibid.). This perception could also mirror the actual health status in Germany, as the rate of healthy life years (HLY) is under the EU average, measuring the number of remaining years that a person of specific age is expected to live without any severe or moderate health problems. German males are below the EU-27 average and have the shortest amount of healthy years of all project countries. On average, they are expected to live 56.4 healthy years, which amounts for 71.7% of their life span (in 2012: EU-27: 80.3%, Germany: 74.2%). In addition, females are below EU level (in 2012: EU-27: 75.5%, Germany: 70.8%) and amongst the lowest in the project with 56.5 healthy years which estimates for a 67.6% healthy life span (cf. Eurostat).[28]

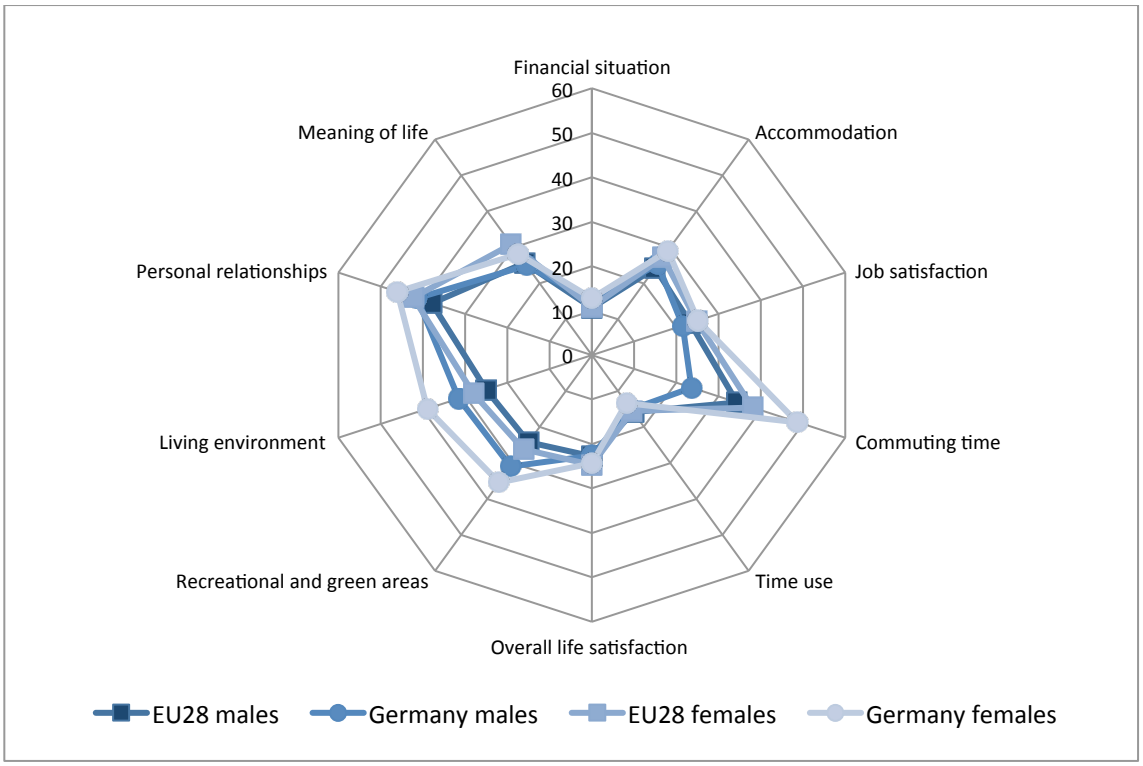
The subjective well-being can be measured in terms of life satisfaction (see Fig. below). This allows to describe a self-positioning perspective on health and well-being of young adults as an uncovering of their perception. In general, Germans are quite satisfied with their lives. On a scale from 0 to 10. Germany rated general satisfaction with life with a 7.3 grade (EU-28: 7.1 grade) and 25% were highly satisfied (EU-28 average: 21.7%). Accordingly, young Germans (16-24) are highly satisfied as well, for instance 33% with their job, especially their peers on the EU-28 average with 29.3% (cf. Eurostat; EU-SILC). Not surprisingly, these results are related to educational attainment and labour status: satisfaction is much lower for low-educated, roughly equal to the national-average for upper secondary educated, much higher for tertiary educated as well as those in education and training compared to those being unemployed (ibid.).

This close link between the subjective health status and the individual position in the social structure on the one hand and educational certificates on the other hand leads to the topic of

[28] No data on the EU level for 2014 was available via Eurostat.

health inequalities which has been widely discussed in Germany for fifteen years (cf. Mielck, 2005; Richter & Hurrelmann, 2006; Hackauf & Jungbauer-Gans, 2008; Bauer et al., 2008). Meanwhile *there is no doubt that health inequalities exist in Germany and that they partly increase for all age groups* (Kroll, 2010; Lampert, 2016).

Figure 12 High satisfaction in various life domains, age 25-34, EU-28 and Germany, 2013



Source: Eurostat Living conditions and welfare database, EU-SILC microdata

Health relevant risk profiles for young adults are very similar to the risks of being poor, unemployed and dependent on social transfers. Recent studies have shown that children growing up in poor families are more likely to have poor dental, are more often affected by mental illness, particularly depressive symptoms, and have a poorer opinion of their overall health status. Similar patterns can be observed for the continuing life course and accumulate in different life expectancies between the top 20% income groups as compared to the 20% bottom income group of nearly ten years for both gender (Kroll & Lampert, 2014). Furthermore, health inequalities have another independent regional dimension. In rural areas the access to health care and specialized health and medical services, for instance in terms of psychiatric or ophthalmologic care, is problematic (cf. Bittlingmayer et al., 2009; Bauer, 2009). On the one hand, health care access in urban areas is much better. On the other hand, the gap between rich and poor people in urban areas is much higher and leads to notable differences in life expectancies within one town – nearly sixteen years of wealthy and poor quarters within U.S.-cities (Wilkinson, 2005, pp. 14ff.). But risks

for bad health, a shortened life expectancy or the risk of mental illness of young adults are most of all the direct consequence of bad living conditions, however, not just a risk factor that stands alone (cf. Hoffmann et al., 2014; Borrell et al., 2014).

For a more local or regional health related risk profile, we can assume that the same variables and relationships are very likely true. In the Functional Regions Bremen and Rhein-Main, there is very likely a concentration of bad health status of young adults, of mental illnesses, obesity a.d.o. in the poor neighbourhoods, following the logic of a high concentration of unemployment and bad housing conditions. As detailed local data is missing, we assume, starting from the data on poverty and unemployment, that the health risk is also high in the cities of Bremerhaven and Wilhelmshaven (both FR Bremen) and Worms and Offenbach (both FR Rhein-Main) (cf. sub-chapter 3.4).

The following chapter provides the data assessment of the available statistical data.

4. Quality data assessment

The data quality assessment provides an overview on the possibilities and limitations of the available data for describing the living conditions of young adults' in the two Functional Regions Rhein-Main and Bremen. Statistical data is widely used in policies processes to inform and steer the definition, coordination and implementation of policy for young adults. Thus, assessing the data allows us to understand the perspective, or the 'data-lens', shaping LLL policies. As LLL policies unfold differently within the different contexts, the implementation of LLL policies is not only a question of the process of policy coordination and matching, but also a question of the information on which policy-making is based on. Its objective is to describe the availability, representation and quality of the data and data sources on the local/ regional level. In order to do so, firstly, context specific data gaps at national and local level were described in order to secondly, assesses limitations and constraints of the analysis.

The process of gathering local/ regional data in Germany is challenging. The vast majority of available data does not focus either on the project's age group (18-29-year-old) or does not correspond to the project's research unit of the Functional Regions. Governmental funded research, such as the 'Bildungsbericht' (federal report on education) or the 'Berufsbildungsbericht 2017' (federal report on vocational education) of the Bundesministerium für Bildung und Forschung, is public available, however, the studies rarely focus on the regional level. They mainly collect and analyse data in larger units, especially the comparison of East versus West Germany and the federal level ('Länder'), focusing mainly on the reunification and its aftermath with the development of East compared to West Germany. This approach of data collection mirrors the traditional path-dependencies of Germanys administration units: regional variations below the federal level are the responsibility of the federal units ('Ländersache'), and therefore it seems

that larger studies focus on rather broader administrative levels. Undoubtedly, we can also find studies using smaller units, however, the representativeness is limited. This challenge unfolds differently on the Functional Regions Bremen and Rhein-Main as described in the methodological approach (cf. chapter 2). As a result, the systematic introduction of the regional level in governmental funded research has still to be made.

Although the governmental reports mainly focus on larger research units, the governmental statistical registers provide a broad variety of data on smaller research units, such as districts and cities (cf. chapter 2). For the local data collection, the governmental statistical registers were used for several reasons:

1. regarding the chosen indicators the registers come close enough to the regional/local level,
2. they offer longitudinal data sets, and,
3. the information is specific enough in order to permit interpretation.

The data information systems of the registers allow a quick and to-the-point data gathering, thus providing a broad variety of spatial customizing of the indicators on an operational level as opposed to edited data reports by various federal and/or regional/local agencies mainly focusing on the national level. The registers merge data from official statistics and ensure both, data accessibility and representativeness. As main sources, the following registers were used:

- Regional Database Germany (Regionaldatenbank Deutschland)[29],
- the statistical state office Bremen (Statistisches Landesamt Bremen)[30], and.
- the interactive online-atlas of the Federal Institute for Research on Building, Urban Affairs and Spatial Development (INKAR, der interaktive Online-Atlas des Bundesinstituts für Bau-, Stadt- und Raumforschung)[31].

In order to do so, mainly the interactive online-atlas INKAR was used as it provided most of the required data drawing from different official registers. Although the Regional Database Germany –and the statistical state office Bremen provide detailed statistical data from various official statistics in the form of standard tables, the amount of data is limited. Both, on the indicator level as well as on the depth of the regional category, the information systems hardly allow a tailoring and customizing for the needed research scope. For this reason, it has been difficult to access data describing the target group at hand:

1. *Difficult access of data describing the target group*: Although all three statistical registers offer a vast amount of demographic data and information on the educational system as

[29] Available under: https://www.regionalstatistik.de/genesis/online/data;jsessionid=E45863A21A7DB10816FA15E40C669472.reg1?operation=statistikenVerzeichnisNextStep&levelindex=0&levelid=1498395022977&index=1&structurelevel=3 [last access: 23 June 2017]

[30] Available under: http://www.statistik.bremen.de/datenangebote-8409 [last access: 23 June 2017]

[31] Available under: http://www.inkar.de/Default [last access: 10 July 2017]

well as the labour market system, the data can hardly be customized according to the age of our target group. Therefore, data collection for common indicators in Germany seems not so much a problem of data availability, however more a *technical issue on the possibility for tailored and customized data access and representation*.

2. *Indicators on young peoples' attitudes are largely missing on local level*: Data towards labour and political life are largely missing on local level. This data is available on the national as well as on the level of the federal states. Here, additional data along the age of our target group closer to the local level is needed in order to provide a collated picture of the living conditions of young adults.
3. *Available indicators reduce young adults in information sources to education and employment:* The available indicators on young adult focus mainly on the unemployment rate and educational attainment level, the citizens' economic contribution to society according to their labour productivity (GDP; GAV), unemployment rates, access and output of the educational system. Thus, the contextual information is reduced to the participation to the labour market.

As a result, young adults are mainly invisible the statistical data sets. The data gathering process of local data is confronted with a classification problem of the official registers that tailor young adults not as an independent target group. Thus, from a Cultural Political Economy (CPE) perspective, the young adults themselves are a gap in the data sets (cf. Weiler et al., 2017a). They are age-wise either grouped with minors or adolescence, diminishing their position as in between. Although this age group face crucial developmental tasks pertaining career building, family gaining independence and taking on responsibility (Weiler et al., 2016). Most of the data sets cluster the young adults into two age groups: in the age range either of 15-25 or 18-25-year-old. For example, INKAR (2017) includes the age group 'young unemployed people', comprising the age group between 15 and 25. Only for the demographic indicator 'inhabitants' the data is also systematized along the age group of 25-30. However, above the age of 25, young adults are grouped with adults. These processes of classification merge the young adults with older citizens, most likely more established in terms of career, family planning and personal development. Therefore, the classification of young adults produces different degrees of visibility, or rather invisibility.

The invisibility/ visibility of young adults pertains whether or not they are considered important in policy making processes. This has a high influence on future decision-making processes (cf. Bowker & Star, 2000) and can, if developed into standards, represent certain social choices which impose ethical and political implications, especially affecting those who are selected – or in this case not selected (cf. Lampland & Star, 2009). This becomes even more prominent as most indicators are not separately available along the different age groups, but rather along the institutions, they are embedded in. For example, regarding the dimension education,

we find a broad variety of different data sets, such as participation rate in the educational and vocational training institutions, however, not explicitly systematized along the age group. Here, the different age groups are covered by a notion of standardized age-trajectories in passing through institutional pathways.

Against this background of data mismatches on the age and regional level, the statistical data on young adults are missing crucial information in order to inform LLL policies. First, local structural data on young adults is potentially available, however not represented along our age group. For further data analysis, it would be helpful if the statistical registers would allow a tailored and customized data collection. Second, more subjective indicators on a local level are needed in order to describe the young adults living conditions beyond education, training and development. In doing so, other important factors for social inclusion and participation could be considered. Therefore, the question arises, how current LLL policies are fitting into young adults' social realities as the statistical basis of information is not tailored along the needed information. The gathering of more information is only partially the answer, such as subjective indicators on job satisfaction, but more a question of data representation.

The following chapter provides concluding remarks and emerging issues.

5. Emerging issues

In this section of the Briefing Paper we want to point out specific issues that came up during the analysis and are relevant for the context of the project. The *first issue* reflects the data quality and quantity and the relationship between national and European data (cf. chapter 4). There are big data gaps in different dimensions on NUTS 2 and NUTS 3-level that should be addressed in the coming years. The biggest gaps are in the subject of health even though there have been researchers in the field of Public Health complain about the poor data quality and quantity for the past 20 years (cf. Prüss-Üstün et al., 2006). The Robert Koch-Institute, which is responsible for national health monitoring, does not publish health data on a regional level due to their standards in necessary case numbers. In recent years, the German government established and widened a national health monitoring (Gesundheitsberichterstattung) but according to a member of the Robert Koch-Institute, these data are not collected and designed with respect to the NUTS-Level. Only in Bavaria, the situation is slightly better (cf. BLGL, 2017). But also in the realms of social policy and labour market policy relevant data at NUTS 2-level are missing. Additionally, the data representation on the regional as well as age level of our target group is challenging, as the data is potentially available, however, the data output of the registers is not customisable along the research interest. As a result, the registers aggregation of young adults differs from the projects scope, which can cause data distortion.

A *second big issue* is the role of the family as a very important resource for young adults. On the one hand, families are in some dimensions implicitly pictured, for instance regarding the ratio of young adults living – voluntarily or involuntarily – together with their parents or regarding early pregnancies. On the other hand, the family support is more or less invisible in the data. We assume that most of the risk factors for young adults are buffered by the family support, for instance regarding childcare for young mothers or material support for unemployed sons and daughters. The importance of the family support system highlights the notion of the German conservative welfare state along the principle of subsidiarity (cf. Parreira do Amaral et al., 2017b, p. 17; cf. sub-chapter 3.5). However, it seems, that the contribution of the family for the young adults' life course is not mirrored by the data, but rather the young adults' contribution to the society through education and employment.

In conclusion, statistical data available on the living conditions of German young adults is mainly collected at national level and usually restricted to education and employment indicators, glossing over other crucial aspects of their life courses. The data largely informs on the different school tracks, the training opportunities, the unemployment/ employment rates and the social security system. Against this background, based on the data reviewed the German context can be described as an employment-centred transition regime where young adults' autonomy is characterised by a low level of state support but high family support (Parreira do Amaral et. al., 2017b, p. 22; Walther & Pohl, 2005; Walther, 2006). Therefore, young adults' citizenship can be described as a 'monitored citizenship', with the overall aim to expedite their transition into work along highly institutionalised education and training systems (Chevalier 2016, p. 14ff.; cf. Parreira do Amaral et al., 2017b, p. 21).

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Work Package 4

Quantitative Analysis Young Adults' Data

National Report Italy

University of Genoa (UNIGE)

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Project Coordinator:	Prof. Dr. Marcelo Parreira do Amaral (University of Münster)
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Executive summary

The main findings of the in-depth review contained in this country report are as follows:

- Demographic structures

  From a demographic point of view, Italy is one of the oldest countries with the lowest replacement rate. This makes the demographic stability and the same system of social security more and more dependent on migrations, which, however, are today one of the most serious problems for the Country. The old dependecy ratio confirms a worst demographic dynamic in Liguria in comparison with Lombardy. Regarding the life expectancy indicator, in Lombardy (83.9 on average), the indicator shows a better situation than in Liguria (82,8 on average), anyway higher than the great part of Italian regions.

- Structure of the economy

  Productivity growth remains weak, slowing the correction of Italy's macroeconomic imbalances. It has been a problem for years. Making the labor market more flexible and reducing the indirect costs have been considered a pivotal part of a wider strategy aimed at reducing high structural Italian unemployment. The focus on these two aspects, however, has overshadowed another important but scantily investigated issue: the missing effects of the innovation on productivity growth, as Italian industries preferred financiarization to innovation. High public debt remains a major source of vulnerability for Italy, also because the spread with German Bund (around 1,6 percent) make debt heavier, its reduction more difficult and investments for industries more expensive. Despite recent gains, the competitiveness gap remains. The depreciation of the euro supported the stabilisation of Italy's export performance in recent years, together with contained increases in producer prices and unit labour costs.

  Lombardy and Liguria remain in the EU average with regards to the GDP, but while the first one is firmly above Italian and EU average, the second is much closer to the average.

- Education system

  Education reform is ongoing but tertiary education remains largely underfunded and participation in adult learning and apprenticeships is low. The 2015 reform, if properly and swiftly implemented, is expected to improve school outcomes. In particular, strengthened apprenticeships and work-based learning aim to raise the labour-market relevance of education. However, participation in adult learning remains a persistent concern, in particular for those needing it most. In spite of recent partial measures, the higher education system suffers from significant underinvestment.

Italy lacks of short degrees (EQF 5) makes the average rate of young with tertiary education level lower than EU average (and far from the Lisboa 2020 target), but in the same time the absence of technical short degrees causes the overqualification of workforce, because the rate of degrees that don't use enough their qualification in the joc is high (more in Liguria than in Lombardy), and the rate of highly educated youngs that migrates is growing.

Ligurian students perform less than peers in Lombardy, but the results are lower than EU average.

- Youth and labour market

Despite the gradual improvement of the labour market, long-term and youth unemployment remain high. The implementation of the active labour market policies reform, including the reinforcement of public employment services, is still at an early stage. Also in the public debate, mismatch prevails over the lack capacity of productive context to absorb skilled workers. In the last 15 years, profits have risen and wages have fallen, but companies did not devote their highest profits to greater investments. In addition, due to the high public debt, despite a recent modest reduction, the tax burden on production factors remains among the highest in the EU. Investment in Italy suffered a sharper fall than in most Member States. The decline was broad- based, but particularly strong in non-residential investment and services.

The potential of female labour market participation remains largely underutilised. Access to affordable childcare remains limited with wide regional disparities, paternity leave is among the lowest in EU and the effectiveness of cash allowances for childcare has not been assessed. Young people and women are confirmed the less protected and needy strata of society, even if the female employment has developed over time (if less than the strong EU countries).

The structure of the economy explains a large part of the different internal outcomes. For examples, about our functional regions, the data shows that in Liguria the risk of poverty and social exclusion is higher than in Lombardy.

- Redistribution and social inclusion

Significant barriers to competition remain in important sectors, including professional services, local public services, concessions and the transport sector. The public sector is being reformed to tackle longstanding inefficiencies.

New social policies have been put forward to respond to the rising poverty rate. It is unclear whether the financial resources will be sufficient to address Italy's poverty challenge. Activation policies are not yet widespread enough. The rate of people at risk of poverty or social exclusion is well above the EU average, and is particularly high for children, temporary workers and individuals with a migrant background.

- Health and well-being conditions

  The share of private health expenditure in Italy was 24.5 percent of the total in 2015, equal to Estonia and Finland. Health public expenditure in Italy was below other important European countries. In general living conditions in Lombardy are better, and this evaluation emerges both from objective data, both from perceptions of citizens. We must consider that Liguria is the region with the oldest population, as said heavily affected by economic and demographic crisis, caused serious disturbance in educational and social sectors. Less young people in an ageing context with fewer opportunities and a greater part of population at risk of social exclusion contribute also to lower levels of subjective well-being and lower expectations for the future.

To summarise, the current problems of the Italian economic and social context (low productivity, high public debt, inefficiencies in some sectors, poor innovation, population ageing, overcrowded social policy costs, often passive) do not favor the condition of Young Adults, who to a large extent continue to live in the family (78% of people aged 20-29, vs a EU average of 55,4%). In a time of crisis such as this, families are the main safety valve, reducing the autonomy of young people.

Introduction

The national briefing paper offers an overview of the living conditions of young adults in Italy and, more specifically, in the two functional regions selected for the YOUNG_ADULLLT project, the Functional Regions of Genoa and of Milan.

The living conditions are explored by observing the key set of indicators that was provided for the 6 dimensions: the demographic characteristics of the population, the structure of the economy, the inputs and outputs of the education and training system, the labour market, the reditribution and social inclusion and, finally, the health conditions and individual well-being.

The data were not all available for 2016 and for this reason we often refer to 2014 or 2015 as the last data accessible.

Description of the data collated and quality data assessment

A huge amount of harmonized and comparative data has been collected by OECD and EUROSTAT since they provide metadata and completed time series. Most of the information are provided at national level and not all dimensions have a fair number of indicators at NUTS2 and NUTS3 level. Moreover, the analysis of our two Functional Regions with these data sets is a hard task for

mainly two reasons: a) the available data do not cover all the indicators of the six dimensions, and b) the units of NUTS2 and 3 do not match our Functional Regions.

The educational and labour market data collated at national and local level were extracted also from different surveys such as the EU-LFS, EU-SILC, PISA and PIAAC. The main corpus of data proceeding from international and harmonized data was successively complemented by data collated at the local level, made available by the ALMALAUREA dataset and by INVALSI surveys, as well as by official websites of several Italian Institutions (Ministers, regional government and Chambers of trade).

The data ranges between 2005 and 2015, but for some indicators especially at national level it was collected more recent data. Due to limited availability of data at the regional/local level, and the high level of the fragmentation of sources, the possibility of comparison is limited in some cases.

1. Demographic structure

Italy, with its 302,073 square kilometres, has 60,589,445 inhabitants according to the calculations current as of December 31, 2016. The distribution of the population is widely uneven. In the last years, the Italian population recorded a negative variation mainly attributable to the natural dynamics and the migration slow down. The natural population difference (births minus deaths) in the most recent year was negative by almost -142 thousand units. As the balance was positive for foreign nationals (almost +63 thousand units), for the Italian ones the decline was even more significant (-204,675 units).

The decline in the number of births that started in the Sixties is still going on.

The deaths were over 615,000, almost 32,000 less than in 2015. The decrease in 2016 was due to a high level of mortality registered in the previous year. The two FRs show different levels of demographic decrease: in Genoa Functional Region the crude rate of natural change of population in 2015 was -8.0 for thousand inhabitants, in Milan FR of -1.2; crude rate of net migration was -1.3 in GFR and + 4.8 in MFR.

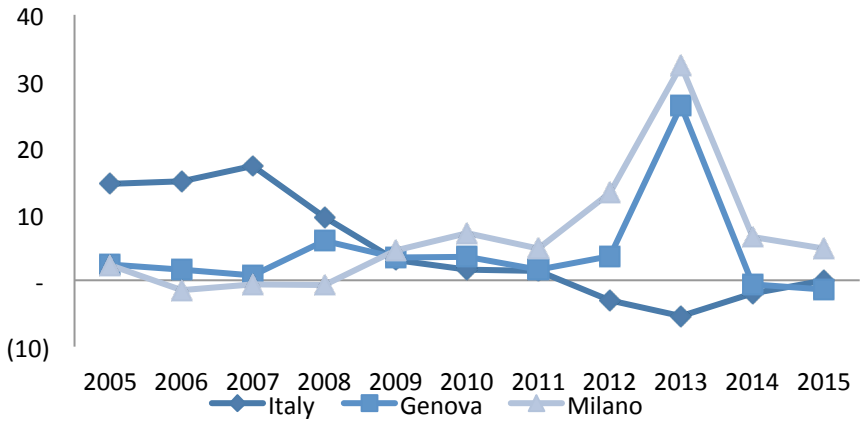
In 2016, the international migratory movement determined a positive balance of approximately 144,000 units, a stable value compared to previous years. The attractiveness of the northern and central regions to which were addressed most migration flows (both internal and from foreign countries) was confirmed.

In the last years, migration becomes an important aspect of the development of the population, affecting both Functional Regions evenly.

The crude rate of net migration decreased in Lombardy until 2008 (-0.7), jumped in 2013 to 32.4

percent (but only due to statistic flow, and in 2015 decreased to 4.8. In Liguria, the crude rate of net migration fluctuated until 2012 and then rose up to 26.3 in 2013, and collapsed in the last years (in 2015 -2.4 percent).

Figure 1 - Crude rate of net migration (1 per 1000)



Source: Eurostat

From 2005 to 2010 the total fertility rate in Italy increases from 1.34 to 1.46 and then the rate began to decrease. The numbers in the here focused in functional regions are very near these average, but GFR shows a worts situation than MFR. In 2015, the numbers are 1,33 in Liguria, and 1,46 in Lombardy. This seems to be a European phenomenon as well, as the EU-28 average increases from 1.51 to 1.62 until 2010, and in the last years the rate started a slow decline (1,58 in 2014). The mean age at childbearing - 31.7 years in 2016 - was stable to the previous year.

The old-dependency rate (ratio between population aged 65 and over to population 15-64) increased in Italy from 29.4 percent to 34.3 percent in the time span 2005-2016. In Lombardy, in the same period the rate rose up from 28.5 percent to 34.2 percent, while in Liguria from 42.2 percent to 46.8 percent. This indicator confirms a worst demographic dynamic in Liguria in comparison with Lombardy.

Life expectancy estimates for 2016 evidenced a new growth of the indicator for both genders (80.6 males, 85.1 females), after the exceptional decrease recorded between 2014 (reported excess deaths) and 2015 (males: +0.3 compared to 2014, +0.5 compared to 2015; females: +0.1 compared to 2014, +0.5 compared to 2015). In Lombardy (83.9 on average), the indicator shows a better situation than in Liguria (82,8 on average), anyway higher than the great part of Italian regions.

The rate of young adult living with their parents rapidly increased over the last decade. In 2013, the rate of young adults (20–29 years) who live with their parents was 78 percent, which exceed 23 points the European average (55.4 percent), however in 2006 the rate was still at 72,8 percent (EU-27 53.1 percent). We assume that this increase is linked with the reforms of social programs and labor market since 2015. Living at home with their parents is rather a young male (83.4 percent in 2013) than a young female issue (72.5 percent).

2. Structure of the economy

The Italian economy is historically characterized by a different territorial development, usually represented in three specific geographical areas: the developed industrial North, a less-developed and welfare-dependent agricultural South, with high unemployment, and the Center area, more dominated by small and medium-size firms. Italy has moved slowly on implementing needed structural reforms, such as the reduction of the public-sector costs, and increasing employment opportunities for young workers, particularly women. The data of the different economic sectors, put in evidence the role played by the service sector (according to European trends) and, at the same time, the role played by the agriculture sector, that, despite the reduced impact, in Italy represent an interesting area of develop for new entrepreneurship activities.

Table 1 - Economic sectors, share of economic sectors in GDP value added (percent of GDP)

						Agriculture					
	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
EU 28	1.8	1.7	1.7	1.64	1.49	1.62	1.68	1.68	1.74	1.65	1.6
Italy	2.25	2.17	2.1	2.07	1.98	1.97	2.1	2.19	2.33	2.16	2.25
						Industry					
	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
EU 28	26.46	26.73	26.62	26.14	24.61	24.96	25.03	24.75	24.49	24.37	24.50
Italy	25.83	26.15	26.49	26.13	24.27	24.37	24.21	23.87	23.7	23.38	23.53
						Services					
	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
EU 28	71.74	71.57	71.69	72.22	73.9	73.42	73.28	73.57	73.77	73.98	73.9
Italy	71.92	71.68	71.41	71.8	73.75	73.66	73.69	73.94	73.97	74.46	74.22

Source: Eurostat

The last international financial crisis worsened the economic conditions in Italy, with unemployment rising from 6.2 percent in 2007 to 12.4 percent in 2015. In the longer-term Italy's low fertility rate and quota-driven immigration policies will increasingly strain its economy. A rise in exports and investment driven by the global economic recovery nevertheless helped the economy grow.

The general framework of the productive structure of the Italian economy is marked by the persisting financial crisis which caused a dramatic fall in the number of enterprises. Although the number of enterprises per 1,000 inhabitants decreased, their average size remained stable in 2014 at about 4 employees by enterprise; micro-enterprises therefore still play a non-negligible role in the entire productive system.

The Italian productive system is characterized by a large degree of fragmentation, together with a relative specialisation seen in the micro-enterprise service segment, accounting for over 30 percent of employment. Regions in the North-west area had the highest levels of wage adjusted labour productivity, while values lower than the national average were recorded in the South and Islands area. The lowest values were recorded in the construction sector.

The Italian socio economic background expertise some relevant changes in the last twenty years. Although the main indicators of inequality exhibit a stable trend until the explosion of the current crisis, in the same period major changes taking place internally in Italian social structure and dynamics have largely redrawn the map of social risks. In Italy, the effects of the crisis (the recent economic crisis and early '90 crisis) was aggravated by a particularly slow economic growth that concerned productivity and wage increases, as well as people's standards of living (Crouch 1999, Ranci and Migliavacca 2015). The labour productivity grew in the manufacturing sector by less than 1 percent per year between 1996 and 2007 and decreased after 2001. As

regards wages, whilst in the 1970s and 1980s the average growth had been 2.5 percent per year, between the earliest '90 and the first decade of the 2000 the gross pay of dependent labour grew at a rate of 0.6 percent – a slowdown which meant that wages could do no more than keep up with the inflation rate.

Table 2 - Labour productivity per hour worked (ESA 2010). Percentage change on previous period

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
EU28	1.1	1.7	1	-0.4	-1.4	3.1	1.4	0.9	1	0.6	1.2	0.6
Italy	0.6	0	-0.1	-0.7	-2.2	2.2	0.5	-0.3	0.9	0.2	-0.2	-0.8

Source: Eurostat

There was also an evident downturn in the standard of living: in the period 1995-2012, per capita GDP growth at market prices was lower in Italy than in the main European countries – especially after 2001 – which increased the distance between Italy and its principal European partners. At the same time between 2006 and 2015 the per capita GDP growth at market prices decreased, while a positive variation was registered in many European countries. Italy's real GDP growth recovered only modestly in 2014 and 2015 (0.1 percent and 0.7 percent respectively), while growth in the rest of the euro area was significantly more dynamic (1.4 percent and 2.3 percent respectively). This trend shows the difficulties of the Italian economy, difficulties similar to the others southern European countries (especially Spain).

As highlighted by European Commission in the last country report Italy 2017, the unit labour cost dynamics slowed significantly in recent years despite negative labour productivity growth. Since 2010, nominal unit labour costs have slowed down in Italy and in 2014-2016 they increased by less than 0.4 percent per year on average (as compared to 2.3 percent in 1999-2013). These developments helped to reduce slightly the cost competitiveness problem of the Italian economy in recent years. Labour productivity was negative also due to historically low investment levels, which turned capital deepening negative.

Table 3 - GDP at current market prices, Euro per inhabitant in percent of EU-28 average

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Δ 2015-2005
European Union (28 countries)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	
Italy	**108**	**107**	**107**	**106**	**104**	**104**	**102**	**99**	**97**	**96**	-12
Liguria	**118**	**119**	**120**	**119**	**114**	**114**	**112**	**108**	**108**	**107**	-11
Lombardy	**138**	**137**	**140**	**138**	**138**	**137**	**134**	**129**	**128**	**127**	-11

Source: Eurostat

The economic structure of the territorial system of the Metropolitan Area of Milan selected as one of the Functional Regions for YA project is quite complex due to the high number of sectors

and of supply chains for each sector. In the recent years, this area has been characterized by different vulnerability aspects (more specifically, territorial disparity, inequalities in gender and education, social and spatial marginality) which nowadays are stressed due to the economic crisis effects. It has also been affected by a de-industrialization process. The Metropolitan City of Milan has over 296,000 active enterprises, the majority of which operate in the tertiary sector, particularly in services, where there are over 146,000 units (49.6 percent of the total) and 1,032,000 employees (55 percent). The manufacturing sector covers 18.8 percent of employees, with 10.5 percent of the enterprises. It is a system in good health, which, despite the economic recession, has seen an increase in the number of enterprises of 3.4 percent in the last 5 years, with an overall positive annual change and particularly in Milan (4.6 percent).

The Metropolitan Area of Genoa selected as the second Functional Region is characterized by a dynamic and specialized port especially with regard to container traffic and its nodal position with logistic trans-European and Mediterranean corridors. The Port of Genoa features an uninterrupted 22-kilometre coastline, and covers a total surface area of 6 million sqm of land and 14.5 million sqm of seawater.

According to the data, Lombardy and Liguria remain in the EU average with regards to the GDP, but while the first one is firmly above Italian and EU average, the second is much closer to the average.

3. Education

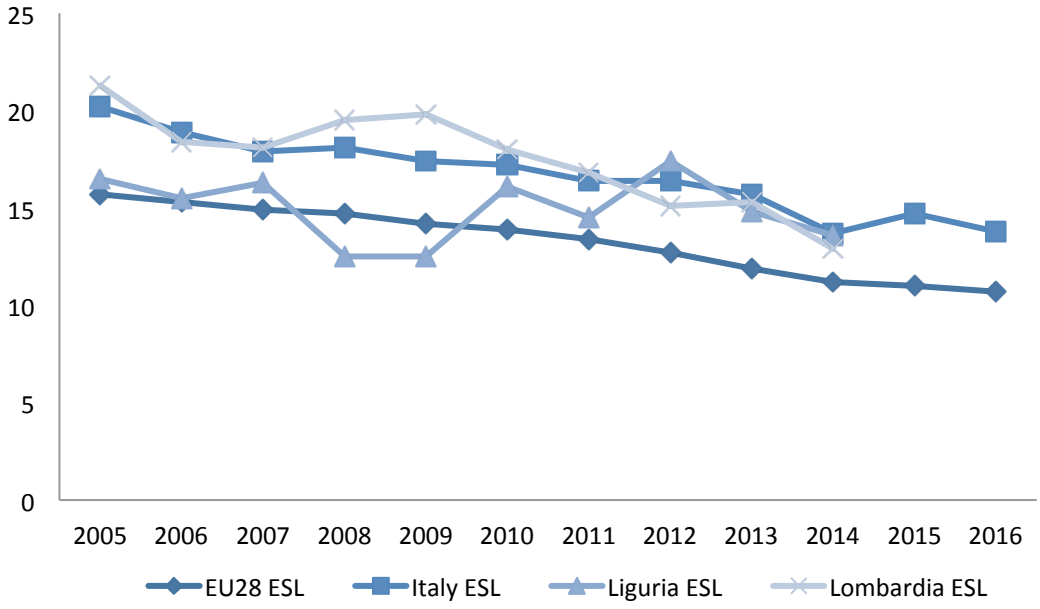
Expenditure on education and training allows to assess policies implemented for the growth and optimization of human capital. Both as a proportion of GDP (4.1 percent) and as a proportion of total general government expenditure (7.9 percent), the expenditure on education in Italy was among the lowest in the EU in 2014. Europe Strategy 2020 set some objectives for the population education levels, which our country has partially reached in 2016.

Students in Tertiary education rate is higher in Lombardy than in Liguria (61,7 percent vs. 56 percent) and this phenomenon is relevant because, in the past, in Liguria families invested in tertiary education more than other regions (Bini & Palumbo, 1990); Lombardy shows also a higher percentage of pupils enrolled in vocational secondary education than Liguria (61,7 percent vs. 54,3), as an additional proof of labour market oriented choices of families. Anyway, the percentage of people aged 30-34 years with high level education (ISCED 5-8) is still higher in Liguria than in Lombardy (in 2014 31.3 percent vs 25.9).

The early school leaving rate has been on a downward trend since 2008. The percentage of early school leavers in 2016 decreased to 13.8 percent (14.7 percent in 2015), thus surpassing the

national target of 16 percent set for 2020. However, the rate remains above the EU average (11 percent in 2015). It is interesting to note in this context that in Lombardy the ESL rate goes down very fast, while in Liguria increases for a time for falling in the last years, maybe due to the impact of foreigners. In fact, the gap is particularly high among foreign-born students, with a rate of 31.3 percent compared to the EU average of 19 percent in 2015. Integrating students with an immigrant background is a relatively recent issue in Italy, but it is gaining importance. The proportion of foreign pupils in state schools reached 9.5 percent in 2015/2016, ranging from 6.3 percent in upper secondary education to 11.4 percent in early childhood education. There is also in the same year a significant gender gap, with the rate for boys at 17.5 percent, compared to 11.8 percent for girls, and a widening of the north-south divide over the last five years.

Figure 2 - Early school levers at national and regional levels (percent)

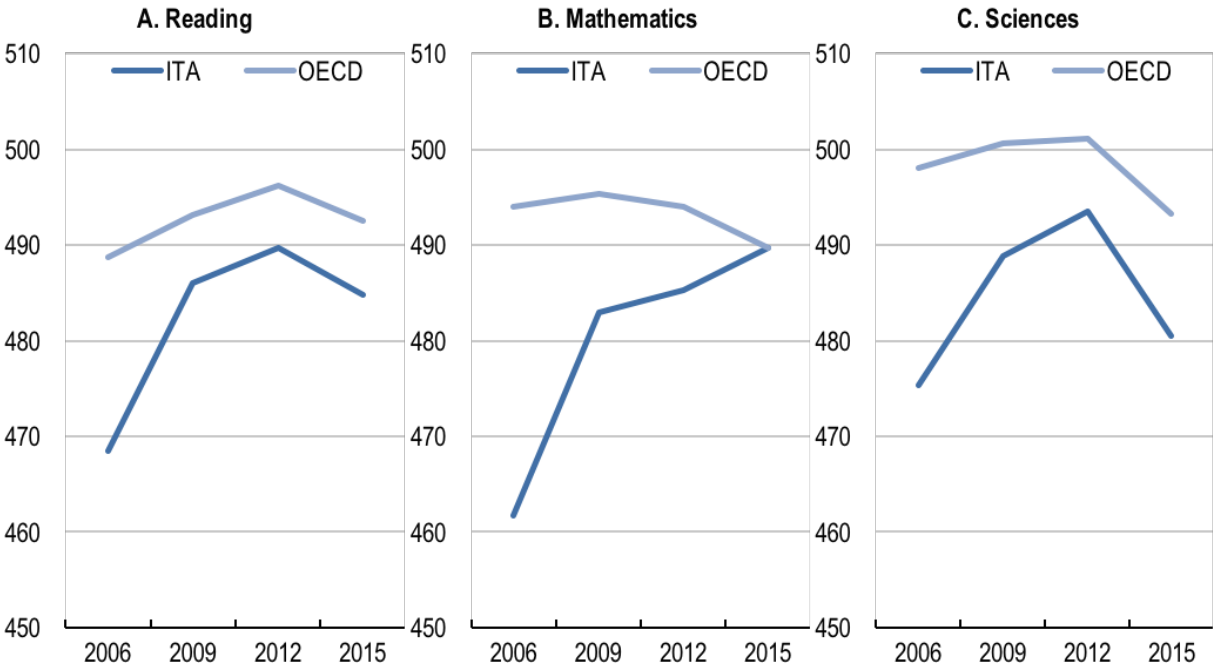


Source: Eurostat

According to the 2015 school reform, one of the possible actions to tackling inequalities and promoting inclusion is improving migrant students' proficiency in Italian.

There have been consistent signs of improvement in the quality of education. Scores in reading, math and sciences among 15-year olds have increased substantially and faster than the OECD average, as measured by the OECD Programme for International Student Assessment (PISA). However, average levels of competences proficiency are still low.

Figure 3 - There are clear improvements in school results but they are still below the OECD average



Source: OECD PISA 2006, 2009, 2012, 2015

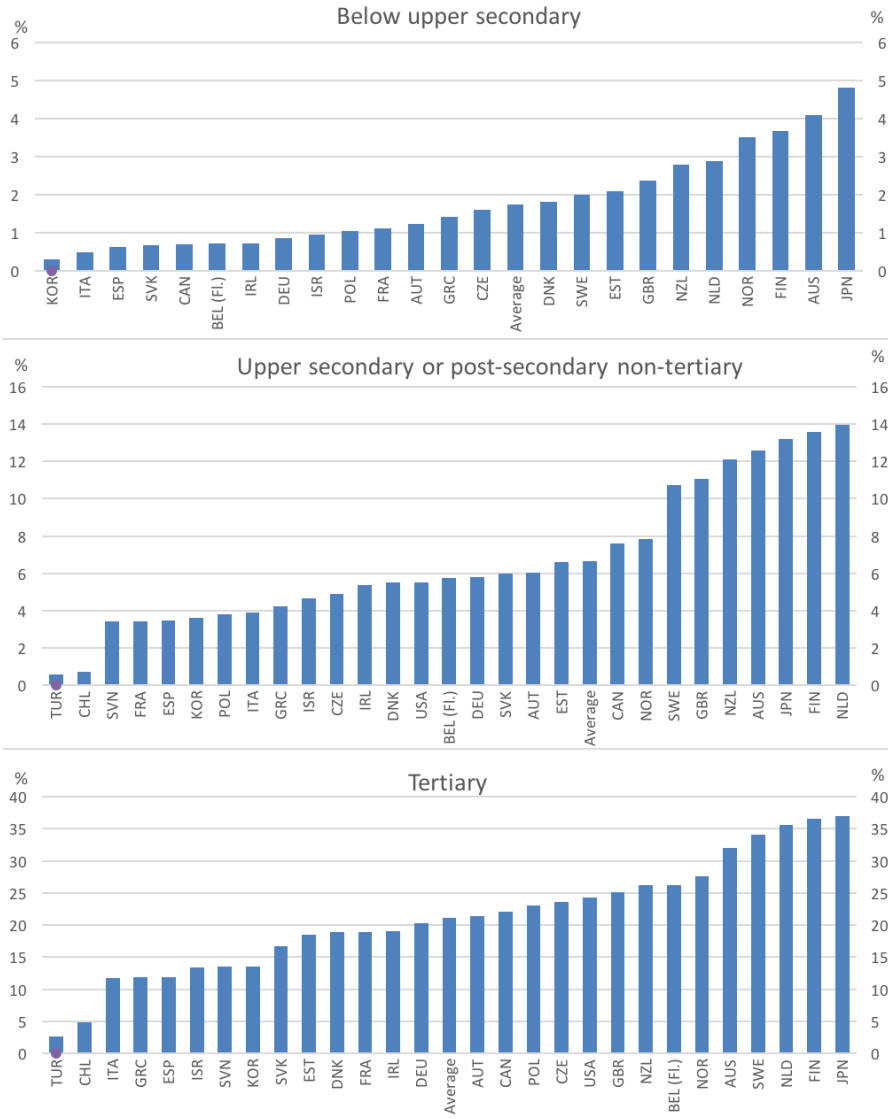
In science literacy, the main topic of PISA 2015, 15-year-olds in Italy score 481 points compared to an average of 493 points in OECD countries. Boys perform better than girls with a statistically significant difference of 17 points (OECD average: 3.5 points higher for boys). On average, 15-year-olds score 490 points in mathematics compared to an average of 490 points in OECD countries. Boys perform better than girls with a statistically significant difference of 20 points (OECD average: 8 points higher for boys). In Italy, the average performance in reading of 15-year-olds is 485 points, compared to an average of 493 points in OECD countries. Girls perform better than boys with a statistically significant difference of 16 points (OECD average: 27 points higher for girls).

In the Pisa 2015 survey, there is no longer data from all regions, which can be seen from the INVALSI report 2016. From 2012 to today the results are worse and not least: Lombardy lost 16 reading points (521-505), nine points in mathematics (517-508), more than twenty points in three years in science (529-503), but today it is still at the level of Switzerland and Ireland, halfway between Singapore (556 points). Ligurian students perform less than peers in Lombardy, but the results are lower than EU average. It is also interesting to note that since the PISA tests began in 2000, Lombardy performs better than Liguria.

There are also significant differences in basic skills proficiency, as measured by Programme for

International Assessment of Adult Competencies (PIAAC).

Figure 4 - Higher education participation and incentives to invest are low

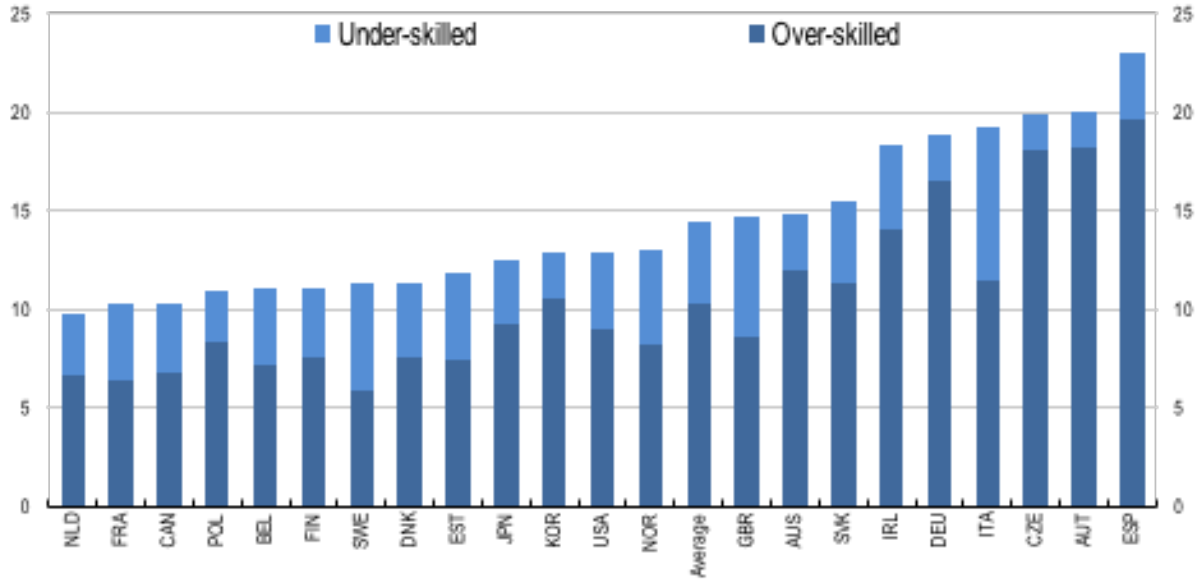


Source: Eurostat

In Italy, workers' skills often do not match employers' needs. The Survey of Adult Skills (PIAAC), that measures the key cognitive skills for adults to fully participate in society, shows that 12 percent of Italian workers are over-skilled in literacy as they are not able to fully use their skills and abilities in the job; while 8 percent are under-skilled as they lack the skills normally needed for their job. Both measures are above OECD averages which are 10 percent and 4 percent, respectively. Under-skilling is especially high in Italy, reflecting the low levels of skills. Reducing skill mismatches is crucial to raising productivity, job satisfaction and well-being. Illustrative evidence suggests that Italy could boost its level of labour productivity by 10 percent if it were to

reduce its level of mismatch within each industry to that corresponding to OECD best practices (Adalet McGowan and Andrews, 2015).

Figure 5 - The level of skills mismatch is high



Source: Eurostat

Overcoming skill mismatches, under or over-skilling, requires policies to foster labour mobility and make the education and training system more responsive to labour market needs.

In 2015, 26.2 percent of people aged 30-34 achieved a tertiary qualification, in line with the objective set for Italy, but rather far from the 40 percent set for Europe.

Inbound graduate mobility remains rather low at Master's level, but is on the rise at Bachelor's level (4 percent of bachelor graduates came from abroad in 2014, compared to 2.9 percent in 2013).

The number of Italian citizens with a tertiary education degree leaving the country has been rapidly increasing since 2010. This has not been compensated by inflows of equally well qualified Italians (or foreigners) returning to the country (ISTAT, various years). The increasing emigration reflects better job opportunities and conditions abroad. Survey data show that compared with their peers working in Italy, young Italian graduates working abroad earn higher and more rapidly increasing salaries, work more frequently under open-ended contracts and consider their formal qualification more appropriate for their job (Consorzio Interuniversitario AlmaLaurea 2016). Italians with a doctoral degree working abroad report having both better job opportunities and significantly higher earnings. This may explain why highly qualified Italian workers have very little inclination to return to their home country (Biondo et al. 2012). The

emigration of highly qualified Italian workers therefore does not qualify as 'brain circulation' (i.e. when people temporarily go abroad to study or work, but then go back to their home country), neither a 'brain exchange'. Many Italian workers leave the country, but few highly qualified individuals from other countries choose Italy as a destination.

The proportion of foreign citizens living in Italy aged 25 to 64 with a tertiary education degree is much lower than that of Italian citizens (11.5 percent compared to 17.5 percent in 2014). In the EU, as a whole the proportions of highly qualified EU citizens and non- EU citizens are similar (29.4 percent and 28.1 percent respectively). The resulting 'brain drain' can thus cause a permanent net loss of highly qualified human capital, which would harm Italy's competitiveness (European Commission 2016).

Even lifelong learning, which is considered to be an important requirement to be integrated into the labour market, in 2016 involved 8.3 percent of people aged 25-64.

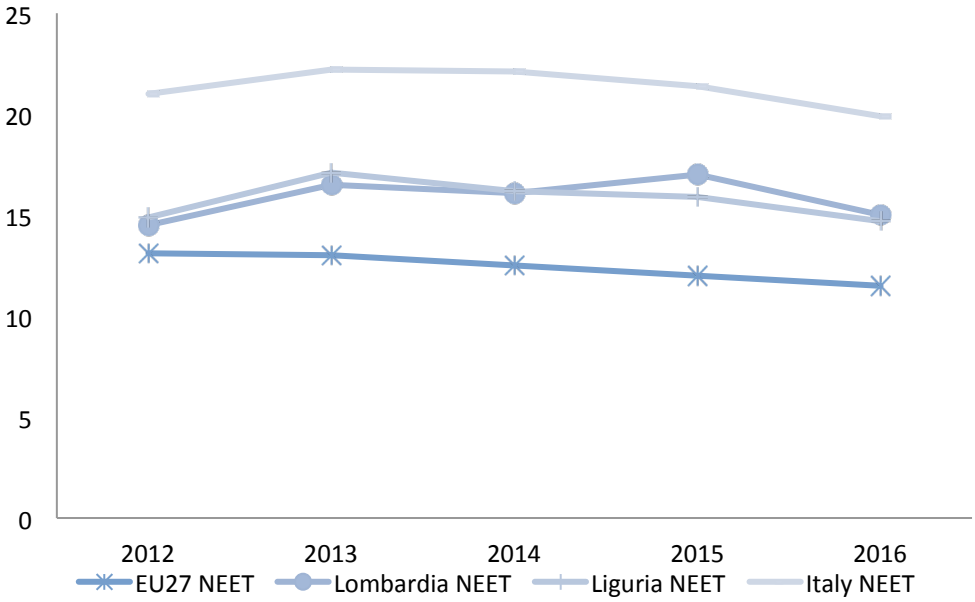
The share of 30-34-year-olds with tertiary education, too, is different across regions: in 2016, the indicator for almost all regions of the Centre and North was above the national average, while for the South and Islands area it was 5.5 percentage points lower.

Finally, young people aged 15-29 who are not in education, employment or training were over 2,2 million (24.3 percent of the relative population), with a higher incidence among women than men. In 2016, however, the aggregate shows a slight decrease for the second consecutive year.

The phenomenon seems to have begun a trend reversal, after the exponential growth dynamic that has been in place since the beginning of the economic crisis. Compared to the maximum values reached in 2013 in Liguria and in 2014 in Lombardy, the NEETs are down slightly in 2016.

In 2016, 15 to 24-year-old NEETs residents in Liguria were 19,019 and their incidence on the population of the same age was 14.7 percent, down from 15.9 percent in 2015 and 17.1 percent in 2013. Among the Italian regions, Liguria is ranked 13th with regard at NEET rate, with a percentage weight of 5.2 points lower than the Italian average (19.9 percent) and 0.9 points than the Northwest Italy (15.6 percent). Regarding the neighboring regions, only Emilia Romagna is in a better situation with the percent rate of NEET at 12.1 percent, followed by Tuscany 14.9 percent, Lombardy 15 percent and Piedmont 17.5 percent.

Figure 6 - NEETs at national and functional region's levels (percent)



Source: EUROSTAT

The presence of NEET increases by observing the15-29-year-old. The Ligurian NEETs of 15-29 years in 2016 were 34,859, with an incidence on the population of the same age of 17.6 percent (16th among the Italian regions), 6.7 percentage points below the Italian average (24.3 percent), and 0.2 percentage points higher than the North-West average (17.8 percent). Liguria last year had a rate of NEET between 15 and 29 years higher than the neighboring regions. This year is in an intermediate position: Liguria exceeds Emilia Romagna (15.6 percent) and Lombardy (16.9 percent), but is exceeded by Tuscany at 18 percent, and by Piedmont to 20 percent. The NEETs resident in Liguria aged 18-29 are 33,425, with an incidence of 20.8 percent of the population of the same age (16th among the Italian regions), 8 percentage points below the national average (which affects 28,8 percent), and 0.3 points below the North-West average (21.1 percent). Liguria is also in a middle position with regard to this age group: it is above Emilia Romagna (18.7 percent) and Lombardy (20.1 percent), but it is below Tuscany at 21.5 percent, and from Piedmont to 23.6 percent.

In conclusion, considering the trend of NEETs in the two areas involved in the YA project, Liguria and Lombardy has many similarities and in 2016 the percentage in the two regions was quite the same.

4. Labour market

The Italian labour market recorded slight positive growth between 1999 and 2008, with

absolute employment and the employment rate rising slowly but constantly. In 2009, however, this upward trend reversed. While in 2008 some 22.7 million people were employed, this figure had dropped to 21.8 million by 2014. The employment rate also dropped in this period, from 58.6 percent in 2008 down to 55.7 percent in 2014.

Employment growth started to recover in 2014 when the economy was still stagnating, and this trend continued in 2015 and 2016. Most recent data show that Italy reached the pre-crisis level.

A look at the rates of employment according to gender and age reveals structural underemployment among young adults, older persons and women. The poverty risk has increased accordingly.

After the positive economic signs at the beginning of the 2015, the Italian economy looks set to return to growth last year. In the second quarter of 2016, against the backdrop of a general stoppage in economic growth internationally, the Italian economy came to a standstill. GDP remained unchanged compared to the previous quarter, and increased 0.8 percent in year-on-year terms. In this context, the absorption of work by the production system continued to increase: the total hours worked rose by 0.5 percent on the previous quarter and by 2.1 percent year-on-year. The quarter-on-quarter rise affected both industrial production (+ 0.4 percent) and services (+ 0.6 percent).

The number of inactive people continued to decline at a faster pace, both quarter-on-quarter and year-on-year (in absolute and percentage terms), especially with regard to the number of discouraged people[1]. After the economic stability, the unemployment rate fell slightly (- 0.1 points) in comparison to the previous quarter, and was down 0.6 points on the same quarter of 2015, with the number of unemployed persons falling year-on-year by 109,000.

The changes in the employed population imply significant changes in the situation of people in the labour market; transitions to permanent employment increased, particularly for temporary employees and staff. Moreover, the flow from unemployment into employment increased, particularly for employees. The increased move from unemployment to employment mainly affected men, young people aged 25-34, residents in the North and secondary school diploma holders.

In the second quarter of 2016 there was an upward trend in employment: an increasing trend in the 'new entrants' expected by enterprises combined with a descending trend in the number of

[1] Discouraged workers are persons not in the labour force who believe that there is no work available due to various reasons and who desire to work (OECD, http://www.oecd.org/els/emp/LFSNOTES_SOURCES.pdf).
Discouraged workers do not include those who have dropped out of the labor force for other reasons. These are people who have gone back to school to better their chances of getting work. Many women leave the workforce because they've gotten pregnant. Other people can't work because they've become disabled. Although they may indeed also feel discouraged, they aren't counted as discouraged workers.

jobseekers. Growing labour demand must therefore meet reduced labour supply; in other words, a virtuous circle has begun which, if it continues, could speed up and intensify the fall in unemployment. In Lombardy Region, in the second quarter of 2016 there was year-on-year growth in employment (the number of employed persons was 4,367,000), male employment rose and female employment decreased. The employment rate of the working age population (15-64 years) in the first quarter of 2016 stood at 65.8 percent.

The number of jobseekers in Lombardy in 2015 fell by 3.8 percent compared to 2014. According to ISTAT, the unemployment rate in the second quarter of 2016 was 6.9 percent compared to 7.8 percent in the previous quarter. Overall, there were 322,000 unemployed people.

The first quarter of 2016 showed a decrease of 11 percent of hirings compared with the first quarter of 2015 and related equally to men and women. All economic sectors recorded a fall in the number of hirings; agriculture showed the least pronounced fall (1 percent), compared to the construction sector (- 19.5 percent), industry (- 11 percent), and trade and services (- 10.8 percent).

As regards employment contract types, overall there was a 6 percent increase in agency contracts between the first quarter of 2016 and the first quarter of 2015 and a decrease in permanent contracts (- 23.5 percent), apprenticeships (- 9.5 percent), fixed-term contracts (- 4.7 percent) and project-based contracts (- 32.6 percent).

In Lombardy, the difficulties in filling vacancies are attributable equally to the poor skills of candidates and the lack of availability of the professional profiles sought. On the other hand, vacancies are filled more easily in public utilities and in leisure services.

At a sectoral level, recruitment difficulties are more frequent in IT services and telecoms (28 percent of the total), advanced services to enterprises (23 percent), electrical and electronic industries (22 percent), metalworking industries (21 percent), and textile and clothing industries (20 percent).

The main sectors requiring the greatest specific work experience are: construction (74 percent), media and communication (68 percent), healthcare and social work (68 percent), IT and telecoms (67 percent), and textile and clothing industries (66 percent).

In 2015, in Lombardy, the recruitment of highly-skilled workers (specialists: 8 percent, technicians: 16 percent, and a small number of managers) came to 32,750, or 25 percent of total hirings. The hiring of medium-skilled workers, of which 12 percent were office workers and 31 percent service and trade occupations, was 57,890, or 44 percent of total hirings. The remaining 42,390 planned recruitments were in low-skilled occupations, accounting for 32 percent of the total. They included labourers (21 percent) and generic unskilled occupations (11 percent).

The occupations in greatest demand were: skilled workers in trade, hotels and restaurants/bars (cooks, waiters, bartenders and similar), unskilled occupations in trade and services, technical professions in organisational, administrative, financial and trade activities, secretaries and office workers, and technical professions in science, engineering and production.

In 2015 in Liguria, the overall employment rate was 62.4 percent, up 1.7 percent compared to 2014, which was lower than the average for the North West, but 6.1 percent higher than the national average. Among the employed, men have the largest share (55.1 percent), despite decreasing by 24 000 workers compared to 2008 (before the crisis) (- 6.6 percent); female employment between 2008 and 2015 remained stable, although the percentage of women among total people in work rose from 43.2 percent in 2008 to 44.9 percent in 2015.

In Liguria in 2015, 71.6 percent of people in work were employees, while 28.4 percent were self-employed.

The breakdown of people in work by age groups shows that in Liguria the situation is especially critical for young people: only 3.3 percent of people in work are aged 15-24 years, compared with 4.1 percent of the national figure; 25-34 years-old account for 15.7 percent of the workforce in Liguria against 18.2 percent at national level.

As to gender differences, in Liguria the greatest gap between men and women in terms of percentage points is found in the age group 25-34 years, where employed men are 15.1 percent and women 2.6 percent of the total by gender, and in the over-65s, with men outnumbering women by 2.1 percentage points.

Breakdown of employment by activity sector shows no significant changes vis-à-vis 2008: services account for almost 80 percent of total employment, followed by industry at 20 percent. Within industry, the manufacturing sector accounted for 12.7 percent of total employment in 2015.

In 2015, according to data obtained from compulsory reporting, the most widely used type of contract continued to be fixed-term contracts (44.6 percent), followed by permanent contracts (30 percent). Compared to 2014, flexible work dropped to third place (16.1 percent), with a gap of about 14 percentage points from fixed-term contracts. Between 2014 and 2015 permanent contracts increased by 65.5 percent, while non-standard employment fell by 11.5 percent and apprenticeships by 19.6 percent.

Breakdown by type of occupation shows that 33.2 percent of employment was in skilled occupations in trade and services, followed by unskilled occupations (20.6 percent). Office workers, intellectual professions, craft workers, skilled manual workers and farmers accounted for around 11 percent of employment.

Compared to 2008, the largest increases were in intellectual, scientific and highly specialised professions (+ 34.7 percent), followed by skilled workers in trade and services (+ 16.9 percent), which show that in years of crisis people with very specific professional skills and highly intellectual skills could be more attractive for the labour market. Conversely, there has been a significant drop in legislators, managers and businesspeople (- 46.6 percent) and technical occupations (- 41 percent).

The unemployment rate in Liguria increased from 5.4 percent to 9.2 percent between 2008 and 2015, although it fell from 10.8 percent to 9.2 percent between 2014 and 2015. With regard to the gender component, female unemployment in particular decreased in Liguria (- 17.1 percent, corresponding to 6 000 people), while men continue to be the largest component (53.2 percent) of those seeking employment.

In spite of the improvement in the female unemployment rate, the relative rate, which was down on the previous year, was nonetheless higher than the male unemployment rate (9.5 percent compared to 8.9 percent).

The rise in unemployment mainly concerns workers who lost a previous job and first time jobseekers (who made up 21 percent of unemployed people in Liguria in 2015 and 27.2 percent of the national average).

Between 2014 and 2015 the growth in employment was solely due to the good performance of services (+ 14 000 jobs, corresponding to + 3 percent), while industry lost a thousand jobs (- 0.8 percent), mainly due to the decline of employment in manufacturing (- 5 000 jobs, corresponding to - 6.6 percent).

In Liguria on 1 January 2015 there were 114 984 non-EU nationals legally resident, representing 7.2 percent of the total regional population.

According to the ISTAT data (RCFL - Continuous Labour Force Survey annual average 2015), the employment rate (15-64 years) of non-EU foreign nationals was 58 percent; around 4 percentage points lower than the overall regional rate (62.4 percent). Among EU nationals, however, the employment rate was 69.4 percent. There were 50 645 employed non-EU nationals (aged 15 and over), of whom 51.5 percent were men.

The unemployment rate (aged 15 and over) of non-EU foreign nationals was 20.1 percent, more than double the overall regional figure (9.2 percent).

Employed foreign nationals (aged 15 and over) tended to be younger than Italians: 64 percent of non-EU workers were under the age of 44 year (among Italians the figure falls to 44 percent); the majority of employed foreign nationals were in the age group 30-44.

Companies in Liguria showed a largely stable trend compared to 2015, with a growth rate of 0.10 percent. There were 163,418 businesses registered as at the end of 2015, and the balance between registrations and closures was positive, standing at 163.

In terms of changes in registration, taking into account joint changes in registrations and closures, the sectors struggling most appeared to be construction, trade, transport and warehousing, and accommodation and food services, while rental, travel agencies and business support services, real estate activities and manufacturing showed a positive trend.

More critical is the situation of craft businesses at all levels: national, regional (North West) and Liguria. Growth rates increased, with the exception of Liguria, compared to 2014, but were still in negative territory. The North West fell from - 1.15 percent to - 1.08 percent, while in Liguria the figure fell from 0.66 percent in 2014 to - 0.93 percent in 2015 and was negative in all four provinces.

Although the overall trend for companies in Liguria appeared to show resilience rather than full recovery, it is important to recall that to revive the economy, the difficult situation in which craft businesses have been struggling for years cannot be ignored, given that craft businesses make up a significant proportion of the local economy (27.5 percent).

The employment situation for the best qualified deserves attention: the employment rate of graduates of different types at the University of Genoa (Liguria Region) in 2015, one year after graduation, was 58.9 percent and more than half (55 percent) said they made little or no use at all of the skills they gained during their university education, and probably also carried out tasks for which a university degree was not required. Also, one year after graduation, the employment rate of graduates with master's degrees and single cycle degrees (76.6 percent and 62.7 percent respectively) was significantly higher than that of graduates having only a bachelor's degree (48.9 percent). The academic disciplines with higher unemployment rates include geology/biology, architecture and social and political sciences; the disciplines with the highest employment rates are medicine and health, engineering, teaching and science.

In particular, one year after obtaining a bachelor's degree, the unemployment rate declared by respondents was higher for those having a degree in social and political sciences (30.7 percent), geology/biology (30 percent), law (29.3 percent) and architecture (26.3 percent). Conversely, the unemployment rate was lower for psychology-related subjects (4.3 percent), the sciences (7 percent) and physical education (10.5 percent).

One year after obtaining a master's degree, there was a higher unemployment rate in geology/biology-related subjects (43.1 percent), physical education (25.1 percent) and architecture (21.3 percent); meanwhile, the employment rate was higher in the field of medicine and healthcare (92.9 percent), engineering (89.6 percent) and teaching (86.2 percent).

Based on the average 2015 data, this trend was more pronounced in Liguria than in Italy, although it was noteworthy that female graduates conversely had a higher rate of unemployment than men with similar qualifications. In Liguria, the situation was the reverse with regard to high school diplomas, with the female unemployment rate at 7.9 percent and the male rate at 8.9 percent.

5. Redistribution and social inclusion

The Italian welfare state is considered by the literature on comparative welfare state as 'familistic' welfare systems, in the consideration of the key role that the family plays in the overarching architecture of the welfare system, acting as the main provider of care and welfare for children and dependent individuals. At the same time, we can define the Italian welfare an unbalanced system if we consider the subdivision of expenditure by functions. Current trends of the social expenditure highlighting the inertia of the Italian welfare state. Starting from early'90 the Italian public spending on social protection increased, according to the main European countries, but this data it's not enough to describe the Italian case.

Table 4 - Net social protection benefits

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
EU (27 countries)	25.1	24.8	24.2	24.9	27.5	27.5	27.3	27.6	27.8	27.6
Italy	24.4	24.6	24.5	25.5	27.5	27.6	27.4	28.0	28.7	28.8

Source: Eurostat

As matter of fact, if we put the focus on the specificity of the public spending we can discover some interesting evidences. If the growth in the volume of social expenditure has been matched by marked fixity in the subdivision of expenditure by functions, the data shows that the only dynamic element is expenditure on old-age and survivor pensions. Considering the total amount of social security spending (included the pensions) in overall social protection expenditure, Italy spends more than the other European countries.

The social and economic changes happened in Italy in the last decades, have not been matched by analogous changes in the welfare system. The welfare system structure has remained largely unchanged, with few significant exceptions: the reform of the pensions system (started between 1992 and 1995 from the "Amato" and "Dini" reforms until 2011 with the "Fornero" reform); the reforms and the changes in the labour market regulation (in1997 ("Treu" Reform), 2001 ("Biagi" Reform) and 2014 (the job's act) and in 2017 the first step of the minimum income policy, (REI reddito minimo di inclusione). The amount of expenditure on social protection in Italy has

grown at a rate greater than that of GDP. In 2014 is near 7 percent, lower than EU average, for health care, but higher for old age (11.50 percent) and lower for other social problems, like disability, housing and so on. During the last twenty years, there has been no reconfiguration of the Italian welfare state able to include the new social risks within the existing social protection system.

If anything, observation of the redistributive effects exerted by the welfare system shows the reverse: the evolution of Italian welfare has contributed to an *increase* in social imbalances and inequalities. Without significant changes in the welfare state system, the welfare benefits have been distributed mainly to the advantage of the *insiders* instead of the *outsiders*. The outcome of these dynamics has been that the dualism, between insiders and outsiders, historically characteristic of Italy's welfare system, like those of the other southern European countries, has been increased by the joint effect of the absence of the structural welfare system's reform (Ferrera 1996, Ranci and Migliavacca 2015).

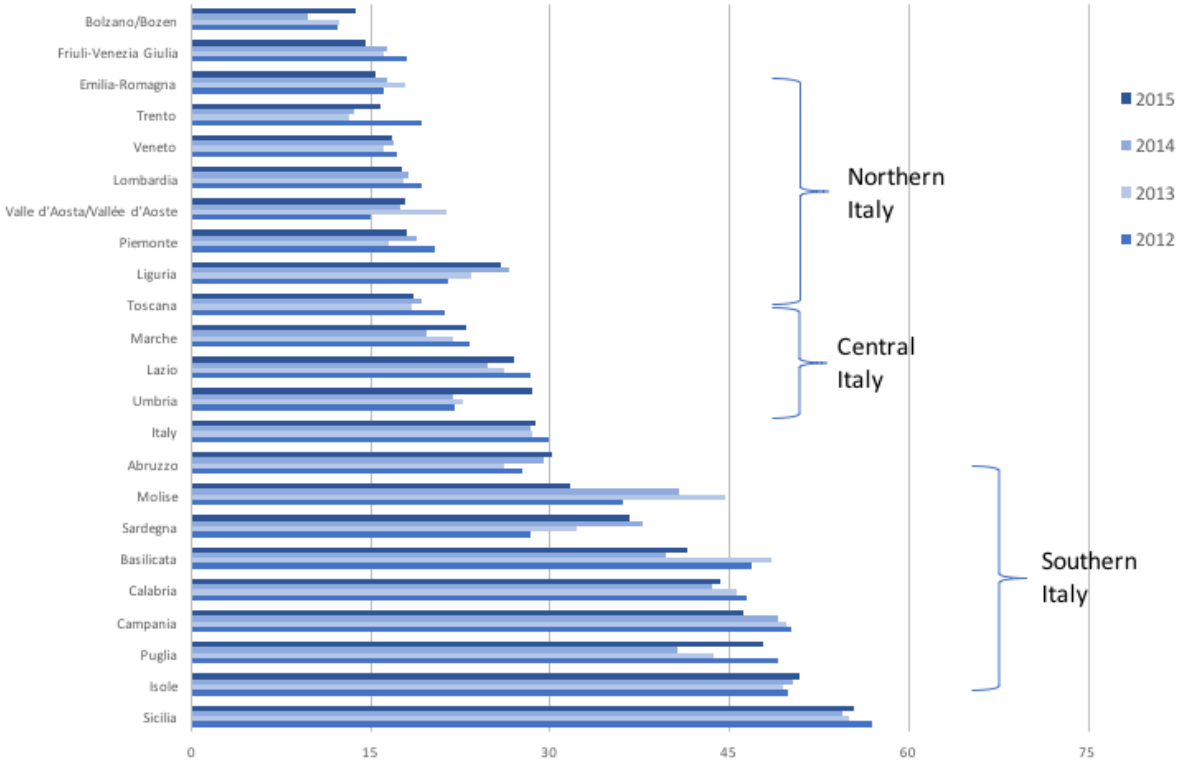
Italy is among one the main European countries with the highest levels of income inequality as the data shows this. Gini coefficient after social transfer is, in 2015, 32.4, higher than EU (18) average, 31.0. The level of the people at risk of poverty or social exclusion is larger and is line as the worst situation of the other southern European countries.

The share of the population at-risk-of-poverty-or-social-exclusion (AROPE) stabilised close to 29 percent in 2015, one of the highest rates in the EU. In addition, there are substantial regional disparities, with very large differences in AROPE rates between northern and southern regions.

The structure of the economy explains a large part of the different internal outcomes. For examples, about our functional regions, the data shows that in Liguria the risk of poverty and social exclusion is higher than in Lombardy. In fact, the ratio in Liguria grew by 18.9 percent from 2005 to 2015 rising 25.8 percent (EU27 23.7 percent; Italy 28.7 percent), while in Lombardy by 29.4 percent at the same period considered rising 17.6 percent. People in condition of severe deprivation was in 2015 11.6 percent in Liguria (similar to the national data) ad only 6.4 percent in Lombardy. Also, people living in households with very low work density is higher in Liguria than in Lombardy (8.7 percent vs. 5.3).

Nevertheless, in both the Regions households' income is higher than average (in 2013 Lombardy 19.770 euros, in Liguria 18.500, vs a national average of 16.100 euros; in 2014, average income per inhabitant was 20.200 in Lombardy, 19.200 in Liguria and 16.600 at the national level).

Figure 7 - People at risk of poverty or social exclusion by NUTS 2 regions, 2012 -2015



Source: EU-SILC

6. Health and well-being

For more than a decade the European health system has undertaken reforms aimed at rationalizing resources and limiting spending, however public funding is still the main option for health services.

The share of private health expenditure in Italy was 24.5 percent of the total in 2015, equal to Estonia and Finland. Health public expenditure in Italy was below other important European countries; against 2,431 USD per inhabitant at purchasing power parity, spent in Italy in 2014, the United Kingdom and France spent over 3,000 and Germany 4,000 per inhabitant.

As for hospital bed supply, Italy was still below EU28 average in 2014 (3.4 against 5.2 beds per thousand inhabitants). Liguria and Lombardy have similar indicators referring to beds/thousand inhabitants (3.4 vs. 3.7), but in Liguria there is a greater availability of long-term curative beds (12.5 per 100,000 inhabitants, vs. 8.7) and a greater presence of medical doctors

(442.1 per 100,000 inhabitants, vs. 358.6) or nursey and midwives (981.2 per 100,000 inhabitants, vs. 684.9), we suppose for the greater weight of older people.

In 2015, current public health expenditure was about 112 billion Euros (1,838 Euros per year per inhabitant), equal to 6.8 percent of GDP.

Per capita public expenditure at a regional level is highly changeable because of differences existing in the socio-economic conditions and in the management models of regional health systems.

A wide gap persisted between the North and the South and Islands area as for hospital beds.

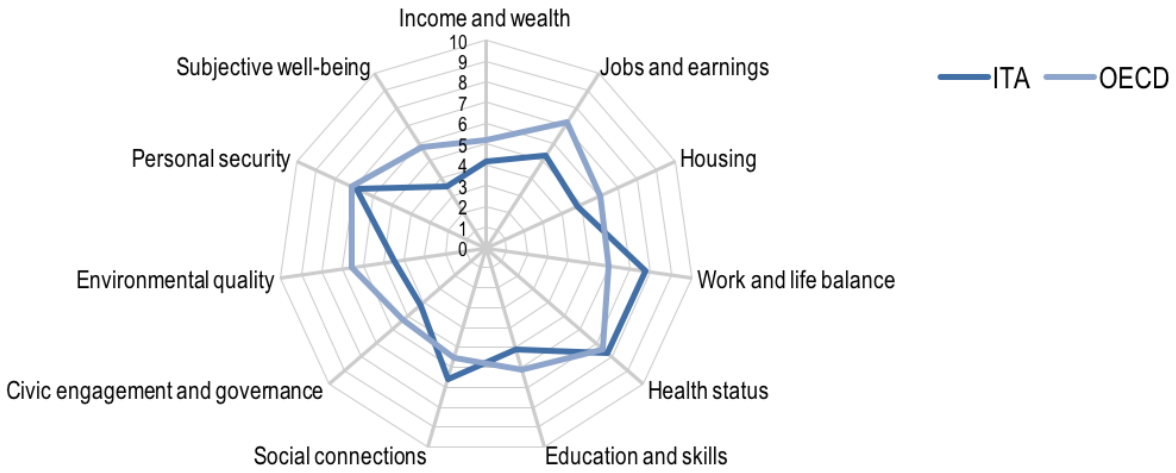
The hospital systems of Lombardy, Emilia-Romagna and Toscana were confirmed as points of attraction for admissions of non-resident patients.

Where people live has an important impact on their opportunities to live well. There can be large differences in average levels of well-being in different regions within the same country. *How's Life in your Region?* and the OECD regional well-being web-tool assess performance across 9 dimensions of well-being in the 362 OECD large regions – 21 of which are in Italy.

Italy's performance across the different well-being dimensions is mixed.

The chart below by OECD Better Life Initiative shows areas of well-being strengths and weaknesses in Italy, based on a ranking of all OECD countries. Longer lines show areas of relative strength, while shorter lines show areas of relative weakness[2].

Figure 8 - Italy's well-being



Source: OECD calculation based on the OECD Better Life Index 2016 database, http://stats.oecd.org/Index.aspx?DataSetCode=BLI.

[2] For more details, see www.oecd.org/statistics/Better-Life-Initiative-2016- country-notes-data.xlsx.

In general living conditions in Lombardy are better, and this evaluation emerges both from objective data, both from perceptions of citizens. We must consider that Liguria is the region with the oldest population, as said heavily affected by economic and demographic crisis, caused serious disturbance in educational and social sectors. Less young people in an ageing context with fewer opportunities and a greater part of population at risk of social exclusion contribute also to lower levels of subjective well-being and lower expectations for the future.

7. Conclusions

Italy is "convalescing" after a deep and long recession. Structural reforms, accommodative monetary and fiscal conditions, and low commodity prices have aided the economy to turn the corner. The ambitious structural reform programme, named Jobs Act, and social security contribution exemptions for new entries have developed the labour market and improved employment. Yet, the recovery remains weak and productivity continues to decline. Returning the banking system to health will be crucial to revive growth and private investment. More investment in infrastructure will be essential to increase productivity.

Raising chronically low productivity growth will require a more effective public administration, an improved business environment, increased innovation, stronger competition, and a better match between the demand and supply of skills. The Good School reform also aims at strengthening links between school and the labour market by mandating school-to-work experiences for all students in the last three years of secondary school. Intensive involvement of the business sector and other stakeholders will be key to ensuring the creation of quality school-to-work schemes that will help the development of relevant skills for the labour market. An assessment system aimed at verifying the quality of training carried out in the work placement will need to be implemented.

Literacy scores are low and job-skill mismatch is one of the highest among OECD countries, depressing earnings and well-being. Many workers are under-skilled in the jobs they hold, emphasizing mismatches between workers' skills and those required by employers. Linking the education system and labour market policies are crucial to raising real wages, job satisfaction and living standards. The Jobs Act and the Good School reform go in the right direction and need to be fully implemented.

Italy has a small share of students in higher education. At the same time, the difference between the earnings of tertiary-educated graduates relative to those of adults with only upper secondary education is low in Italy compared to the OECD average. Furthermore, the unemployment rate among tertiary educated adults is among the highest in OECD countries.

Hence, labour market outcomes of tertiary educated make the investment in tertiary education unattractive, at least still a technical-professional track is not implemented.

Education expenditure is low, particularly in tertiary education, both relative to GDP (Italy 1.0 percent of GDP 2016; 1.6 percent OECD average) and to the number of students (expenditure per student was 71 percent of the oECD average). More funding will be crucial point to improving the quality of education. Given limited fiscal room, one alternative could be to increase tuition fees, which are low compared to other OECD countries (OECD, 2017).

Apprenticeships are a key instrument to help young people to gain useful work-relevant skills. However, they are underutilised. The main challenge for apprenticeships in Italy is the weak link between work and education. The most common apprenticeship, is only weakly connected to formal education and under this type of contract less than one third of apprentices were enrolled in formal education in 2013. In other type of contracts, access to training – as required by law – depends on the initiative of enterprises. Furthermore, there is no national system to control and monitor the training provided by firms. Specific quality criteria need to be set and enforced for companies offering apprenticeships.

Participation in vocationally-oriented tertiary programmes is low in Italy compared to other OECD countries. In recent years, Italy has taken several steps to create tertiary education programmes preparing students for a rapid entry into the labour market with the creation of high technical institutes (Istituti Tecnici Superiori – ITS). The experience of ITS has been positive as graduating students have high level of employability (INDIRE, 2016). The success of ITS is attributable to its responsiveness to labour market needs, as they benefit from strong involvement of the business sector, universities and higher secondary education. The full potential of ITS remains untapped as they are concentrated in the most industrialised regions of Italy and female participation is low. Enrollment in ITS is negligible compared to other tertiary educational paths, basically because it requires additional funding.

Italy must construct on the positive experience of ITS and establish a VET system at tertiary level based on apprenticeships. Professional degrees are going to be introduced in national tertiary education system and could help to reduce the distance between educational outputs and labour market requirements.

This would help match the trend of rising demand for medium- and higher-level qualifications, which are projected to reach 82.5 percent of the labour force in 2025, against less than 80 percent today (CEDEFOP, 2015). Establishing a national body involving the business sector and other key stakeholders would improve strategic planning and coordination, and ensure the education-working experience mix reflects not only student preferences but also local labour market needs.

All the above-mentioned issues shall be valid for both our Functional Regions, but it is important to note that Lombardy need less interventions in all area descripted by the indicators than Liguria, as revealed by the statistical data.

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Work Package 4

Quantitative Analysis Young Adults' Data

Portugal – National Briefing Paper with national and regional data sets

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Date 2017/09/10

Work Package 4 – Quantitative Analysis of Young Adults' Data

Deliverable 4.1

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Executive Summary

This national briefing paper provides a short overview of the living conditions and risk profiles of young adults in Portugal and in the functional regions of Vale do Ave and Alentejo Litoral, selected as case studies for the YOUNG_ADULLLT project. The contextual living conditions of young people are analysed by looking at available indicators at NUTS 0 and NUTS 2 level, collected by the working package leaders and integrated with NUT 3 data when available or provided by the Portuguese National Statistics Institute (INE) and the Database of Contemporary Portugal (PORDATA), as well as by other institutional sources, along the following dimensions: demographic structure of the population and its subgroups; general state of the economy; education; labour market; redistribution and social inclusion; health and individual well-being.

Two of the main demographic characteristic are the growing ageing of the Portuguese population both at national and regional levels, and the high percentage of young adults aged 20-29 living with their parents. During the time span, and in spite of the financial crisis and Troika's intervention the GDP and the GVA increased at national and regional levels. However, the performance of the Portuguese economy measured by GDP per inhabitant and labour productivity is still considerably lower than the EU28 average.

Between 2005 and 2016, the structure of academic qualifications of the Portuguese population has improved significantly both nationally and regionally. The rates of school attainment increased in all age groups, the ratio of early school leavers and the rate of NEET declined significantly. However, when compared to other European partner countries, Portugal still reveals the lowest rates of school attainment even among the younger generations.

In spite of an important skills upgrading during the decade, the occupational structure of the Portuguese labour market is less qualified than the EU27 average. The Portuguese youth employment rate (15-24 years old) is one of the lowest in EU27 and decreased consistently during the time span 2005-2015, showing important differences at regional level. Unemployment is mainly a youth problem, particularly after 2011. In 2015, the Portuguese youth unemployment rate was more than the double the rate of people aged between 20 and 64 years and higher than the EU28 average. Once again, significant regional differences can be found. Generally, the Norte labour market seems to be more youth friendly than the Alentejo one.

In Portugal, resources spent for social protection benefits, provided to households and individuals affected by a specific set of social risks and needs is one of the lowest in EU27. In spite of the financial crisis and the growth of unemployment rate, the expenditure per inhabitant didn't rise significantly and the expenditure with family and children and social exclusion are those were the underfunding is more severe when compared with EU27. The income inequality

started to increase strongly after 2011, transforming Portugal in one of the most unequal countries in EU.

During the time span 2005-2015, self perceived health in Portugal has always been lower than the EU27 average. Portugal was also the country participating in YOUNG ADULLLT project with the lowest self-perceived health. In general, Portuguese people aged between 25-34 years are comparatively less satisfied with their lives.

The data show that the living conditions of young people in Portugal are worse than the EU28 average. They also reveal some regional differences which point to the fact that the living conditions are slightly better in Norte, where Vale do Ave is located than in Alentejo where Litoral Alentejano's young people live.

Introduction

This briefing paper offers a concise overview of the living conditions of young people and risk profiles in Portugal and, particularly, in Vale do Ave and Litoral Alentejano, the two national functional regions selected for analysis by the Portuguese team of the YOUNG_ADULLLT project. Data were gathered at national (NUTS 0) and regional (NUTS 2 and 3) level with regard to the six dimensions agreed upon in the WP4 proposal. These dimensions represent different aspects of the contextual living conditions of young adults' experiences, concretely, the economic context and structure of the productive system; demographic characteristics; the access, process and outputs of education and training system; the interaction between labour market, welfare state and education structures; the material living conditions of young people and their participation as citizens in the political and civic life; and the health status and individual well-being. The joint dataset was elaborated mainly based on the EUROSTAT database; however, other sources were also used, such as the OECD, UNESCO, Eurydice, World Bank, UNIDEMO, PISA, LFS, ESA, EU-SILC, ESSPRO, DG EMPL, and SES 2014. The main corpus of data was then complemented with data collected at the functional regional level (NUTS 3), which were available or provided by the Portuguese National Statistics Institute (INE) and the Database of Contemporary Portugal (PORDATA), as well as by other institutional sources (such as Directorate-General of the Ministries). This report is based on a data collection over a 10-year span, ranging from 2006 to the last year of data available (e.g., 2015).

Description of the data collated and quality data assessment

The Eurostat, OECD and UNESCO databases aggregate a huge amount of data. This can be useful when comparing different dimensions of the contextual living conditions of young people in various countries or regions. However, data in all six dimensions of analysis are mainly available at the national level (NUTS 0). This means that access to data at regional level (NUTS 1) is somewhat limited, and at local level (NUTS 2) it is actually very limited. These limitations constitute constraints on the comparability of some indicators between local functional regions. Besides, it is important to acknowledge that complementing the available and harmonised data with local data can be a difficult and time-consuming process, mainly due to issues related to the heterogeneity and fragmentation of data sources. This can be seen, for instance, in the inconsistency of the concepts and analytical categories used, as well as in the available time-series. Since local data are collected within a particular framework and there is no prior intention to bring them into interaction with other data sources, this affects the possibilities of

contextualised comparison between the different national cases. Just to illustrate, in Portugal, the existing data sources group together retention and school leaving rates, while the European data sources provide the repetition rate. For these reasons, the most significant data source is EUROSTAT, since this database provides metadata and completed time-series, even if not completely consistent or flexible. So, a comprehensive integration and analysis of multi-source data at the different levels of analysis is a hard goal to accomplish; therefore, this research intends to raise awareness for the need and relevance of contextualised data at regional and local level in order to be able to produce a full picture of the risk profiles derived of the living conditions of young people in different European regions.

Findings

1. Demographic structure

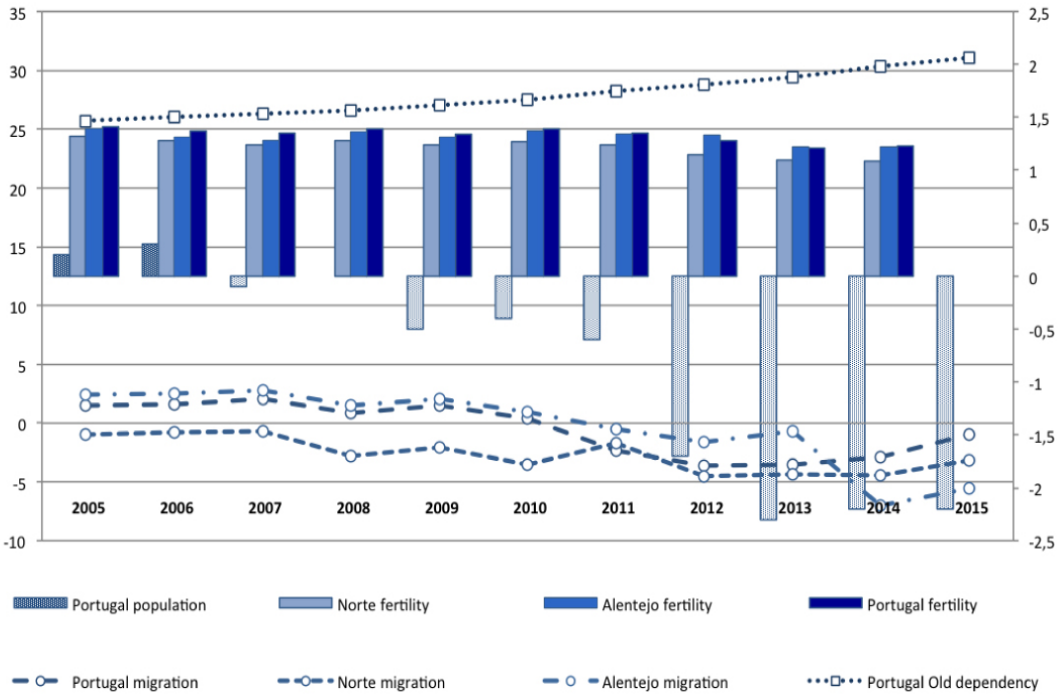
Portugal is located in Southern Europe and is a relatively small country, covering a total area of 92,200 square kilometres. The area of the Norte region is 21,286 square kilometres, while Alentejo is 31,605 square kilometres. The population decreased by 2.2% over the last decade (2006-2016), from 10.5 million to 10.3 million inhabitants (with 111 women per every 100 men) in 2016; this corresponds to 2% of the total EU28 population. Norte is much more populated than Alentejo (3.6 million against 0.72 million people), even if it covers a smaller territory. The national population density accounts for 113 persons per square kilometre in 2014 (less 0.88% since 2006). The Portuguese population has an unequal distribution across the country: at regional level, the Norte is clearly denser than Alentejo (-64%); and at local level, Ave has an incredibly high population density when compared to Litoral Alentejano (-151.1%)[1]. Furthermore, the average Portuguese population is ageing considerably: from 2005 to 2016, the median age increased from 39.2 to 44 years. The same situation happened at the regional level: from 37.6 to 43.8 years in Norte and from 43.2 to 46.7 years in Alentejo. Younger population aged 15-24 and 25-29 has decreased in the last years, and now accounts for 5.3% and 5.4%, respectively, of the total inhabitants in 2015. Also at the regional level, there was a significant reduction in the proportion of these age groups in the population since 2005, reaching respectively 5.6% of the youth aged 20-24 and aged 25-29 in Norte, and 4.8% and 5.6% of the youth aged 25-29 in Alentejo in 2015.

The national crude rate of net migration decreased significantly after 2010, reaching -3.60 per 1,000 inhabitants in 2012. Only after 2014 did the situation begin to change, with the rate rising from -2.90 to -1.00 per 1,000 persons between 2014 and 2015. After 2008, the economic

[1] Source: https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_indicadores&indOcorrCod=0008337&contexto=bd&selTab=tab2

crisis obviously affected the demographic structure of the country, with more intensity in the Norte, since a lot of people left the Portugal and moved to other countries, more attractive in terms of employment and remuneration, between 2010 and 2014 (FIGURE 2). In 2015, the crude rate of net migration started to show signs of change at national and regional level, probably due to the slowdown of the emigration process.

FIGURE 1: Population change and migration (right axis), old dependency and fertility rates (left axis), Portugal, Norte and Alentejo, 2005-2015



Source: Eurostat

Birth and life expectations in Portugal are good, like in most other European countries. The infant mortality, in the first year after birth, has been decreasing constantly since 2005, totalling 2.9 deaths per 1,000 in 2016, while in the EU28 it was 3.6. Life expectancy was Portugal is 81.3 years in 2015. In terms of gender differences, the female life expectancy is longer than that of males (a 6.4 years difference). At the regional level, in Alentejo, the average life expectancy (80.8 years) is lower than the national average, whilst in Norte it is higher (81.7 years) (data from 2015). When compared to other European partners, Portugal had the lowest fertility rate in 2014 (1.23). From 2006 to 2014, the national fertility rate decreased 14.6%. Not surprisingly, during this time span, the fertility also diminished at regional level: 21.1% in Norte and 12.2% in Alentejo. At the same time, the age at which a woman gives birth to her first child has been increasing continuously since 2005, reaching the age of 29.5 years in 2015 (2.2 years more than 10 years ago). The combined effect of increased life expectancy and lower fertility is producing

some changes in the living conditions of European countries; this is not only visible in the population aging, but also in the old dependency rate (the ratio between population aged 65 and over to population aged among 15 and 65). This indicator has been rising uninterruptedly since 2005, from 25.7% to 31.8% in 2014. This rise over time (2005-2014) of the old dependency rate is also noted in both regions, more precisely, 28.3% in Norte and 7.9% in Alentejo. Contrary to old dependency, the national young-age dependency rate has been declining in the last years, from 23.9% in 2005 to 21.7% in 2016. Between 2005 and 2016, there was the same trend at the regional level, reaching 20.1% in Norte and 20.7% in Alentejo in 2016.

The percentage of Portuguese young people aged 20-29 living with their parents has grown since 2006, amounting to 71.6% in 2013. When comparing Portugal with other European countries, the percentage of young people who still live with their parents is much higher than the EU28 average (55.4%) and the Northern European countries (e.g., Finland, United Kingdom or Austria), but quite similar to other Southern European countries (e.g., Italy, Spain or Croatia). In terms of gender differences, the percentage of young males living with their parents (76.6%) is higher than that of young females (66.6%). However, the percentage of both Portuguese young males and females (aged 20-29) who live with their parents is higher to the average of the EU28 (63% and 47.7%, respectively).

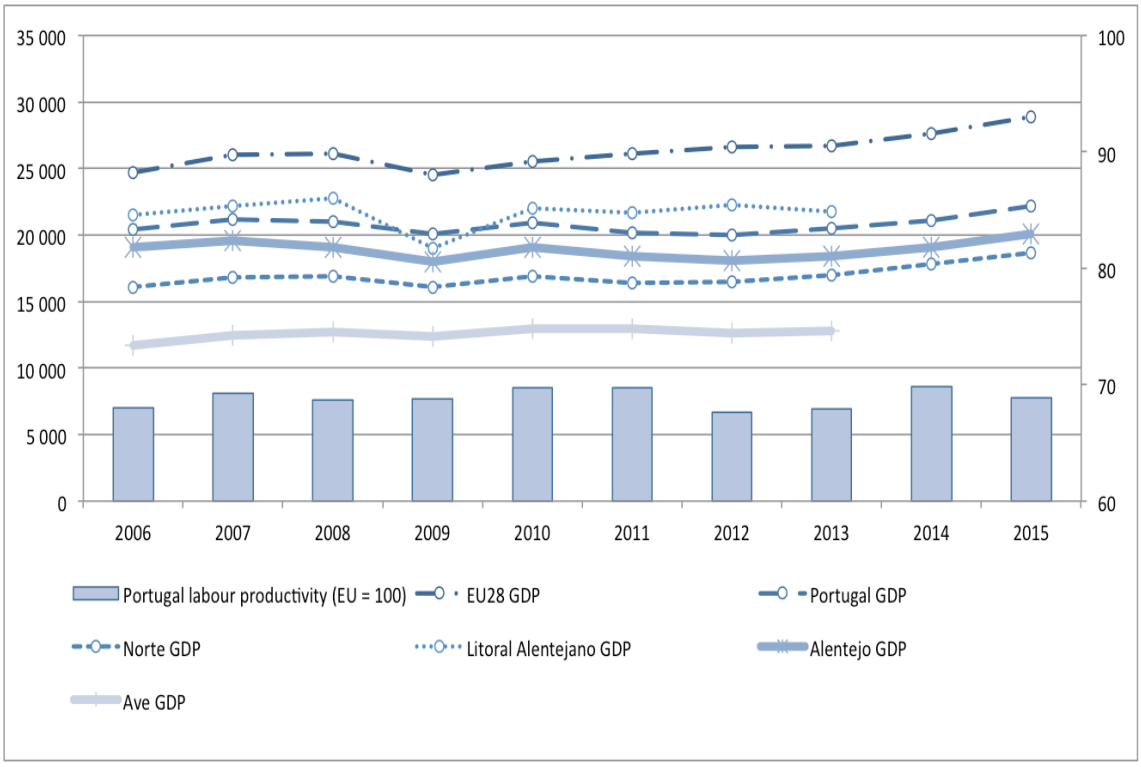
2. General state of the Economy

FIGURE 1 presents some aspects of the Portuguese economic landscape, from 2006 to 2015. Basically, the gross domestic product per inhabitant (GDP) increased from 20,400 to 22,200 euro, however, it remained 23.2% lower than European average (EU28) in 2015. In the same period, at the regional level, nevertheless, the GDP in both Norte and Alentejo regions increased over time (18,700 and 20,100 euro, respectively), even in 2015 it remained significantly below other European countries, showing a discrepancy of 54.4% and 43.8% from the EU28 average. Data drawn from the Portuguese National Statistics Institute (INE)[2] show that, at the local level, there was an increase of the GDP per inhabitant from 2006 to 2013. However, it is important to point out the extraordinary difference in GDP between both functional regions, since the GDP per inhabitant in Litoral Alentejano is not only 70% higher than the one in Ave, but also 32.9% greater than the national average in 2013. It is relevant to mention that there are considerable discrepancies regarding the GDP per inhabitant, from 2006 till 2013, when comparing data from EUROSTAT and INE. Just to give an example, in 2006, the national GDP average is 15,800 euro in INE and 20,400 euro in EUROSTAT.

[2] Source: https://www.ine.pt/ngt_server/attachfileu.jsp?look_parentBoui=224212953&att_display=n&att_download=y

However, over the last decade, the rate of growth of the Portuguese economy was not linear, oscillating across time. The economic and financial crisis, which emerged in 2008, brought about years of profound challenges for Europe, particularly Southern Europe. From 2008 to 2009, the Portuguese GDP per inhabitant decreased from 21,000 to 20,100 euro. Despite some improvements between 2009 and 2010, Portugal has been in economic recession for two years, which can be perceived by the drop in different measures between 2010 and 2012: the GDP (from 20,900 to 20,000 euro); the real growth rate of regional gross value (GVA) (from 0% to -1.9%); and the labour productivity measured in GDP per hour worked (from 69.7% to 67.9%). Various factors may have contributed to this economic framework: the Troika's intervention (2011-2014) is one of them, since it imposed severe austerity measures to the country.

FIGURE 2: GDP in euro inhabitants (left axis) and labour productivity (right axis, EU=100), Portugal, Norte and Alentejo, 2006-2015



Sources: Eurostat and Portugal Statistics (microdata)

Since 2013, the Portuguese economy started to show some positive signs of recovery, expressed, for instance, in the increase of GDP and GVA rates. Both regions, Norte and Alentejo, have also presented evidence of improvement in these two economic indicators. Despite these achievements, the national labour productivity rate decreased until 2015 (-1.7%). In fact, this indicator was considerably below EU28 for all decade (ranging from -32% to -30.2%).

As with other countries, the service sector is dominant in the national economic structure, representing 75.4% of the GDP in 2015, which is a higher value compared to almost any other

partner countries (excluding the United Kingdom). The service sector is followed by the agriculture sector (2.33%), which is remarkably larger than the average for the EU28. On the contrary, the share of the industry sector in the Portuguese GDP is lower than in the EU28 (-2.25%). To be more precise, the national industry sector was on a downward trend from 2005 until 2014, but in 2015 there was a very slightly increase in this economic sector. Micro and small firms are the backbone of the national economic structure. In 2014, companies with less than 49 employees accounted for 99,3% of the total, while medium-sized and large enterprises with more than 49 employees represent only 0,7% of the total. Portugal is a relatively small country in geographical terms. However, the railway lines and motorways cover respectively 28 and 33 kilometres of every 1.000 square kilometres. In 2013, the railway lines network in the Norte region is 4.5% higher than in Alentejo region, which is in accordance with the differences in density population between both regions.

The Portuguese business enterprises spend much less in research and development (R&D) than the average in EU28 in 2014, measured in Purchasing Power Standard (PPS) per inhabitant at constant 2005 prices (more concretely, 107.7 against 307.4). However, the investment of the business sector in R&D was significantly different between both regions in 2014, amounting to 106.1 PPS per inhabitant in the Norte region and 35.4 in the Alentejo. The averages in both regions were below the national and European averages in 2015 (107.7 and 307.4 PPS per inhabitant). Also the investment of the Portuguese government in R&D is remarkably below the EU28 (14.5 against 60.6 PPS per inhabitant). What is particularly important to highlight is the low share of Norte (17.2%) and Alentejo (0.8%) regions in the total of national government expenditure in R&D in 2013. The public investment in R&D has been decreasing considerably over the past few years at the national level (-29.3%), as well as at the regional level: in Alentejo (since 2008, from 10.8 to 1 PPS per inhabitant), and in Norte (since 2010, from 15 to 7.1). Additionally, total expenditure in R&D accounted for 1.36% of Portuguese GDP in 2014, which is a value lower than EU28 (-0.68%). The percentage of researchers in all economic sectors over the active population is high compared to Southern European partners (in Portugal, the figure was 1.5% in 2013, whereas in Spain it stood at 0.9%, and in Italy at 0.7%). Also in this innovation indicator, there are territorial differences since, contrary to the Norte region (1.4%), Alentejo performed below the national average (0.5%).

The share of people employed in the Portuguese public sector presents small fluctuations since 2008 and amounted to 7.2% of the total employment in 2014, with considerable regional differences (10.5% in Algarve and 4.6% in Norte). Regarding employment in the education sector, this indicator had been increasing from 2008 until 2012 (from 6.8% to 8.3%); however, in the two last years it began decreasing (8.1% in 2014). In any case, only the United Kingdom had more employment in education in 2014, when compared to European partners. In terms of regional discrepancies, Alentejo presents a higher percentage (8.5%) than Norte (7.7%). Finally,

the percentage of people employed in the health sector and in social work is considerably lower than in other European partners (16.4% in Finland or 12.5% in Germany in 2014). In this indicator, Alentejo performed 1.1% above the national average in 2014, and Norte below (-7.1%).

In 2015, 70% of the households had access to Internet. This value is the second lowest among the European partners. Once again, there are differences between both regions: 63% in Norte and 54% in Alentejo in 2014.

3. Education

The Portuguese education and training system is comprehensive and centralised at the national level. Since 2009, after the beginning of the financial crisis, and until 2012, the public investment in education declined from 5.7% to 4.9% of the GDP. The government's expenditure in education began to increase again in 2013, being estimated at 5.3% of the national GDP. Full-time education is compulsory for all children and youths aged between 6 and 18 (inclusive).

In Portugal, pre-school education for children between the ages of 3 and 5 is still optional. Since 2006, the participation of children in childcare and pre-school has been increasing continuously: in 2012, 93.4% the children aged 4 were enrolled in education (9.4% more than in 2006). Both regional averages are higher than the national average in 2012, more precisely, 96% in Norte and 99.4% in Alentejo.

Basic education consists of nine years of schooling divided into three sequential cycles of education of four (1st cycle), two (2nd cycle) and three years (3rd cycle).

The division into tracks takes place when pupils are 15 years old, at the beginning of the secondary education system, which is made up of three possible tracks, each three years-long: the scientific-humanistic track prepares pupils to enter higher education in the sciences, technology and humanities; specialized arts tracks prepare pupils to either enter active life or to follow higher education studies in music and performance arts, audio-visual arts and dance; vocational education and training, together with professional tracks, prepare pupils to enter active life, but also allow the pursuit of higher education studies. In 2015, after lower secondary education, around 55% of young people entered a scientific-humanistic course, against 45% who accessed a vocational programme.

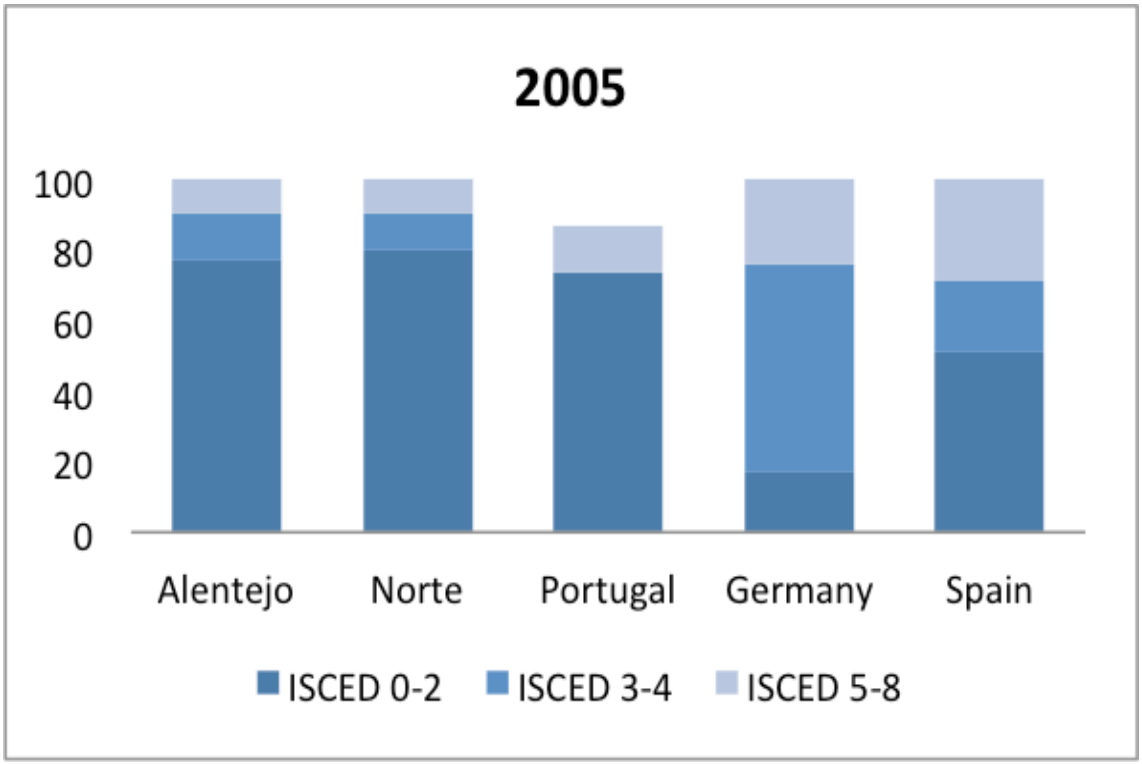
All students who successfully conclude the secondary education can apply to the tertiary education system (university or polytechnics). This application (for public sector higher education institutions) is made through a national online platform and based on students' priorities and grades. Briefly, the polytechnic tertiary education system is aimed at providing a more practical training and to be profession-oriented, while the university tertiary education system is characterised by a stronger theoretical basis and research-orientation.

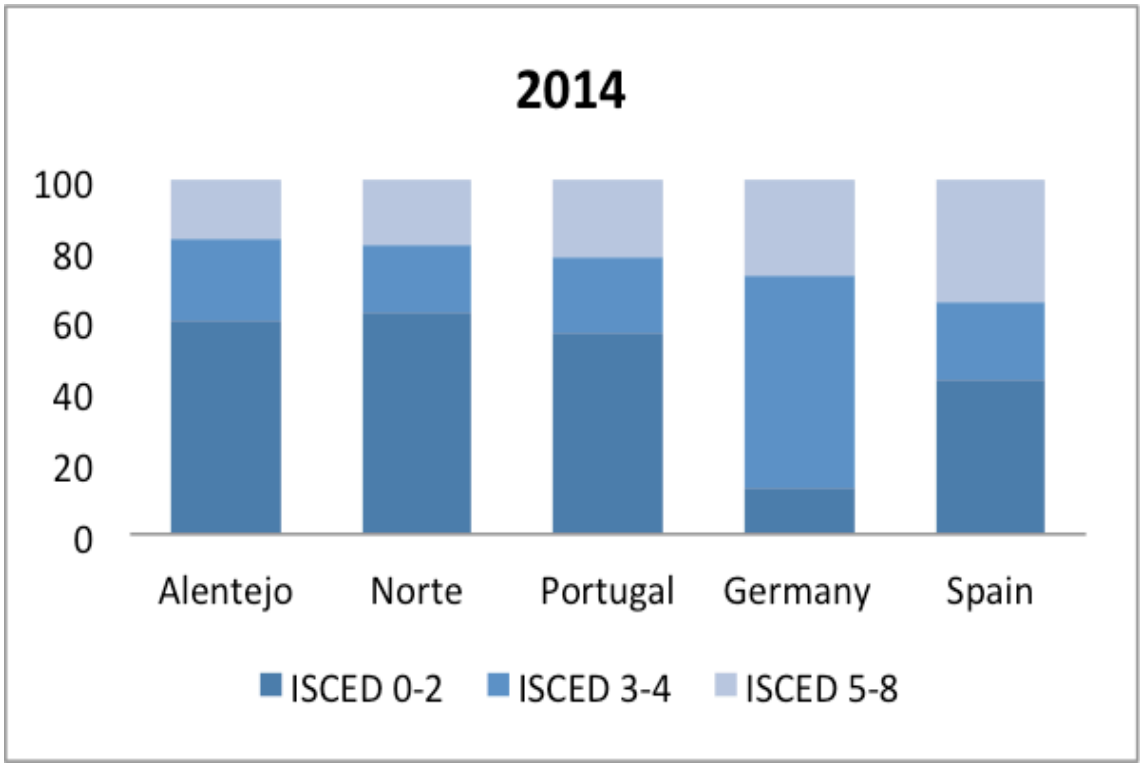
From 2005 to 2014, the percentage of population aged 25-65 who attained lower education (ISCED 2) declined from 73.7% to 56.7%. When compared to other European partner countries, Portugal reveals the lowest rates of school attainment, which can be partially explained by the significant differences in school attainment across age groups. Just to illustrate, the Portuguese population aged 56-65 has the lowest average number of schooling years of all European partners in 2014, more concretely, just 23% of this age group attained upper secondary education (21% less than the average for EU21).

In both regional contexts, the participation percentage of students in upper-secondary and post-secondary non-tertiary education (ISCED 3-4) has been fluctuating; however, it has been declining from 2009 to 2012, from 40.2% to 37.1% in Norte and from 45.7% to 37.1% in Alentejo.

Examining tertiary education in Portugal (FIGURE 3), there was an improvement in the percentage of people aged 25-65 who attained ISCED 5-8, increasing from 12.8% to 21.7% from 2006 until 2014. Even so, Portugal had one of the lowest averages (21.7%) compared to other European countries (e.g., 34.7% in Spain or 27.1% in Germany) in 2014, with the exception of Italy. In terms of gender differences, women are more likely to conclude the tertiary education than men, who reached 17.2% in 2014 (8.7% less than women).

FIGURE 3: Percentage of population (25-64) with ISCED 0-2, ISCED 3-4 and ISCED 5-8, in 2005 and 2014



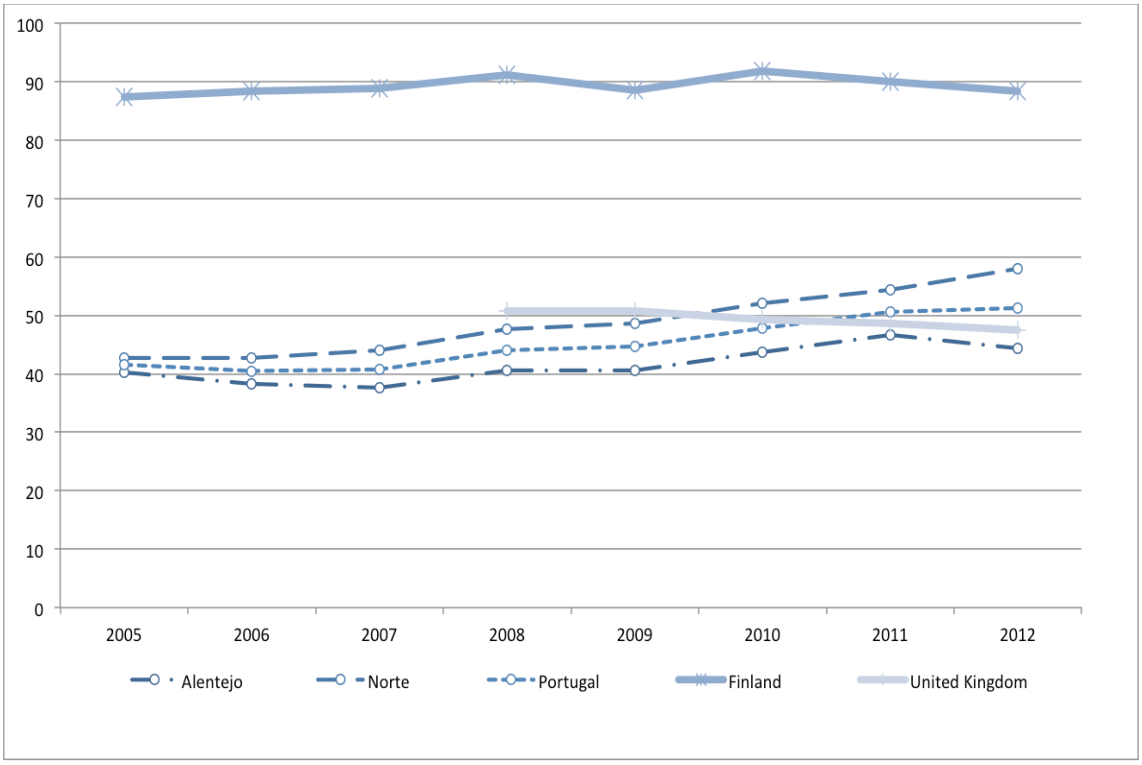


Source: Eurostat

During the same period, at the Portuguese regional level, Norte and Alentejo had an increase in this indicator in 2015, gaining respectively 6.3% and 4% since 2005. Considering the Portuguese population aged 30-34 with ISCED 5-8, the panorama is basically the same as the one described previously; thus, the percentage has also grown considerably since 2006, amounting to 31.3% in 2014, but even so it is less than in most European countries, except Italy and Bulgaria. Also here the percentage of women was 15.7% higher than that of men, amounting to 38.9% in 2014. The percentage of the population aged 30-34 that concluded tertiary education in both Portuguese regions has also increased over time, with 16.7% more in Norte and 10.1% in Alentejo than in 2005, reaching 30.3% and 24.9% in 2014. Although it had been continuously growing since 2006 (FIGURE 4), the Portuguese percentage of population aged 20-24 who attained the tertiary education (ISCED 5-8) is one of the lowest among European countries (51.2% compared to 95.9% in Austria and 88.3% in Finland in 2012). The same growth trajectory is seen in both regions, as this indicator increased from 40.2% to 44.4% in Alentejo and from 42.7% to 58% in Norte.

Regarding adult participation in education and training, in the Portuguese EUROSTAT sample, 16.8% of the participants aged 25 to 34 stated that they had received education or training in the four weeks preceding the survey. This value is 0.6% lower than the EU21 average in 2015. During The last decade, the indicator presented some fluctuations; however, from 2011 to 2016 it has been decreasing. There is no evidence of significant differences regarding gender.

FIGURE 4: Participation (%) in tertiary education of population aged 20-24, 2005-2012



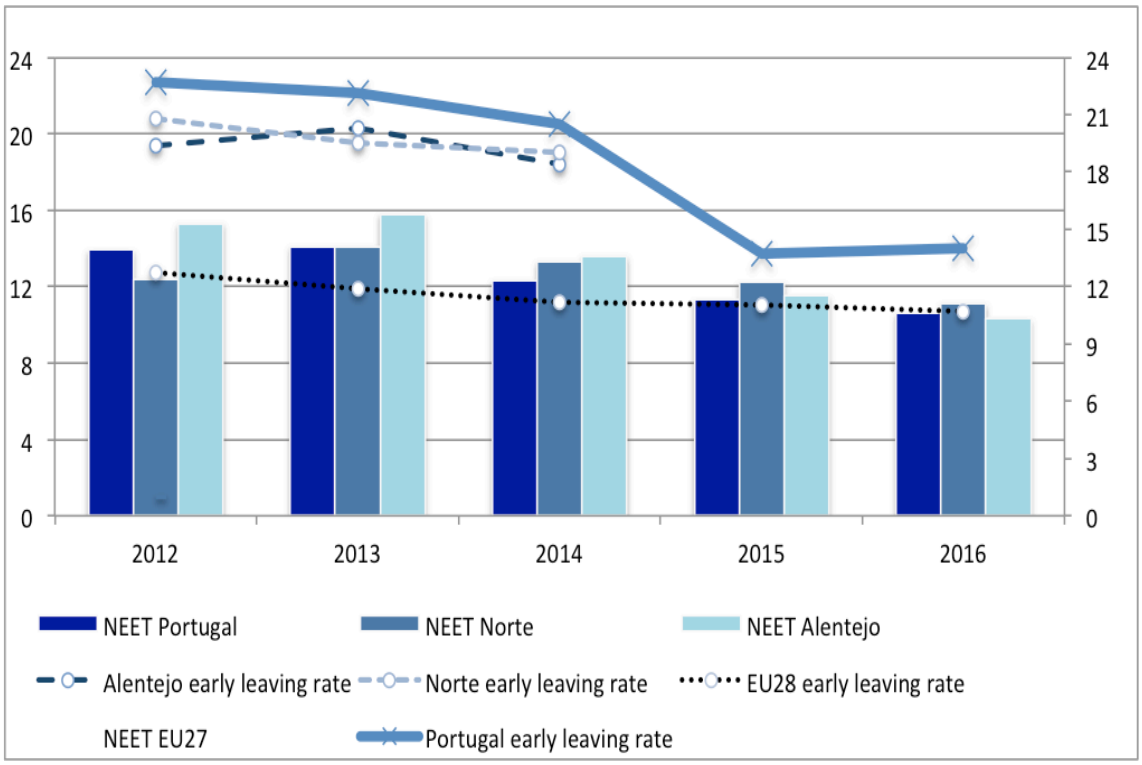
Source: Eurostat

Portugal only completed the field test of Programme for the International Assessment of Adult Competencies (PIAAC), and as such did not participate in the main study that took place between 2008-2013. So, our main source of data is the Programme for International Assessment (PISA). Portugal did not participate in 2003; therefore, we included data between 2006 and 2015. Since 2000, every three years, the Programme for International Student Assessment (PISA) aims to assess and compare education systems worldwide by testing the skills and knowledge of 15-year-old students at the beginning of upper secondary education. From 2006 to 2015, the Portuguese 15-years-old students showed an increase in the mean scores in numeracy and literacy. In 2006, the national numeracy mean was 466 (with 90.67 points of standard deviation and 0.19 of coefficient of variation). In 2015, the national average had risen to 492 points (with 95.74 points of standard deviation and 0.19 of coefficient of variation). Simultaneously, the national literacy average grew from 472 points (with 98.79 points of standard deviation and 0.21 of coefficient of variation) in 2006 to 498 points (with 91.95 points of standard deviation and 0.18 of coefficient of variation) in 2015. The national average in numeracy and literacy was greater, respectively, 1pp. and 6pp. than the EU average in 2015.

In Portugal, the ratio of early school leavers, more specifically, the percentage of the population aged 18-24 having attained at most lower secondary education and not being in further education or training, has been declining in the last decade (FIGURE 5). The national

average decreased from 40.9% in 2005 to 14% in 2016, which is a value that nonetheless remains higher than the EU28 average (10.7%). At the regional level, both regions also had an improvement in this indicator, dropping from 38.3% to 18.4% in Alentejo and from 45% to 19% in Norte between 2005 and 2014. In any case, they were greater than the national and EU28 average (11.2%) in 2014.

FIGURE 5: Percentage of young people aged 15-24 neither in education, employment or training (NEET; left axis) and early leavers aged 18-24 (right axis), Portugal, Alentejo e Norte, 2012-2016



Sources: Eurostat and LFS (microdata)

Similarly to this previous indicator, the percentage of Portuguese young people aged 15-24 who neither in employment nor in education and training (NEET) reduced from 13.9% in 2012 to 10.6% in 2016 (FIGURE 5). This indicator has also decreased in both regions, from 12.4% to 11.1% in Norte and from 15.3% to 10.3% in Alentejo between 2012 and 2016. While the national average is higher than the EU27 average (11.5%) in 2016, the regional averages were slightly lower.

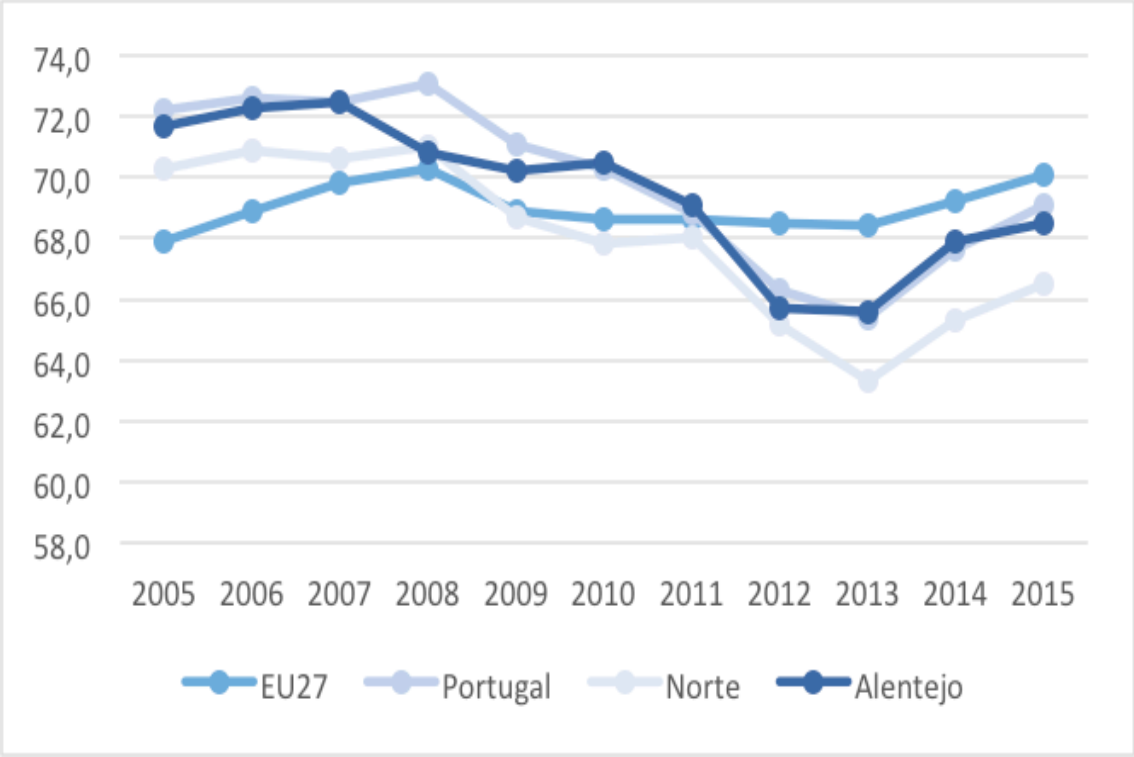
4. Labour market

The occupational structure of the Portuguese labour market is less qualified than the EU27 average. However, some changes have happened during the last decade, with an important skills

upgrading, mainly among the high skilled white-collar occupations. In 2015, 22% of the Portuguese labour force was employed in high skilled white collar occupations (ISCO 1, 2, 3), and 24% was part of the high skilled blue collar group (ISCO 6, 7), while in 2008, the averages for the same occupations were, respectively, 17% and 23%. On the bottom of the occupational structure, 30% of the Portuguese labour force is working in low skilled white-collar occupations (ISCO 4, 5) and the remaining 24% is working in low skilled blue-collar occupations (ISCO 8, 9).

During the last decade the overall Portuguese employment rate for adults aged between 20 and 64 rose from 72.2% in 2005 to 73.1% in 2008 (FIGURE 6). Between 2008 and 2013, the employment rate decreased 7.1pp. due to both the global financial crisis in 2008 and the national one in 2010. It started rising the year after, reaching the value of 69.1% in 2015. In spite of this positive trend in last years, the Portuguese employment rate is still below the value reached in 2005 and the EU27 average in 2015 (70.1%). During the time span 2005-2015, the overall employment rates for adults aged between 20 and 64 in Norte and Alentejo regions followed the same national trends, and were below the Portuguese average. In 2015, the employment rate for adults aged between 20 and 64 was 66.5% in Norte and 68.5% in Alentejo.

FIGURE 6: Employment rate (20-64) in EU27, Portugal, Norte, and Alentejo



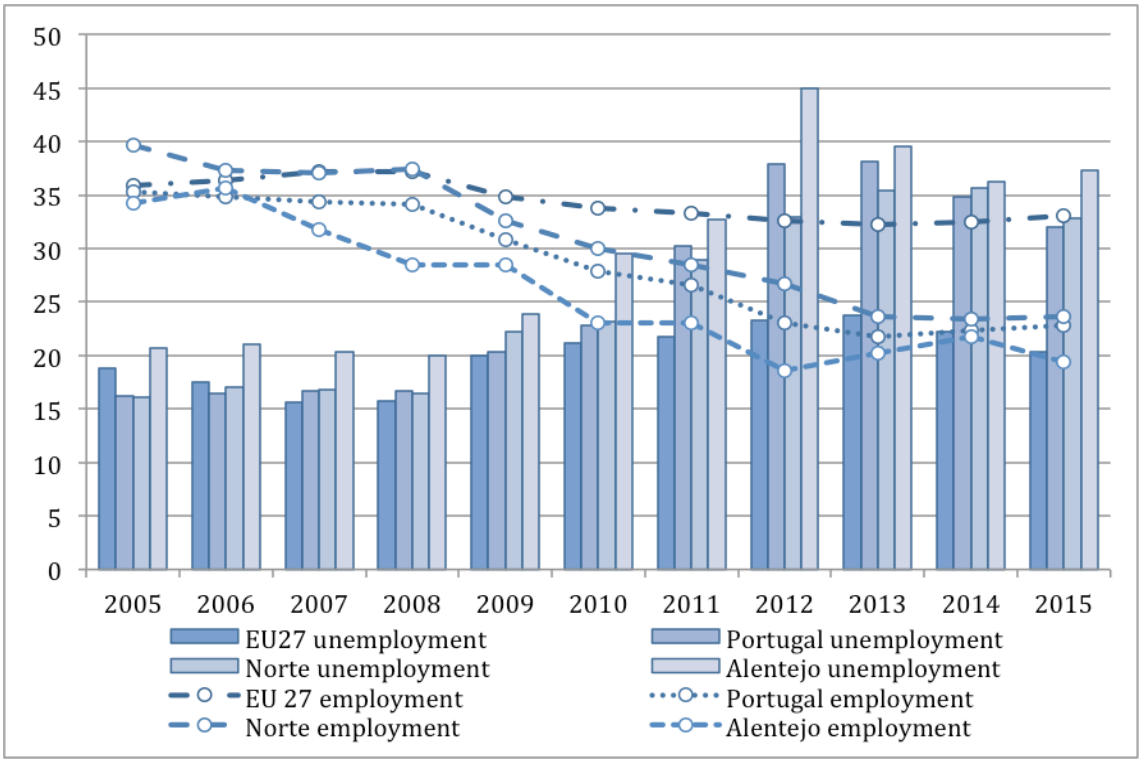
Source: EUROSTAT

The Portuguese youth employment rate (15-24 years old) is one of the lowest in EU27 and decreased consistently during the time span 2005-2015 (FIGURE 7). It was 35.3% in 2005 and 22.8% in 2015, showing a reduction of 12,5pp.. During the last decade, the gap between the

Portuguese youth employment rate and the EU 27 average rose from 0.6pp. to 10.3pp., since 2005 to 2015. Generally speaking, one can support the idea that the effects of the financial crisis, in particular the rise of the unemployment, have been particularly severe to the young labour force.

The impact of the financial crisis at the regional level was even stronger than at the national level (FIGURE 7). The youth employment rate decreased 16pp. in Norte and 14.9pp. in Alentejo between 2005 and 2015. In spite of this general trend, the two regions have different youth employment rates. In 2015, the youth employment rate in Norte was 23.7%, higher than the national average, while in Alentejo was 19.4% lower.

FIGURE 7: Youth employment and unemployment rates, youth unemployment ratio of young people 15-24 (right axis), EU27, Portugal, Norte and Alentejo, 2005-2015

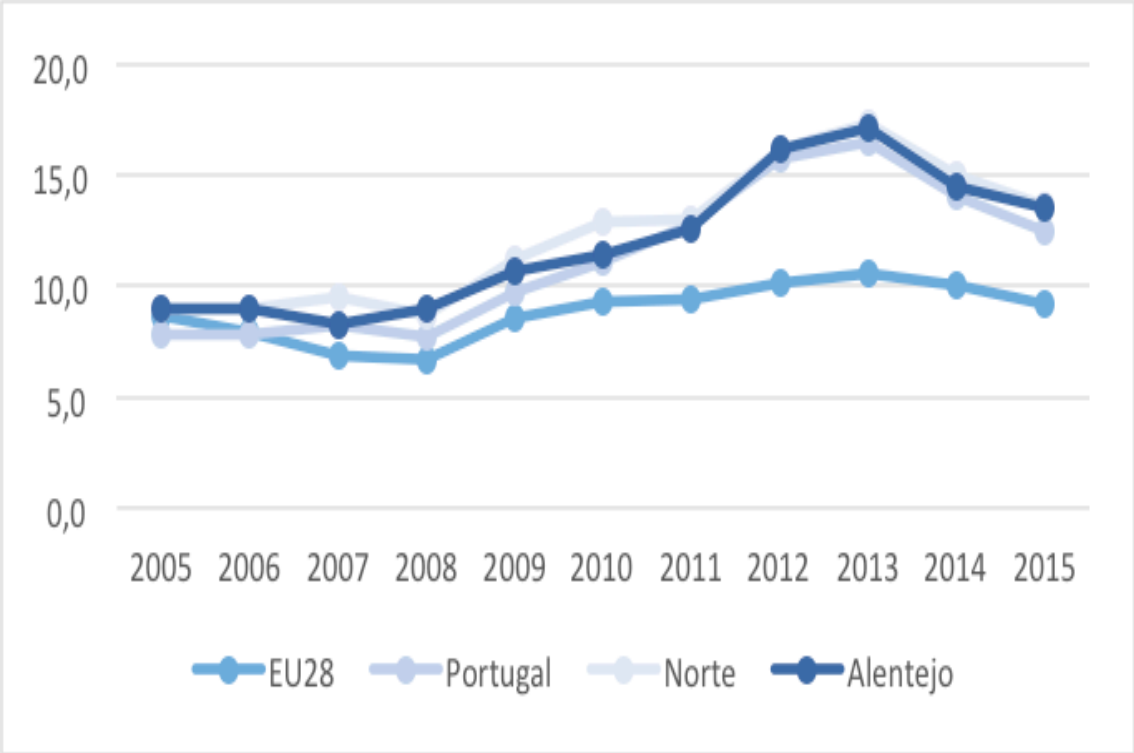


Sources: Eurostat and LFS (microdata)

Focusing on unemployment, the overall unemployment rate (aged 20 to 64) began to increase even before the financial crisis and strongly rose till 2013. In 2006, it was 7.8%, 0.9pp. lower than EU28 average (8.7%). In 2013, the Portuguese unemployment rate was 16.5%, 5.9pp. higher than EU28 average. Since than it has been consistently moving down (12.5% in 2015) and the gap between the Portuguese and the EU27 overall unemployment rate is getting smaller, but the Portuguese rate is still 3.3pp. higher than EU27 average. Norte and Alentejo regions followed the national trend. In both regions the unemployment rate started moving up in 2008 till 2013 when it reached, respectively, 17.4% and 17.2%. As at the national level, the downward

movement began in 2014. In 2015, the Norte average was 2.2pp. higher than the national average, while the Alentejo average was 2pp. lower.

FIGURE 8: Unemployment rate (20-64) in EU28, Portugal, Norte, and Alentejo

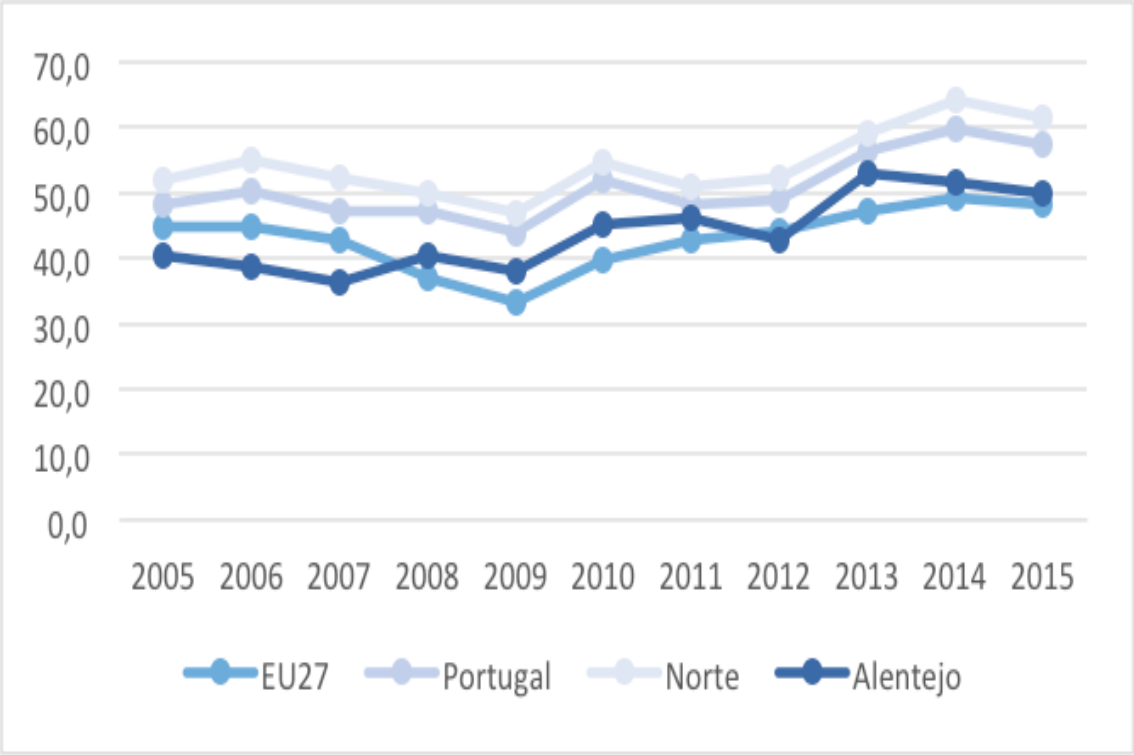


Source: EUROSTAT

In Portugal, the percentage of the unemployed that have been searching for a job for one year or more is one of the highest in EU27. In 2015, the overall long-term unemployment rate in Portugal was 57.4% while in EU27 was 48.1% (FIGURE 9). When long-term unemployment rate is concerned, important territorial differences emerge. During the time span 2005-2015, this rate has always been higher in Norte region than in Alentejo, where it was always lower than the national average. In 2015, the long-term unemployment rate was 61.6% in Norte and 49.6% in Alentejo.

In Portugal, unemployment is mainly a youth problem, particularly after 2011. The unemployment rate among young people aged 15-24 started to rise with the international crisis of 2008 (FIGURE 7). However, it was with the severe austerity measures imposed in the aftermath of the Portuguese bailout of 2010 that it started coming up very rapidly and intensively. In 2005 and 2006, the Portuguese youth unemployment was lower than EU 28 average. In 2011, it touched 30.3%, while in EU28 was 21.8%. The highest value was reached in 2013, when 38.1% of the young active population was unemployed.

FIGURE 9: Long-term unemployment rate (20-64) in EU27, Portugal, Norte and Alentejo



Source: EUROSTAT

In 2015, the Portuguese youth unemployment rate was 32%, more than the double the rate of people aged between 20 and 64 years (12.5%), and 12.4pp higher than the EU28 average. Opposite to what happens with the adult unemployment rate, among young people gender makes the difference. Young women are more affected by the unemployment than young man. During the time span 2005-2015, the youth female unemployment rate was always higher than the young male's one. The major difference can be found in 2005: the youth female unemployment rate was 19.2% and the male unemployment rate was 13.9%. Long-term unemployment seems to be less severe among unemployed youth (15-29) than among the unemployed adults. It started moving up during the financial crises, reaching the highest value in 2013 (12.2%). In 2015, the Portuguese long-term unemployment rate was 8.1%, 4.3pp. higher than the EU27 average (FIGURE 9).

Looking at youth unemployment (15-24) some territorial differences can be found (FIGURE 7). During the time span 2005-2015, youth unemployment rate was always higher in Alentejo than in Norte. While in Norte this rate followed the national trend and was lower than the national average, in Alentejo youth unemployment has always been more severe and got even worse during the financial crisis. In 2012, the Portuguese youth unemployment rate was 37.9%, while in Norte was 33% and in Alentejo 45%. This data suggests that the Norte labour market seems to be more youth friendly than the Alentejo one or even the national one, probably

because of region's economic structure with a high weight of industry. The advantage of Norte disappeared when youth long term unemployment rate (15-29) is concerned. In this case, youth long-term unemployment rates are similar in both regions, and higher than national and EU27 average. In 2015, when long-term unemployment became less severe, youth long-term unemployment rate was 9.2% in Norte and 9% in Alentejo against 8.1 in Portugal and 5.8% in EU27.

Due to the financial crises, the Portuguese investment in labour market policies, started to coming up in 2009, when the total amount of resources was equal to 1.98% of GDP and reached its peak in 2013 (2.14% of GDP). Since that year, the expenditure is consistently decreasing. In 2015, Portugal invested in labour market policies (LMP) a total amount of 1.54% of GDP. During the time span, almost 2/3 of the total amount was invested in out-of-work income and support. Active labour market measures represent a very small share of the overall LMP expenditure. However, the investment in training is relatively high compared to the EU28 average. In spite of the decrease from 2009 till 2015, training expenditure varied between 0.41% and 0.27% of GDP, only Austria and Finland invested more in this active labour market. These figures support the idea that the most important Portuguese active labour market policy to cope with the rise of unemployment has been the investment in training.

5. Redistribution and social inclusion

In Portugal, the net expenditure in social protection rose from 22.4% of GDP in 2007 to 24.9% in 2014. The strongest increase took place between 2009 and 2013 due to the impacts of global and national financial crisis. However, the rise of the expenditure in social protection in Portugal is lower than in other EU countries due to the reduction of the entitlement to social benefits. This can be seen as a political strategy to control public expenditure within the austerity framework. In Portugal, resources spent for social protection benefits, provided to households and individuals affected by a specific set of social risks and needs is one of the lowest in EU27. In spite of the financial crisis and the growth of unemployment rate, the expenditure per inhabitant didn't rise significantly. In 2008, the expenditure per inhabitant in Portugal was 4,779 euro against 6,784 euro in EU27, while in 2013 it was, respectively, 5,544 euro and 7,763 euro. This trend shows the weakness of the Portuguese Welfare State that traditionally allocates to families and civil society the greatest responsibility in responding to social problems.

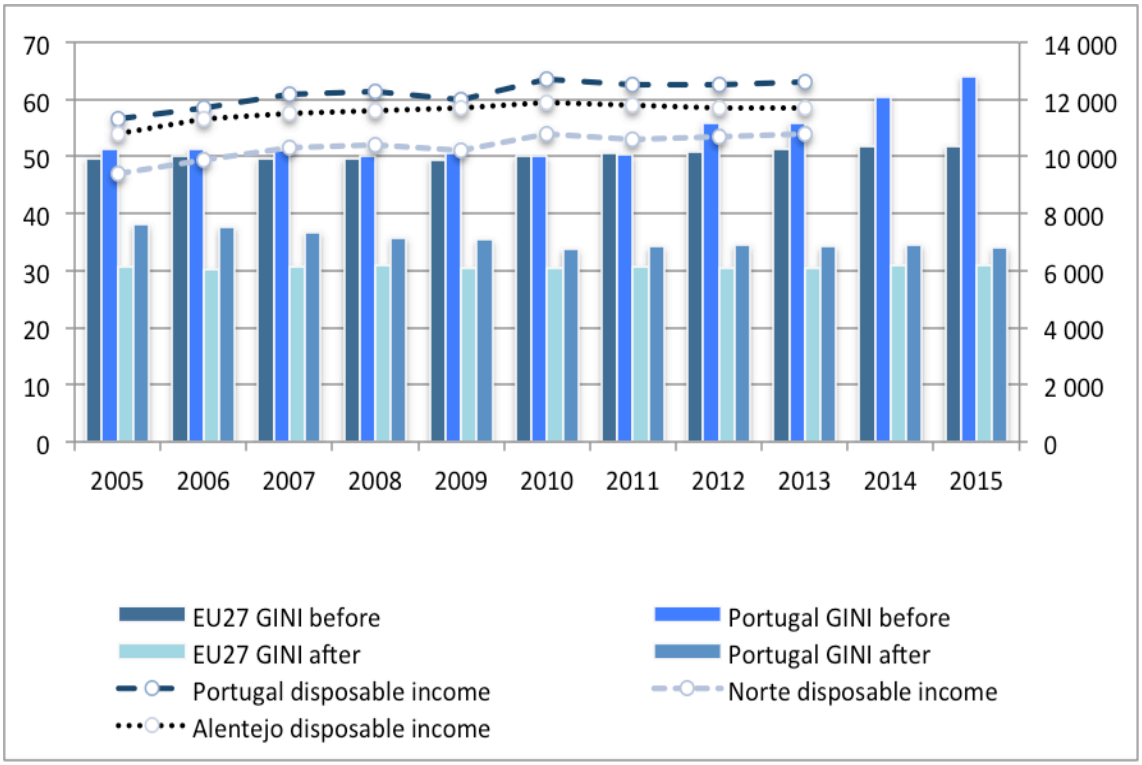
The main share of the overall expenditure in social protection is spent for pensions and retirement. The social protection benefits with old age rose continuously from 9.2% of GDP in 2005 to 12.8% of GDP in 2014. Portugal was one of the countries where this expenditure grew the most. From 2005 till 2014, the expenditure with old age increased 3.6pp. in Portugal against

1.4pp. in EU27. This growth can be explained both by aging and high risk of poverty due to the low income of Portuguese old people. The social protection benefits with survivors also grew during the time span from 1.5% to 1.9% of GPD. On the opposite side, during the time span, the expenditure with social protection benefits decreased in the fields of health care (from 6.7% to 6.1%) and disability (from 2.2% to 1.9%). Expenditure with family and children and social exclusion remained stable between 2005 and 2014. However, these social protection benefits are those were the underfunding is more severe when compared with EU27. In 2014, the amount of resources spent with both social protection benefits was half of EU27 average.

The disposable income for households is the amount of money that a household earns each year after taxes and transfers, representing the money available to a household for spending on goods or services. In Portugal, the disposable income for households rose from 11,300 euro in 2005 to 12,600 euro in 2013, remaining one of the lowest in EU (FIGURE 10). In spite of this growth, due to the financial crisis, the disposable income for households in 2013 was identical to the one registered in 2010. Norte and Alentejo region followed the same national trend. However, in both regions the disposable income for households is lower than the national average. Comparing both regions, the income is highest in Alentejo than in Norte.

Focusing in income inequality, Portugal followed the general European trend of increasing inequalities. The Gini coefficient of equivalised disposable income before social transfers rose from 51.2% in 2005 to 64.1% in 2015 (FIGURE 10).

FIGURE 10: GINI index before and after transfers, disposable income in the households in PPS (right axis), EU27, Portugal, Norte and Alentejo, 2005-2015



Sources: Eurostat and EU-SILC microdata

This was not a linear growth. The inequality started to increase strongly after 2011 due to the structural adjustment policies imposed to Portugal by the European Commission, the European Central Bank and the International Monetary Fund. The concentration of income rose from 50.3% in 2011 to 64.1% in 2015, transforming Portugal in one of the most unequal countries in EU. The huge growth of inequality shows that the structural adjustment policies were more severe towards the low-income families than to the high income ones. This inequality is strongly reduced when the social transfer is taken in account. As shown in FIGURE 10, the Gini coefficient after social transfers dropped down from 38.1% in 2005 to 33.7% in 2010, due to the increase in public expenditure in social protection. However, it started coming up to 34.5% in 2014, maybe as a consequence of the cut and reduction to the entitlement in many social protection benefits.

The risk of poverty and social exclusion decreased from 26.1% in 2005 to 24.4% in 2011. After 2011, it started to grow, reaching 27.5% in 2014. In 2015, 26.6% of the Portuguese population was at risk of poverty and social exclusion against 23.7% in the EU27. Severe material deprivation shows a much more erratic behaviour during the time span. It started coming up in 2006, decreased between 2008 and 2011, and returned to grow reaching the peak in 2013, when 10.9% of the Portuguese population was in severe material deprivation. Looking at both indicators, it can be concluded that the growth of inequality in Portugal, as in the other countries participating in YOUNG ADULLLT project, has mainly increased the percentage of the population at risk of poverty and social exclusion.

Focusing in public sphere and civic participation, recent surveys show that in Portugal confidence in national government is one of the lowest among OECD countries (23% against 42%) and it is even lower when young people aged 15-29 years is concerned (OECD, 2016). Only 20% declare to trust the government, against 43.6% in OECD area. Not surprisingly, the interest in politics is also low and has been declining. In 2005, the participation in the election for the national parliament was 64.3%, in 2009 59.7%, in 2011 58.1% and in 2015 55.9%. The voter turnout is even lower when the election for European parliament is concerned, never surpassing 40% in last decade.

6. Health and well-being

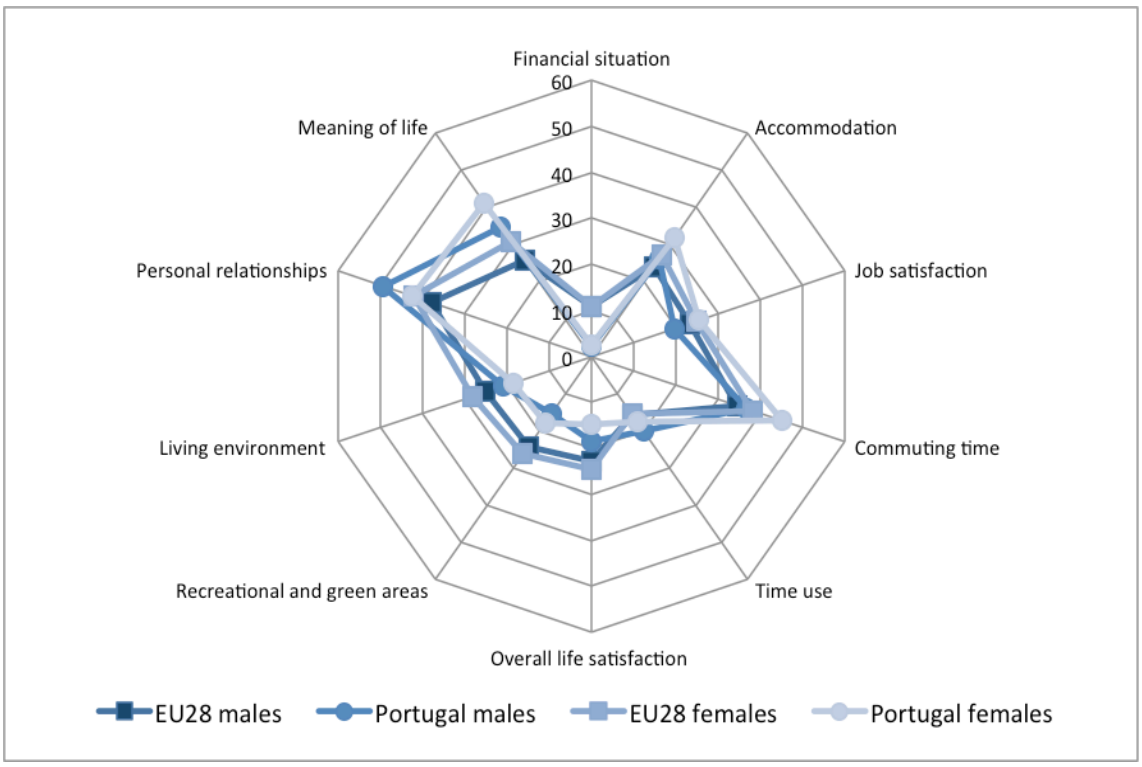
In 2015, life expectancy in Portugal was 80.5 years, slightly higher than the OECD average (79.6 years) (OECD, 2015). Portuguese male and female population experienced an improvement in healthy life years between 2005 and 2012. After 2013, the healthy life years declined due to the effects of the structural adjustment policies. In 2014, males had 58.3 healthy life years and

female 55.4 years. During the time span 2005-2015, self perceived health in Portugal has always been lower than the EU27 average. In 2015, people reporting good or very good self perceived health was 67% in EU27 and 46.5% in Portugal. Portugal was also the country participating in YOUNG ADULLLT project with the lowest self-perceived health. Most probably because of their youth, the health perceptions among young people aged 16-29 years are much higher, 81.3% in 2015, but still lower than the EU27 average, 90.8% in 2015.

The health expenditure per inhabitant rose from 1,014 euro in 2005 to 1,165 in 2009 and decreased since than to 1,012 euro in 2014, when it was less than half of the EU27 average (2,236 euro). This amount is slightly lower than it was at the beginning of the decade showing the Portuguese government's divestment in health and medical care during the financial crisis. This divestment also affected the number of available beds in hospital, which decreased from 353,3 per 100,000 inhabitants in 2005 to 339,5 in 2013. Once again the number of available beds is less than half the EU 27 average (681,4). Opposite to these trends the health personnel rose during the time span 2005-2015. In 2005, medical doctors and nurses and midwives per 100,000 inhabitants were 780 while in 2015 were 1079. However huge territorial differences emerge when we look at both regions. In Norte, the number of health personnel data per hundred thousand inhabitants is similar to national average (719 in 2005 and 1074 in 2015). In Alentejo, it was considerably lower (668 in 2005 and 815 in 2015).

Subjective well-being can be measured in terms of life satisfaction (FIGURE 11). In general, Portuguese people aged between 25-34 years are comparatively less satisfied with their lives.

FIGURE 11: High satisfaction in various life domains, age 25-34, EU28 and Portugal, 2013



Source: EU - SILC microdata

Only 16.5% are high satisfied against 25.3% in EU28. Accordingly, Portuguese are less satisfied with financial situation, recreation and green areas, and living environment than their European peers. However, they are more satisfied than them with accommodation, commuting time, time use, and personal relations. There are some differences according to gender, in Portugal. Portuguese young women are more satisfied with accommodation, job, commuting time and meaning of life.

Same other indicators can be used to measure well-being. In 2015, Portuguese homicide rate was 0.9, significantly lower than the OECD average of 4.1. In 2014, consumption of alcohol per capita was 9.9 litters in Portugal against 8.9 litters in OECD area and the daily smokers were 16.8%.

Final Remarks

Considering the limitations of data availability at NUTS 3 and NUTS 2, as well as regarding the youth age group, it is challenging to find the key aspects to unravel risk profiles at local level. Still, the following main findings bring relevant information on the social conditions of young adults in both FR.

Like a general tendency in Europe, Portugal is also witnessing an ageing process of its population, mainly in Alentejo. In view of the risk profile, this fact associated with low population density and disperse settlement influences negatively the living conditions of the young adults in the region, especially regarding the access to education. The small number of young people living in Alentejo Litoral has an effect on the diversity of educational provision at both upper secondary and tertiary levels. The fact that there is no higher education institution in the region makes the access to higher education more difficult and expensive and partially explain the lower percentage of population aged 20-24 who attained the tertiary education in the region.

Other demographic characteristics are the high percentage of young adults (20-29) still living with their parents and the increasing age at which a woman gives birth. Unemployment, precarious jobs and low wages have a great impact in young adults' life course in both regions and can contribute to postpone their own family project.

Considering other partner European countries, Portugal has the lowest rate of school attainment also among the younger generations. Along the considered time span Portugal has shown a considerable decrease in terms of early school leaving rate, making a great effort to keep youngsters at school, by increasing the compulsory school up to 12 years. Nonetheless, early school leaving rate is still higher than the EU28 average. The percentage of NEET also reduced and both regions show averages lower than the EU27. However, the situation itself poses challenges for statistical effects, as its number is most likely greater than the represented.

Considering the identification of risk profiles, unemployment in Portugal is mainly a youth problem, (15-24 years old) with one of the highest rates in EU27, with regional differences with Alentejo showing a higher rate than Norte. In addition, gender makes a difference and young women are more represented, on the contrary to adult unemployment. Youth long-term unemployment in both regions is higher than the national and the EU27 average. Figures show qualification as the most important active labour market policy to deal with the increasing unemployment rates.

The expenditure in social protection benefits per inhabitant did not accompany the growth of the unemployment rate within the considered time span. To be noted how families and civil society traditionally take responsibility to act as the Portuguese welfare state does not come forth with a response.

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Work Package 4

Quantitative Analysis Young Adults' Data

Scotland –

National Briefing Paper with national and regional data sets in Scotland, Glasgow City-Region and Aberdeenshire

Kristinn Hermannsson, University of Glasgow

Rosario Scandurra, Universidad de Granada

Date 07/09/2017

Work Package 4 – Quantitative Analysis of Young Adults' Data

Deliverable 4.1

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Figures

1 Introduction

This national briefing paper provides a short overview of the living conditions of young adults in Scotland and in the two functional regions selected for the YOUNG_ADULLLT project, Glasgow City Region and Aberdeenshire. The data were collated at national and local level (NUTS2) according to six dimensions of contextual living conditions: the demographic characteristics of the population, the structure of the economy, the inputs and outputs of the education and training system, the labour market, the material living conditions and the participation as citizens to the political and civic life and, finally, the health conditions and individual well-being. Data were extracted from Eurostat and from different surveys such as the EU-LFS, EU-SILC, PISA and PIAAC. The main corpus of data proceeding from international and harmonized data was successively complemented by data collated at the local level.

For the case of Aberdeen City and Aberdeenshire, the chosen functional region corresponds with the NUTS2 region of North Eastern Scotland. For the case of Glasgow City Region, there is a close but approximate fit with the NUTS2 region South Western Scotland. Additionally, South Western Scotland includes the more rural area of Dumfries and Galloway, which spans the area from Ayrshire, which is taken to represent the southern limit of Glasgow City Region and the English county of Cumbria. Overall, this will act to dilute the urban and service oriented character of Glasgow City Region. However, this bias is likely to be modest as the population of Dumfries and Galloway is only around 150,000 people, or less than a tenth of the overall population of Glasgow City Region. For a more detail exposition of the functional regions see Lowden et al (2016) and for a more detailed discussion about the use of available statistics in the modelling of Glasgow City Region see Hermannsson (2016).

2 Quality data assessment

Eurostat UNESCO and OECD provide a vast amount of harmonized and comparative data that can be a useful resource for assessing the life conditions of young people in different domains and in various countries/regions. However, the availability of data at the regional/local level is limited. Most of the data are provided at national level and only two of the six dimensions (economy and demography) have a fair amount of indicators at NUTs2 and NUTs3 level. This restrains the possibility of comparison. Within the surveys available the most relevant source of information is the EU-LFS which has large sample size at local level. Moreover, complementing the international data with local data is a hard task for mainly two reasons: a) fragmentation and availability of sources and b) comparability between regions of the same state and at European level and across 2005 and 2015. Since the objective is very broad, the

data needed are likely to be collected for specific purposes and in different way. For this reason, the most accessible data are EUROSTAT since they provide metadata and completed time series.

Due to its autonomous status within the UK, availability of data for Scotland is typically better than for other UK regions. For instance, the Scottish Government has published detailed regional economic accounts since the 1970's. However, there remain significant gaps when it comes to assessing the living conditions of young adults at the level of functional region. In some cases relevant information is available, but at aggregate spatial scales. Alternatively there may be no data at all. Social research in the UK often draws on several large scale social surveys maintained by the Office for National Statistics, such as the Labour Force Survey and the Annual Population Survey. Whilst these surveys provide information about a wide range of variables, samples sizes are often too small to deal accurately with sub-populations and sub-regions. Furthermore, the UK has invested in cohort studies (e.g. for those born in 1958, 1970 and 2000) and household panel studies (British Household Panel Study, Understanding Society), where greater care has been taken to oversample sub-population to allow for a more detailed break-down. These datasets are useful for the social sciences in general, but waves are infrequent and often focussing on specific cohorts so these are unlikely to meet the needs of policymakers for ongoing monitoring of the living conditions of young adults. Scotland has invested in a dedicated longitudinal study, Growing Up in Scotland, which tracks family circumstances, health and education of 3 cohorts born in 2002/3, 2004/5 and 2010/11. However, as of yet, these cohorts are too young to shed light on the living conditions of young adults and it is not clear for how long they will be followed up.

The UK higher education sector collects detailed administrative data and deposits with the Higher Education Statistics Agency (HESA). These dataset contain the full population of students and sample surveys are carried out to follow up graduates. The administrative and survey datasets are often linked to carry out analysis of students and graduates. However, a shortcoming of this dataset for assessing the living conditions of young people in general is that it omits the sizable share of the population that does not enter higher education and similar data are not gathered for those in other educational routes or employment. Skills Development Scotland carries out an annual survey of school leavers, tracking their activities. However, these cohorts are not followed up so it is impossible to tell how the young people get on, beyond their first destination after school. On balance, there is a gap in availability of data for young people after they leave the school system.

3 Demographic structure

Scotland is a country that since 1707 has been part of the United Kingdom. Within the United Kingdom Scotland enjoys considerable autonomy. Throughout it has maintained a legal system and an educational system separate from the rest of the United Kingdom (henceforth RUK). The Scottish Parliament was reinstated in 1999 and the Scottish Government (originally referred to as the Scottish Executive) established. The Scottish Government has devolved authority from the Westminster Parliament over most domestic affairs, including health, transport, culture, agriculture, fisheries, rural policy and regional development. However, it has no control over defence or foreign policy and only limited fiscal powers. Taxation is not a devolved matter. Her Majesty's Revenue's and Customs (HMRC) collects tax revenues for the whole of the UK and Her Majesty's Treasury (the ministry of finance in the UK government) distributes an annual block grant to Scotland (as well as Wales and N-Ireland, the other two devolved governments) based on the so-called Barnett formula, which takes account of population and historical expenditure levels. Initially the fiscal autonomy of Scotland was notional, but following the 2014 independence referendum additional steps have been taken to devolve further fiscal powers, such as stamp duty on property transactions and airport duties. Similarly, elements of social security are now being devolved, whereas historically these were reserved matters for Westminster[1].

Scotland covers a total area of 77,933 km^2, just under one fifth of the landmass of Finland or Germany, a quarter of the landmass of Italy and a third of the landmass of the UK – smaller than Bulgaria, Portugal or Austria and larger than Croatia. The population of Scotland is estimated to be around 5.5 million people.

[1] For a more detailed discussion of the fiscal arrangements in Scotland and recent and emerging changes to the fiscal framework see Eiser (2017).

Figure 1 Population of functional regions (ONS population estimates, 2015)

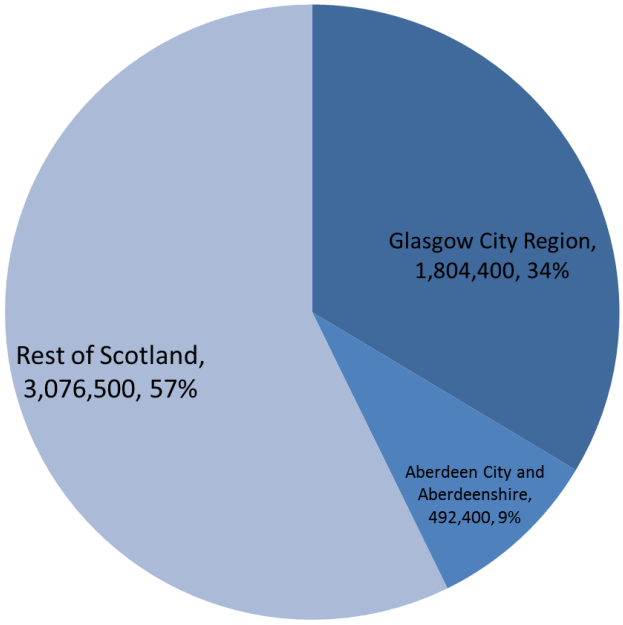
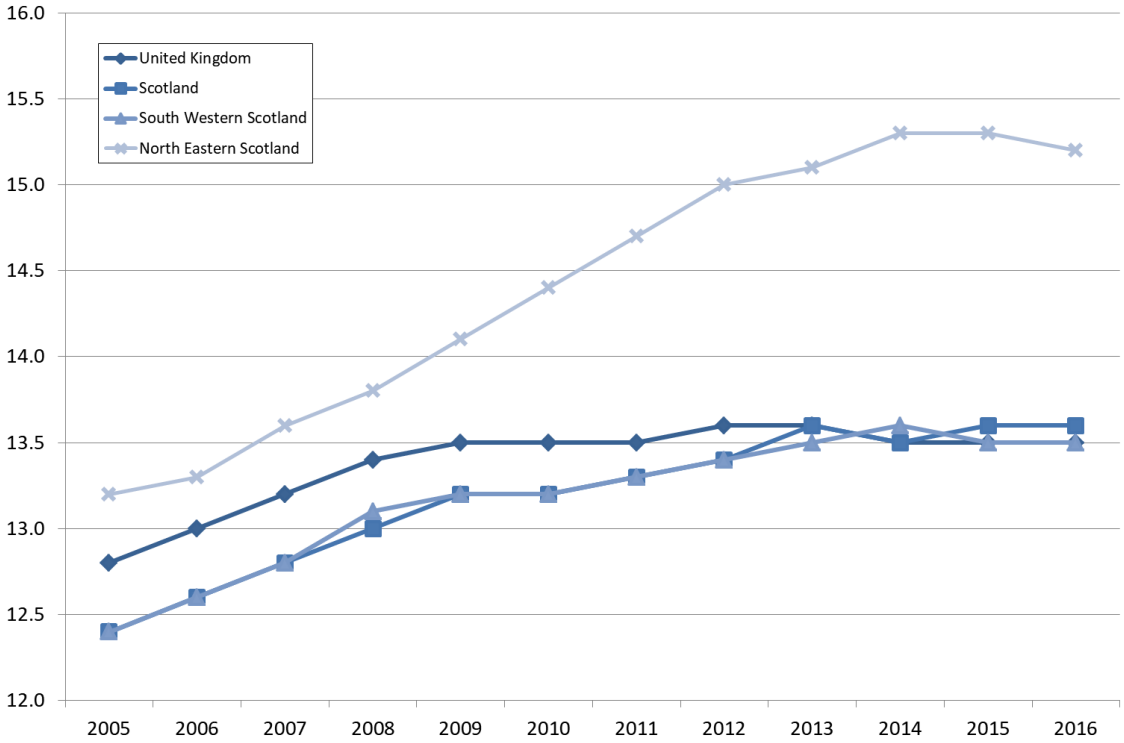


Figure 2 shows the share of the youth population aged 20-29 over the study period. In 2015, youth population aged 20-29 accounted for 13.5% of total inhabitants, in South West Scotland. This is in line with Scotland and the UK as a whole. The NUTS2 region of North Eastern Scotland, however, diverges from the broader average, with 20-29 population making up just over 15% of the total population. Overall, across the UK and Scotland the share of the 20-29 population is stable.

Figure 2. Share of the population aged 20-29 years

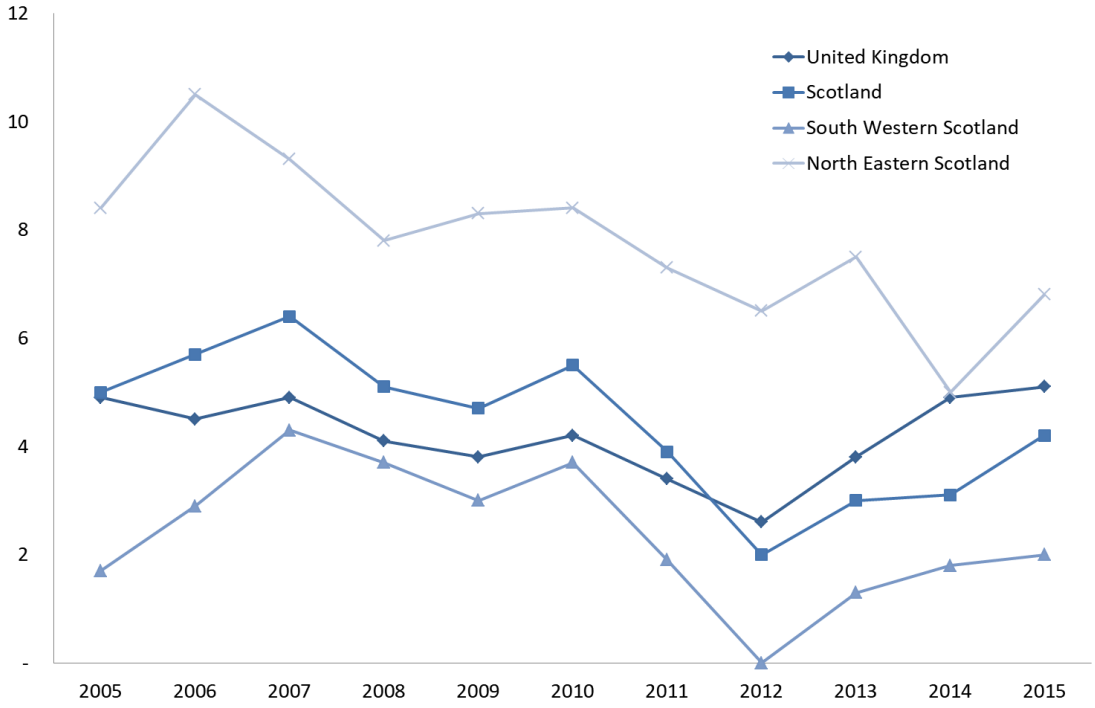


Source: EUROSTAT

Infant mortality in the first year after birth is 3.9 in the UK while in the EU28 it was 3.6 in 2016 with a constant decrease over the last decade (in 2005 it was 3.7). In Scotland, however, this stood at 3.2 in the South West and 2.7 in the North East, In both cases below both the UK and EU averages. Conversely, life expectancy in Scotland is below the UK average of 81.3 years, at 78.6 in the South West and 80 in the North East. In both cases life expectancy has been increasing, broadly in line with developments seen elsewhere.

In the post war era parts of Scotland have at times be threatened by de-population. This is particularly the case for more remote settlements, but has also been an issue for urban centres that have suffered from de-industrialisation such as the Glasgow City Region. In conjunction with population ageing this has been seen as a significant challenge and was seen as a policy priority in the late 1990's. However, following the enlargement of the EU net migration to Scotland increased (and as the immigrant population was more fertile this also boosted fertility rates). Not surprisingly, net migration has been stronger for the affluent North East, above both the UK and Scottish averages, whilst for the South West migration has been below both UK and Scottish averages, albeit positive. For a detailed discussion of the economic impact of demographic change in Scotland see Lisenkova et al (2010).

Figure 3. Crude rate of net migration plus statistical adjustment

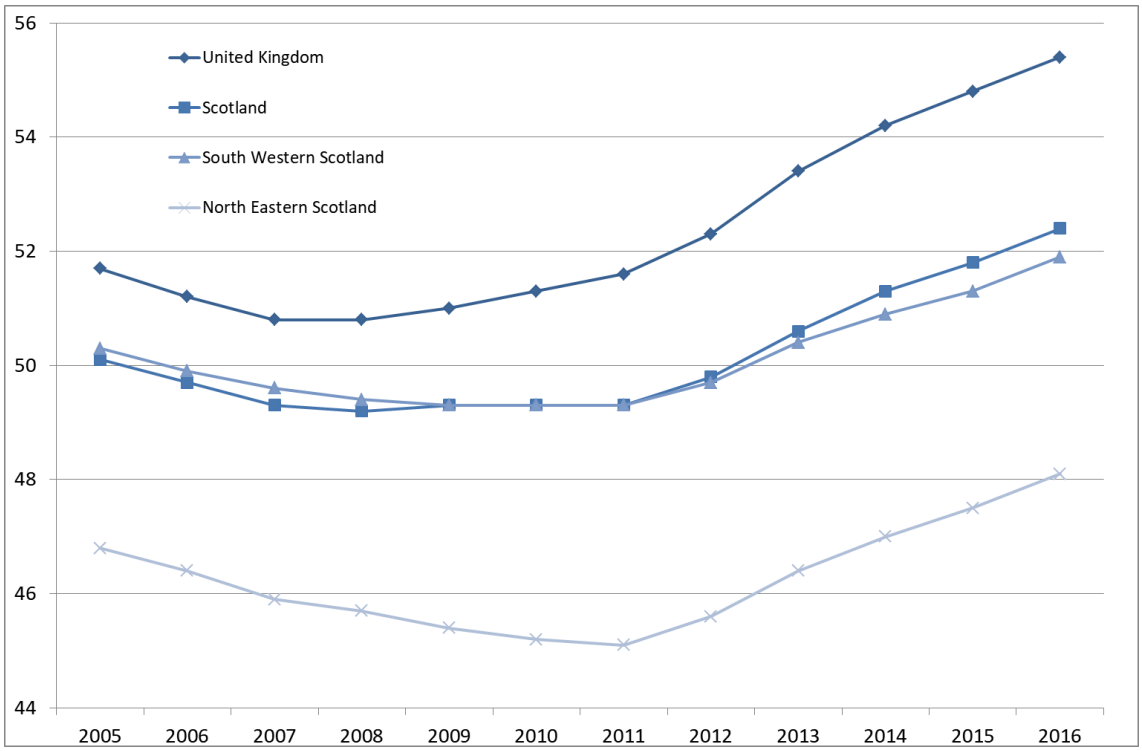


Source: EUROSTAT

Whilst migration and fertility has been moving in a positive direction, this has not been sufficient to off-set the population momentum. Dependency ratios are increasing in Scotland in line with developments elsewhere in Europe, as depicted in

Figure 4. However, Scotland's dependency ratio is somewhat below that of the UK. Furthermore, there is regional variation in the dependency ratios. Whilst the South West is close to the average for Scotland at around 51% in 2015, the dependency ratio for the North East is 3 percentage points lower at 48% in 2015.

Figure 4. Age dependency ratio. On 1st variant (population aged 0-14 and 65 and more to pop. aged 15-64)



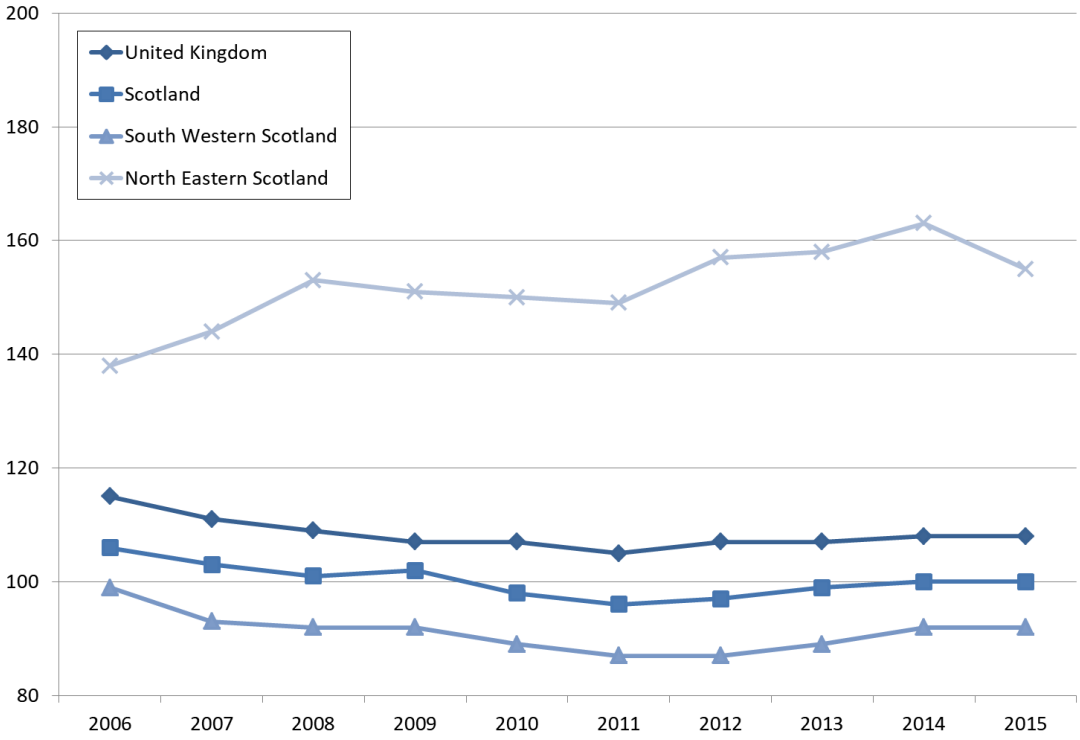
Source: EUROSTAT

4 The structure of the economy

When compared to the EU28 (as in

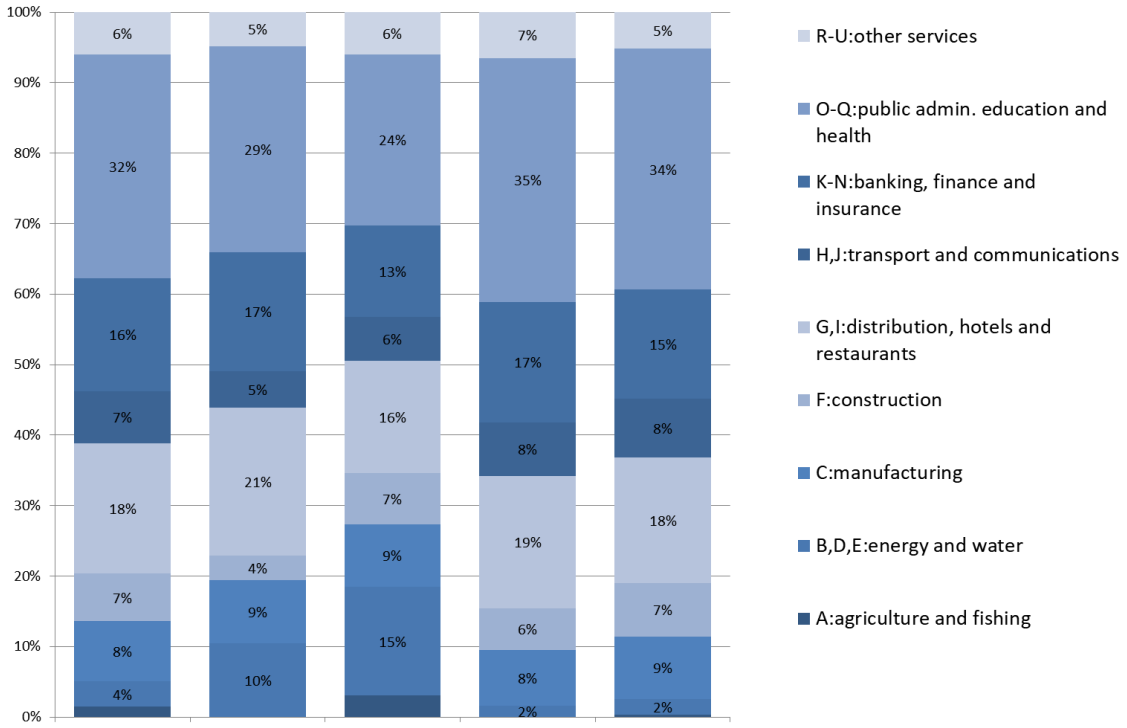
Figure 5) the GDP per capita in Scotland has been falling behind. This is in line with the trend of the UK as a whole. This runs somewhat counter to the popular narrative in the UK media, where politicians have been at pains to emphasise the economic achievements of the UK. However, whilst nominal GDP has been increasing, this has coincided with population growth so that GDP per capita growth has been less impressive. Furthermore, nominal growth has coincided with a significant depreciation of the pound sterling, thereby reducing its euro value. The South West of Scotland follows the UK and Scottish trends albeit at a lower level. However, in the North East, GDP per capita is at a far higher level and has grown over the period (although from 2015 the regional economy has been hit by a strong contraction in the activities of the oil and gas sector).

Figure 5. GDP at current market prices, Euro per inhabitant in % of European average (EU28=100)



Source: EUROSTAT

Figure 6 Employment by broad sector and study region



Source: Annual Population Survey, ONS.

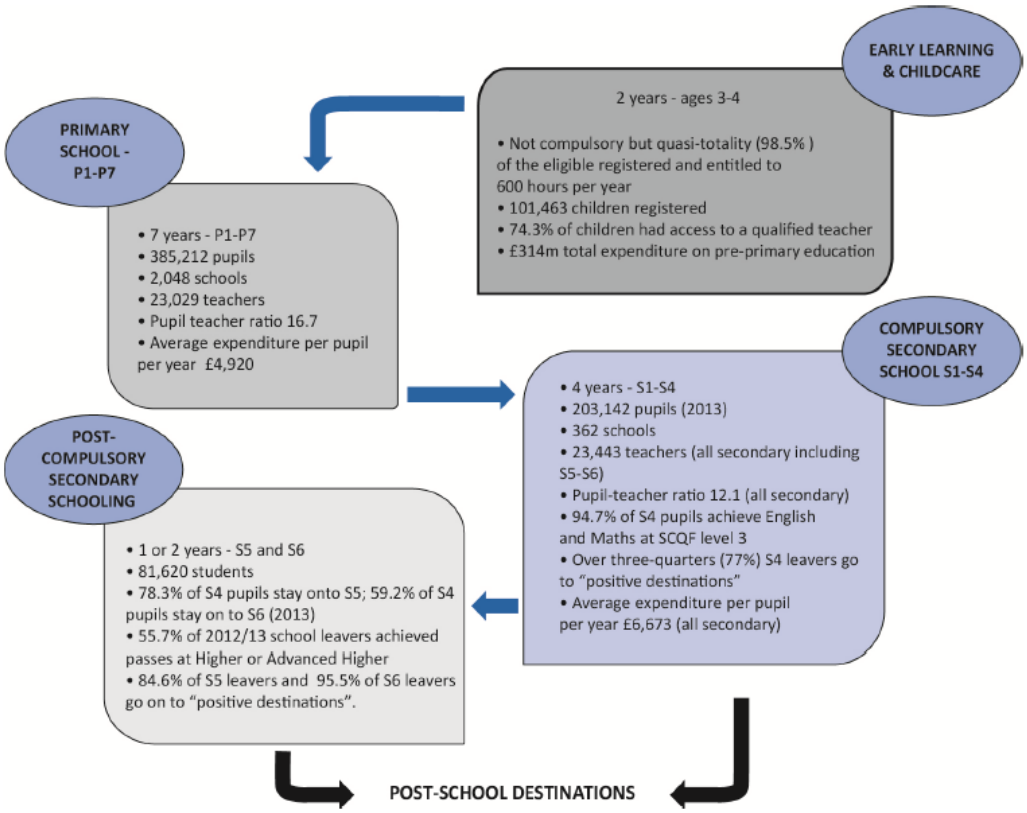
As can be seen from **Figure 6** approximately 80% of the workforce in Scotland is employed in services. About a third of the workforce are employed in the public sector. There is structural variation within the country, with Glasgow City and Greater Glasgow leaning more heavily towards services (approximately 84%) and more public sector employment (34-35%). Aberdeenshire is distinct in that the energy sector (mainly oil and gas) and agriculture and fishing are disproportionately large employers compared to Scotland as a whole. Conversely, the share of services is 65% and the public sector only employs 24% of the work force.

5 Education

Scotland's 32 local authorities are responsible for the provision of education, in Early Learning and Childcare (ELC), primary and secondary education. Local authorities make their own decisions about the share of their income spent on education (Scottish Government, 2015). Approximately 85% of local authority funding is obtained via a Scottish Government block grant and the remainder from local taxation2. **Figure 7** presents an overview of the different stages of the Scottish education system and the key features of each stage.

[2] For a further discussion of local authority finances see the chapter by Gibb and Christie in this volume. A summary of local government funding is provided on the Scottish Government's website:

Figure 7 Overview of the Scottish school system



Source: Scottish Government (2015), cited in OECD (2015, p. 38).

Following the Children and Young People (Scotland) Act (2014), all 3 and 4 year olds are eligible for Early Learning and Childcare (ELC) of 600 hours per annum. This amounts to approximately 3 hours a day during term time. Additionally, some 2 year olds are eligible[3]. Local authorities have a duty to secure these places, which can be provided by the local authority, in a primary school nursery class or by independent providers4.

Most primary and secondary schools are run by local authorities with a few specialist schools funded directly by the Scottish Government. Overall just over 95% of students attend publicly funded schools. Most of these are secular. However, for historical reasons 15% of publicly funded schools are denominational (mostly Roman Catholic). The independent school sector in Scotland is relatively small, with 100 institutions providing education for approximately 30,000 students or just over 4% of the overall student population. However, these institutions are unevenly distributed spatially, with a third of students attending institutions in

http://www.gov.scot/Topics/Government/local-government/17999/CoreRevenueFunding/Revenue-Funding-Streams

[3] This includes children in care and children whose parents are in receipt of particular benefits. For details see: http://www.gov.scot/Topics/People/Young-People/early-years/parenting-early-learning/childcare

[4] For details see: https://www.scottishfamilies.gov.uk/NationalCategoryDetail.aspx?ncid=7

Edinburgh, a fifth attending schools in Glasgow and 10% attending schools in Aberdeen. In Edinburgh, 1 in 4 secondary school students attend independent schools. This is the highest concentration of independent schools in Scotland. Independent schools in Scotland receive no public subsidy. However, schools that meet the requirements for a charitable status receive a tax break (Scottish Government, 2015).

Skills Development Scotland carries out a follow up survey of school-leavers to determine their first destination. These statistics play a central role in the Scottish Government's policy on young people. The Scottish Government monitors the share of school leavers that go to what it refers to as positive destinations. This broadly refers to being in work, education or training5. This indicator has been improving in recent years. These data are published by the Scottish Government: http://www.gov.scot/Topics/Statistics/Browse/School-Education/TrendDestinations

5.1 Post-compulsory education

The Scottish Qualifications Authority (SQA) awards qualifications in Scotland, typically to students in secondary schools and Further Education Colleges (FECs), but also for work based training and other routes[6]. After 4 years of secondary schooling (S4), students can leave compulsory education at 16 or continue secondary schooling for a 5th and 6th year (S5 and S6). Although students can leave with qualifications after year 4 most (78.3%) stay on for S5 and the majority (59.25%) of S4 pupils stay on for S6 (Scottish Government, 2015, p. 8).

The Scottish Government funds teaching and research at FECs and HEIs via the Scottish Funding Council (SFC), which is an arms-length organisation (formally a Non-Departmental Public Body). The SFC publishes an outcome agreement for each HE and FE institution, which sets out how the funding will be used to achieve policy aims relating to research, life outcomes and the economy. For instance the SFC uses outcome agreements to promote the participation of under-represented socioeconomic groups by ring fencing a part of student places for these groups[7]. Scottish Universities receive a teaching grant from the SFC, but additionally receive tuition fees. Scottish domiciled students studying in Scotland do not pay tuition fees as these are covered by the Student Awards Agency Scotland (SAAS). This entitlement is also available

[5] For details of the Scottish Government definition see here: http://www.gov.scot/topics/archive/About-Archive/scotlandperforms/NotesSP/TechnicalNotesSPNI10
[6] For up to date details of qualifications see the SQA's website: http://www.sqa.org.uk/sqa/70972.html
[7] For a detailed overview of current outcome agreements, see the website of the Scottish Funding Council: http://www.sfc.ac.uk/funding/OutcomeAgreements/OutcomeAgreementsOverview.aspx

to students from the European union outside the UK, while students from other parts of the UK pay fees (for details see SAAS, n.d.).

The FE sector is mostly funded by the SFC and receives funding largely for teaching. A significant share of those studying for HE qualifications in Scotland, do so within the FE sector. The HE sector receives funding from the SFC both for teaching, research and other activities. Furthermore the HE sector receives significant income from outwith the Scottish Government. Such as tuition fees from external students and Scottish post-graduates and research funding from UK Government, EU and industry sources. Hermannsson et al (2014) estimate that on average Scottish Government funding amounts to 55% of the sector's income.

5.2 Work based learning

Apprenticeship schemes in Scotland are managed by Skills Development Scotland (SDS), a subsidiary of the Scottish Government. The main scheme for work based learning is Modern Apprenticeship (MA), which emerged in the 1990s. This is available to everyone 16 years or older. An MA combines employment with training, either directly provided by the employer, affiliated further education colleges or private training providers. According to SDS[8] there are 37,500 individuals working as modern apprentices in Scotland, as of August 1st, 2017. The number of these has been growing in recent years, but to put this into perspective, there are approximately 140,000 Scottish domiciled students registered at universities in Scotland (based on HESA 2014).

More recently, two additional apprenticeship schemes were introduced Foundation Apprenticeships (FA) and Graduate Level Apprenticeships (GLA). FAs are a two year long work-based learning opportunity for senior-phase secondary school pupils. Young people spend time out of school at college or with a local employer, and complete the Foundation Apprenticeship alongside their school qualifications. An explicit aim of the FA policy was to address youth unemployment by giving young people an opportunity to gain work experience. GLA are a route towards completing advanced professional qualifications whilst in work. These are open to employees of participating employers in collaboration with universities and further education colleges.

[8] SDS publishes statistics on apprenticeships in Scotland on its website: http://www.skillsdevelopmentscotland.co.uk/publications-statistics/statistics/modern-apprenticeships/?page=1&statisticCategoryId=4&order=date-desc

Apprenticeships are classified thematically along sectoral lines9 and are assigned a particular level to correspond with the Scottish Qualifications Framework (SQF)[10]. Apprenticeships in Scotland range from level 5 to level 11 on the SQF. This corresponds to ISCED levels 3 to 7, i.e. from upper secondary to masters level[11].

Apprenticeships are funded by a UK-wide employer levy. Employers pay their apprentices salaries and have to abide by minimum wage rules but receive in turn a contribution towards training costs. In some cases, employers received additional tax incentives for taking on apprentices. SDS surveys employers to determine the needs for particular skills, which in turn determines priorities for apprenticeships. Once these have been determined subsidy towards the apprenticeships is allocated on basis of competitive tendering, in line with public procurement principles. For further details of this process see Audit Scotland (2014) All apprenticeship training providers, whether education institutions or private firms are subject to inspection by Education Scotland, which carries out inspections of schools and colleges in Scotland.

The need for this subsidy arises to off-set a market failure. As a component of the apprentices skills are transferable, rather than firm specific, there is a disincentive for individual employers to invest in training due to a free rider problem, which arises as competing firms could poach trained employees without bearing the burden of the training cost, thereby potentially gaining a competitive advantage at the expense of firms more dedicated to training. If not countered by intervention this would lead to a sub-optimal outcome with underinvestment in skills (for a more detailed discussion of this point see OECD (2016).

6 Labour market

Through a series of reforms since the 1980´s the labour market in the United Kingdom has become one of the least regulated in the European Union. Whilst, in line with predictions of neoclassical economics this flexibility has mean that recent economic shocks have led to only moderate rise in unemployment, but a fall in real wages (Blundell et al, 2016). Furthermore,

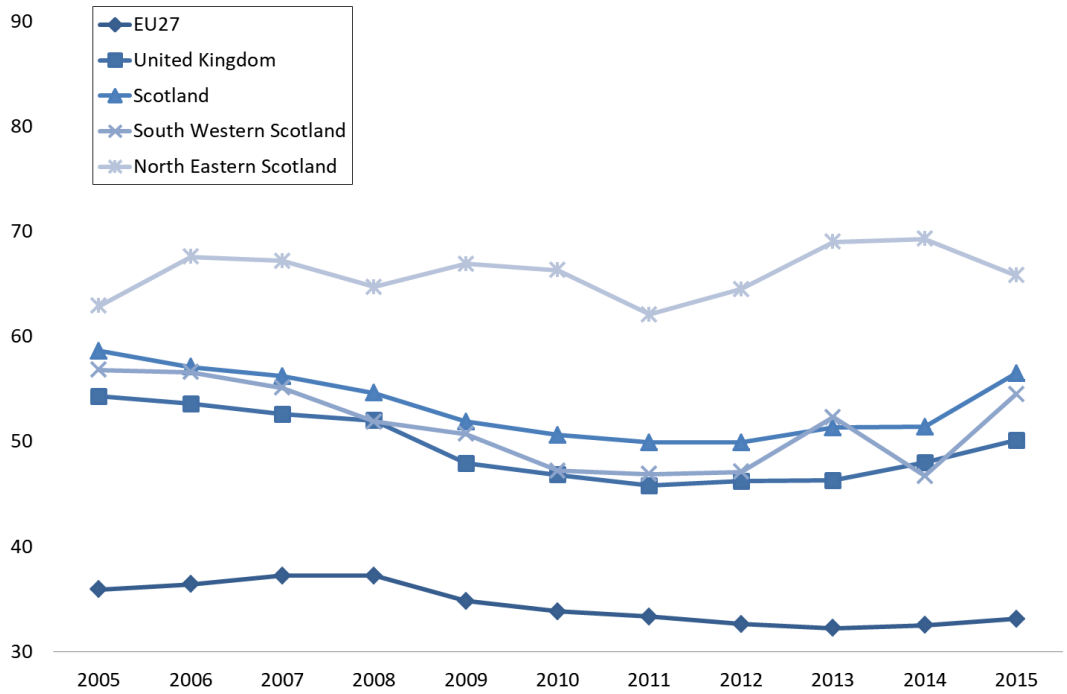
[9] For an overview see: http://www.skillsdevelopmentscotland.co.uk/media/41680/sds-framework-grouping-1.pdf

[10] Details of this assignment can be accessed here: http://www.skillsdevelopmentscotland.co.uk/media/38809/MA%20Level%20Description.pdf

[11] For details of how the SQP maps against UNESCO's ISCED framework see: https://beta.gov.scot/publications/scottish-qualifications-unesco-isced-levels/

the consequences of the economic downturn have taken more subtle forms, for instance a rise in underemployment and precarious employment (Furlong et al, 2017).

Figure 8. Youth employment rates, population 15-24 years



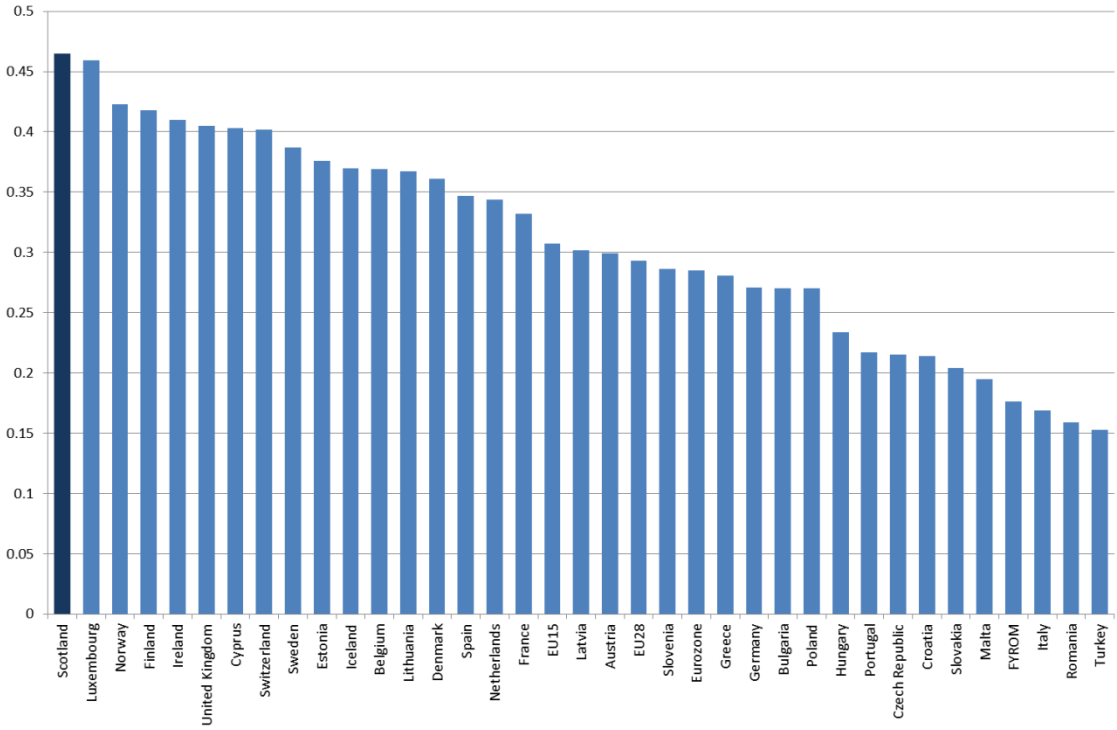
Source: EUROSTAT

As can be seen in **Figure 8** youth employment rates in the UK are far higher than for the EU27. Whilst this fell during the economic downturn it has been recovering since 2013. Scotland as a whole and South Western Scotland closely track the UK average in terms of youth employment rates. However, youth employment rates in the North East of Scotland are far higher and remained high during the economic downturn.

6.1 Qualifications of the working age population

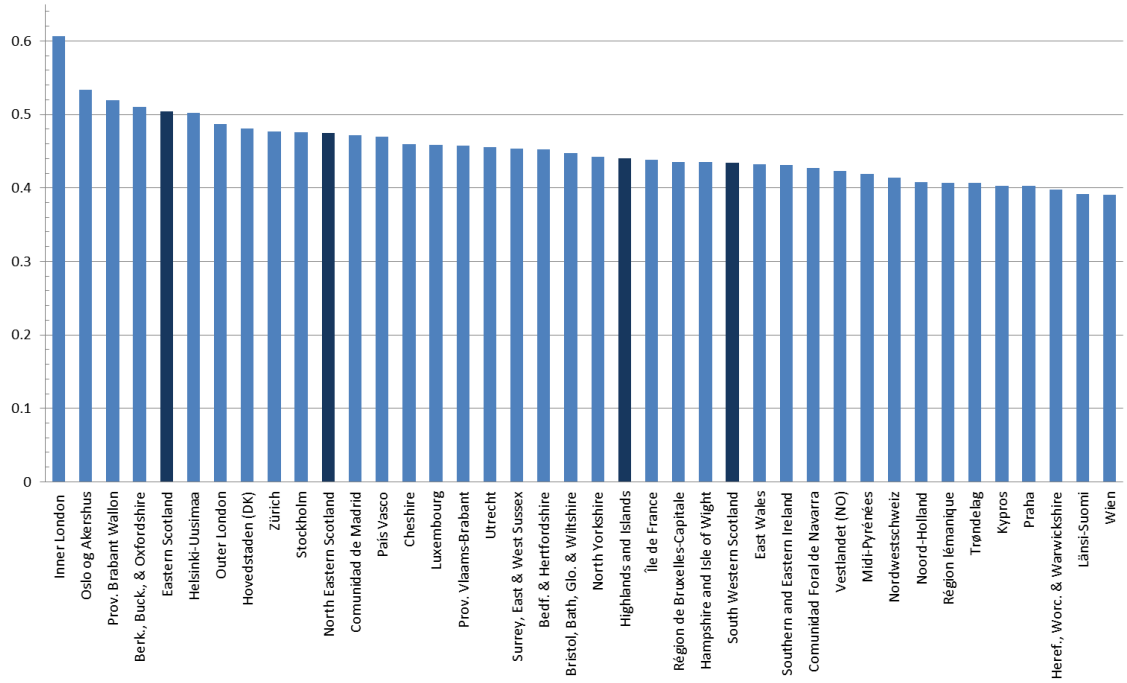
Eurostat compiles data on the levels of formal qualifications achieved by the populations of European Union (EU) member states, affiliated countries in the European Economic Area (EEA), Switzerland and candidate states for accession to the European Union. In **Error! Not a valid bookmark self-reference.**, the share of the approximate working age population in Scotland is compared to the states returning data to Eurostat. On that basis Scotland has the highest share of graduate workers within Europe. However, of course, comparing Scotland to state-wide averages can be misleading as many of these are large and internally heterogeneous.

Figure 9 Share of population aged 25-64 with tertiary qualifications by Eurostat country in 2014 (%).



Source: Eurostat.

Figure 10 Share of population aged 25-64 with tertiary qualifications in Eurostat affiliated countries in 2014. 40 highest ranked NUTS-2 regions. (%).

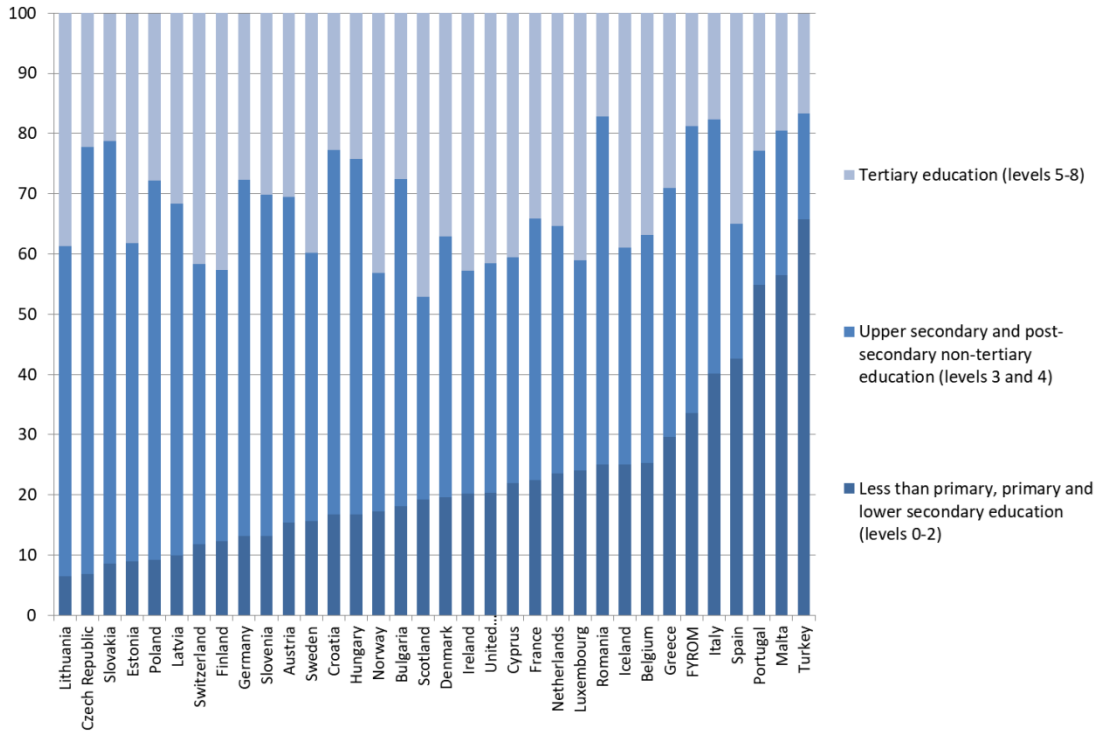


Source: Eurostat.

A slightly different perspective is presented in

Figure 10, which shows the share of graduates of the working age population for NUTS-2 regions. To save space only the 40 regions with the highest share of tertiary educated working age population are shown (data is available for 314 regions). Scotland's four NUTS-2 regions are all on this "Top 40" list and indeed the UK is widely represented along with many of Europe's capital regions.

Figure 11 Highest qualifications achieved for population aged 25-64. Eurostat affiliated states and Scotland in 2014 (%).



Source: Eurostat

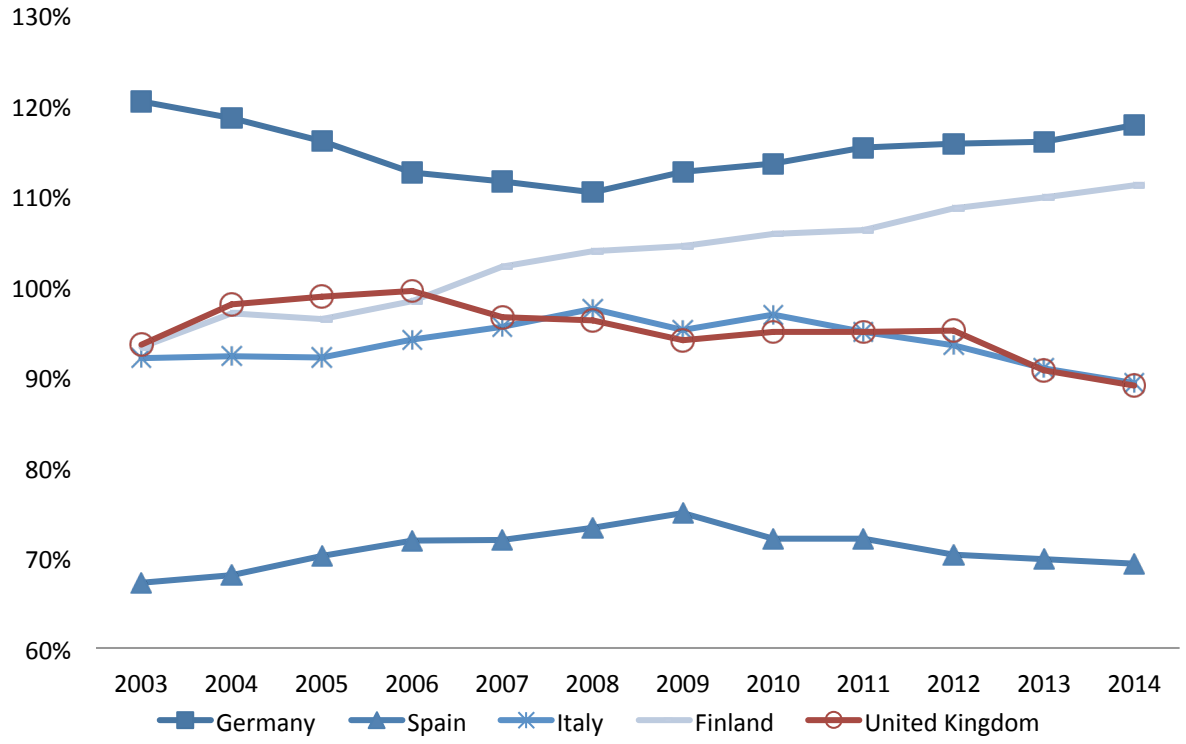
These data illustrate that Scotland is well endowed in terms of highly-qualified workers. However, an alternative view is to examine the share of workers with low qualifications.

Figure 11 shows the highest qualifications achieved by the working age population of Eurostat affiliated states in comparison to Scotland. Scotland is close to the median with just under 20% of the population reporting the highest qualification obtained to be lower secondary or less. Within Scotland there is substantial regional variation in this regard. The population of North Eastern Scotland has the lowest share of workers with lower secondary qualifications or less at 13.7%. While these shares stand at 16.8%, 20.5% and 22.3% in Eastern Scotland, the Highlands & Islands and South Western Scotland, respectively.

7 Redistribution and social inclusion

Throughout the period examined in this project social protection spending was a reserved matter in the UK, conducted by the central government in London. Region specific data is not available for Scotland as a whole or Scottish regions, but UK-wide data can provide an overall comparison with other EU countries. UK net expenditure in social protection fell from a peak of 99% of the EU19 average in 2006 to 89% in 2015.

Figure 12. Expenditure in social protection in PPS per inhabitant as % of EU19

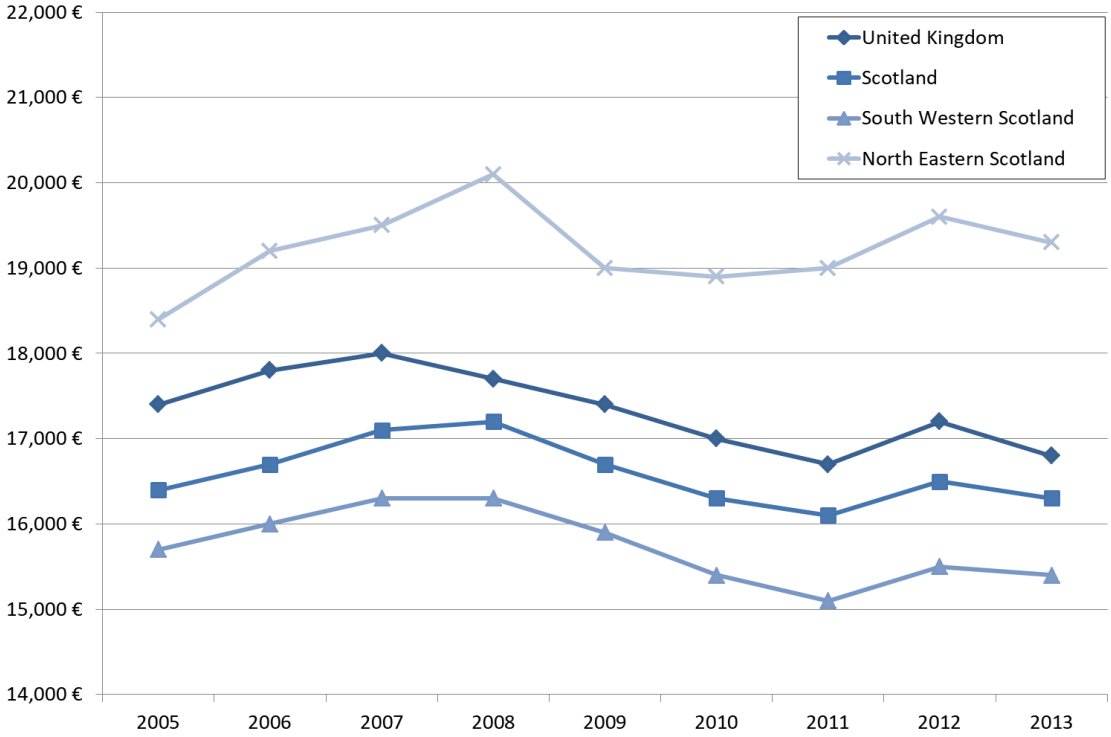


Source: ESSPROS, EUROSTAT

This shows that whilst social protection expenditures in the UK, where in line with other EU countries, it has been gradually shrinking. Whilst the liberal-conservative coalition

government that came to power in 2010 made a point of welfare reforms and implemented a fiscal austerity programme, the trend seems to have set in earlier.

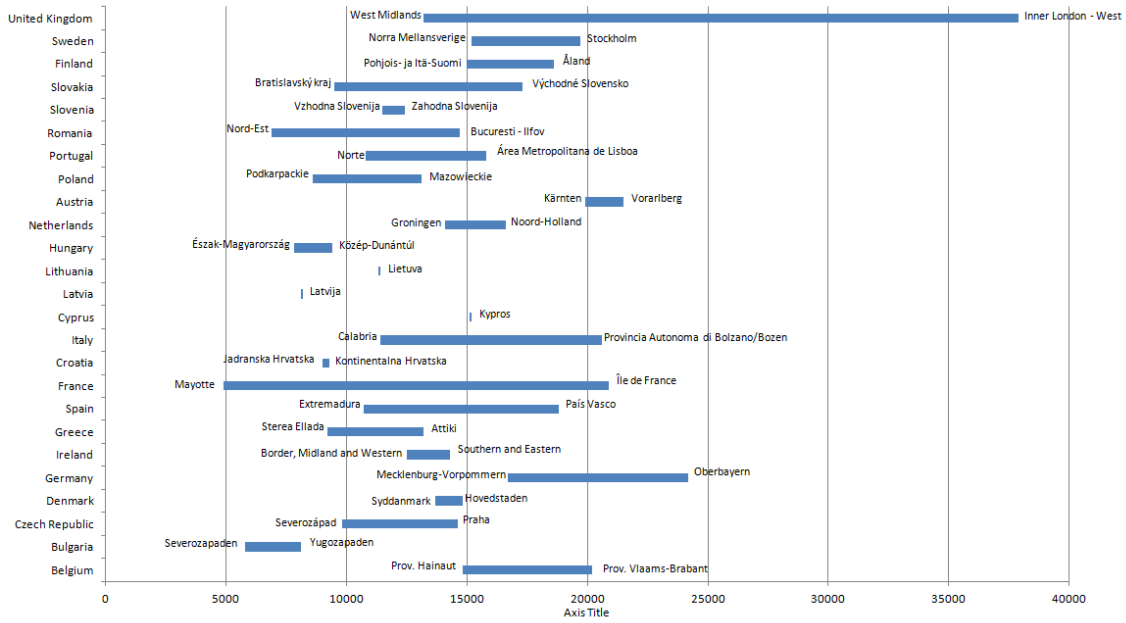
Figure 13 Disposable household income (€, PPP adjusted)



The disposable income for households is the amount of money that a household earns each year after taxes and transfers, representing the money available to a household for spending on goods or services. The UK on average is on par with Italy and Finland in terms of disposable income and comes in at about 80% of disposable income in Germany and Austria and about 120% of disposable income in Spain. Disposable income has fallen from a peak of €18,000 in 2007 to a trough of €16,700 in 2011. These trends are replicated closely at a regional level for Scotland as a whole and the South West of Scotland, albeit at a lower of level of, €16,100 and €15,100, respectively, in 2011. The North East of Scotland is out of sync with the rest of Scotland and the UK, being dominated by the oil and gas economy. There, disposable income reached a peak of €20,100 in 2008 and bottomed out at €18,900 in 2010.

Comparing Scotland to UK average masks significant regional variation in living standards within the UK. The UK average is skewed upwards by the vastly higher disposable income of greater London and with Scotland being the most affluent region outside greater London this truncates the lower range of observation. Indeed, the Office for National Statistics (ONS) recently mined Eurostat data to produce a regional comparison of GDHI across the EU. This reveals that the range of average GDHI across regions in the UK is the widest found within the EU. This analysis is summarised in **Figure 14**.

Figure 14 Disposable income of private households per inhabitant, highest and lowest NUTS2 region within each country.



1. Estonia, Luxembourg and Malta data not available.
2. Figures are shown in Purchasing Power Standards (PPS) (based on final consumption) per inhabitant.

Source: Eurostat

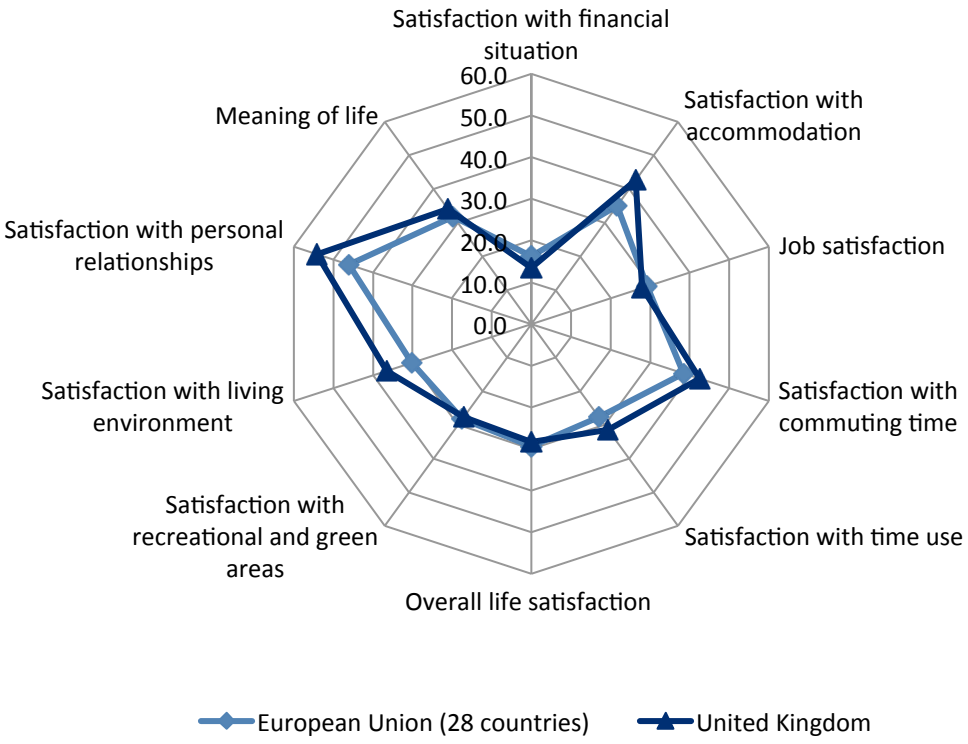
8 Health and well-being conditions

Health and well-being conditions are very difficult dimensions to assess. Many data gaps emerged and there is neither enough information at regional level nor for targeted age group. We will refer to general condition of health and well-being in this section. The UK population has experienced an improvement in life expectancy together with an increase in healthy life years. Generally though, Scotland has lagged the UK in terms of health outcomes and therefore UK averages may not be representative. In particular, Greater Glasgow has suffered bad health outcomes, which researchers have been unable to explain based on available controls such as income or social class. This residual lag in health outcomes has been termed the Glasgow effect.

Looking closer to the young adult population, some information about life satisfaction is available for European members states in the EU-SILC 2013. In 2013 a special ad-hoc module of EU-SILC assessed satisfaction in different domains of life. We report in the **Figure 15** the percentage of young adults aged between 18 and 30 who report being highly satisfied in the 10 domains assessed. Generally UK young adults experienced similar and sometimes higher satisfaction in all 10 different domains compared to EU28. Britons tend to be more satisfied with accommodation, living environment and relationships, but less satisfied with the

financial situation, jobs and green spaces. However, on balance, overall life satisfaction was slightly lower than in the EU28.

Figure 15. High satisfaction in various life domains, population aged 18-30, EU28 and UK, 2013



Source: EU-SILC, EUROSTAT

There are very few proxies available at regional level regarding access to health services. Some of them are closely related to health system such as hospital staff and doctors available in the area. Of course these proxies represent a measure of the coverage of health access.

9 Final remarks

This report has used harmonised data from EUROSTAT and other publicly available sources to analyse living conditions in a broad sense for two functional regions of Scotland: Aberdeenshire and Aberdeen City and Glasgow City Region. The harmonised indicators are useful as they allow a straightforward comparison with other European regions. Naturally, such indicators should not be interpreted in isolation. Wherever possible, these have been related to the structure of Scottish institutions and policies – in particular for the realm of education. In some cases these have been supplemented with additional data that are not

available across the EU. This supplementation with local data has been useful. However, it is perhaps not the data as such that represents the bottleneck for meaningful discussion or comparison, but rather local capacity to engage with data source to interpret and critique. This report has benefitted greatly from the availability of prior work m which has sought to engage with and apply the data to understand the Scottish context. Coverage of this is undoubtedly limited by the authors' oversight and focusses mostly on education and the economy. In future work it would be useful to supplement the analysis of harmonised regional indicators with systematic reviews of available academic and policy literatures, relating to the topic being examined.

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Work Package 4

Quantitative Analysis Young Adults' Data

Spain – National Briefing Paper with national and regional data sets

Name: Rosario Scandurra, Universidad de Granada
Xavier Rambla, Universitat Autònoma de Barcelona

Date 05/09/2017

Work Package 4 – Quantitative Analysis of Young Adults' Data

Deliverable 4.1

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Executive Summary

This national briefing paper provides a short overview of the living conditions of young adults in Spain and in the two functional regions selected for the YOUNG_ADULLLT project, the autonomous regions of Andalusia and Catalonia. The data were collated at national and local level (NUTs2) according to six dimensions of contextual living conditions: the structure of the economy, the demographic characteristics of the population, the inputs and outputs of the education and training system, the labour market, the material living conditions and the participation as citizens to the political and civic life and, finally, the health conditions and individual well-being. Data were extracted from Eurostat and from different surveys such as the EU-LFS, EU-SILC, PISA and PIAAC. The main corpus of data proceeding from international and harmonized data was successively complemented by data collated at the local level, made available by the *Instituto de Estadística y Cartografía de Andalucía* and by the IDESCAT, as well as by official websites of various Spanish Institutions (Ministers, regional government and Chambers of trade). The data ranges between 2005 and 2015, but for some indicators the data were not available for 2015 and for this reason we refer to 2014 as the last data available.

Description of the data collated and quality data assessment

Eurostat UNESCO and OECD provide a vast amount of harmonized and comparable data that can be a useful resource for assessing the life conditions of young people in different domains and in various countries/regions. However, the availability of data at the regional/local level is limited. Most of the data are provided at a national level and only two of the six dimensions (economy and demography) have a fair amount of indicators at NUTS2[1] and NUTS3 level. This restrains the possibility of comparison. Within the surveys available the most relevant source of information is the EU-LFS which has large sample size at local level. Moreover, complementing the international data with local data is a hard task mainly for four reasons.

[1] NUTS stands for Nomenclature Unite Territorial Statistique.

First, the fragmentation of sources is relevant both at Spanish, Andalusian and Catalan levels. Neither the regional bureau of statistics nor the National Statistics Institute of Spain (INE[2]) bring together all the information available at public and official sites or provide a complete list of sources and studies. Thus, collecting data implies investing a lot of time, even if these data are quite simple and publicly available. Second, the multiplicity of available sources might entail methodological difficulties that hamper the comparability of the provided data between regions and at European level between 2005 and 2015. Third, there is a lack of data at provincial[3] and local level in the available sources. Finally, some private institutions in agreement with some public ones (the Chamber of Commerce of Catalonia and the Department of Education of Catalonia and the Catalan Employment Service) are collecting very rich information on skills and competences of the vocational and training education[4]. However, these data are not provided publicly and the channels to accessing them are not clearly established. This hampers the transparency of the administration that is collecting a huge amount of information, but it is not using it neither to better inform the citizenship nor, as stated by the Chamber of Commerce, to improve their own political action. Moreover, the fact that this is a private institution, which develops and administers these datasets, poses ethical problems as well as bureaucratic difficulties to access it.

From a more general perspective, considering the high rates of early school leavers and NEET in Spain, it is remarkable that we did not find almost any specific sources neither at regional nor local level[5] about this group of population which is socially vulnerable. Reducing early school leavers is a priority for both Andalusian and Catalan government, nevertheless there is no specific instrument to understand the specificities of these young adults and inform policies.

[2] Istituto Nacional de Estadística (INE) www.ine.es

[3] In Spain there are 50 provinces excluding Ceuta and Melilla. They correspond to NUTS3 in the EUROSTAT classification.

[4] For the case of Catalonia, two data sources are relevant: the Comprehensive Data Bank (*Banc Integral de Dades* -BID). The first was created by an agreement between the Chamber of Commerce of Catalonia and the Department of Education of Catalonia. Nowadays its aim is to provide information not only about the available companies but also, and more importantly, to track the apprenticeship period gathering the assessments developed by both the high schools, the companies and the students themselves in relation to each training process. In the last years, information about those courses provided by the Employment Service of Catalonia has also been included. The Graduate Insertion Survey (*Estudi sobre Inserció de Graduats*) collects information about the degree, quality and the suitability of the placement of the students from the VET provided by the High Schools once they have finished their studies.

[5] Here with regional and local level, we refer respectively to Andalusia and Catalonia and Malaga and Girona as functional region of the YOUNG_ADULLLT project.

Understanding young adult social risk represents a very broad objective. For this endeavour, the data needed were collected in various studies, in different way and sometimes for very specific purposes. For this reason, the most accessible data are EUROSTAT since they already provide harmonized data, metadata and completed time series. However, accessibility of data is not a straightforward issue, as databases are not completely combined and flexible and the collection is at times difficult and time consuming. The complexity and variety of the data published make such comprehensive integration difficult to achieve.

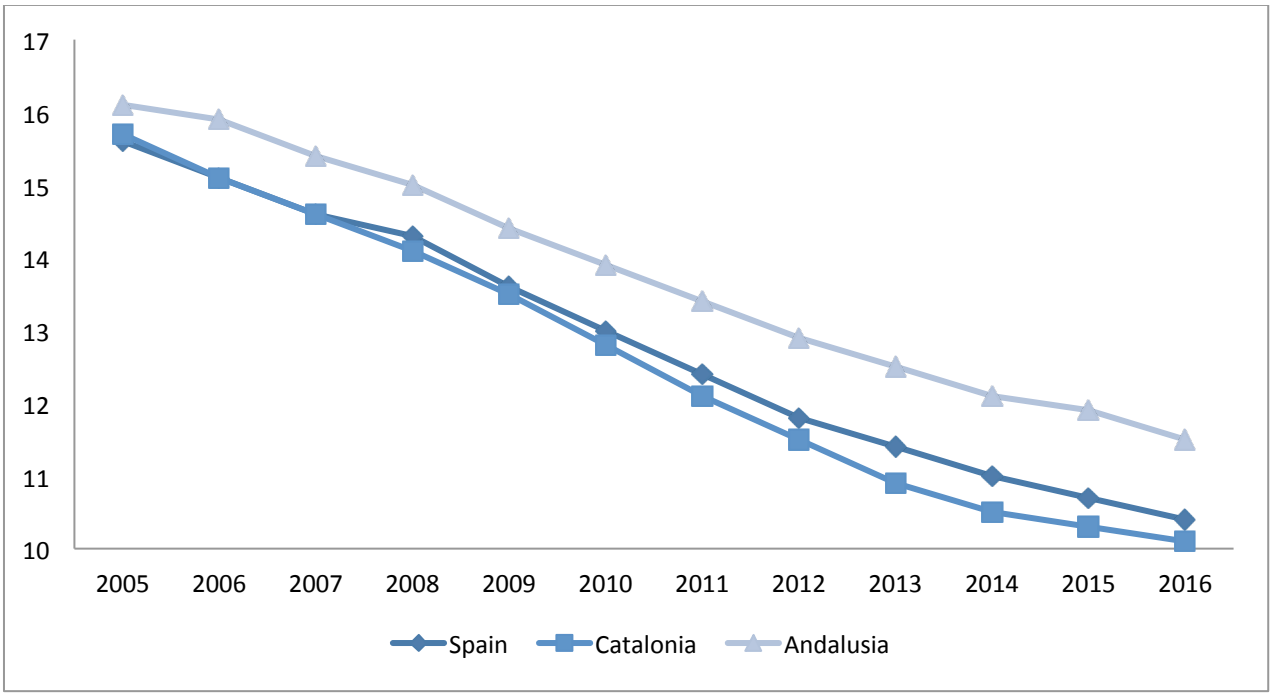
1. Findings

1.1. Demographic structure

Spain covers a total area of 505.970 square kilometres. It is the second largest country in the EU28 and it represents 11% of its total area. Spain is divided into 17 Autonomous regions; the biggest one is Andalusia with an area of 87.597 square kilometres, while Catalonia covers 32.091 km^2. Spain is the fifth most populated country in the European Union. The population increased gradually reaching 46.8 million in 2012, then started decreasing (in 2015, the population was 0.7% less than 2012). Andalusia and Catalonia are the most populated autonomous regions with respectively 8.3 and 7.4 million inhabitants. The population density is below 93 individuals per square kilometre in Spain and it has slightly increased over the past decade. It is very unevenly distributed both between and within regions: Andalusia has 97 individuals per square kilometre, while Catalonia has 232, more than double of the Spain average.

Youth population aged 20-29 in 2015 accounted for approximately 10.4% of total inhabitants, making up 11.5% of the population in the region of Andalusia and 10.1% in Catalonia. The decrease of the share of youth population over the last decade is constant and remarkable.

Figure 1. Share of the population aged 20-29 years



Source: EUROSTAT

General living conditions in Spain are comparatively good in relation to other European countries. Infant mortality in the first year after birth is 2.7 while in the EU28 it was 3.6 in 2016 with a constant decrease over the last decade (in 2005 it was 3.7). Life expectancy in Spain is 83.3 years higher compared to European average, but the overall value is the result of relevant gender differences: a Spanish female in 2014 could expect to live 86.2 years, while a male had a life expectancy of 80.4 years. Territorial differences are remarkable; in Andalusia it is 1.2 years lower than Spain average, while in Catalonia it is about 0.3 years higher. Infant mortality in the first year after birth is low; it touched a minimum of 2.7 deaths per thousand in 2015, being the EU28 average 3.6. This has decreased from 2005 of 1 year. Some territorial differences emerge. Catalonia has 2.4, while Andalusia 2.9, and this difference was larger over the last decade.

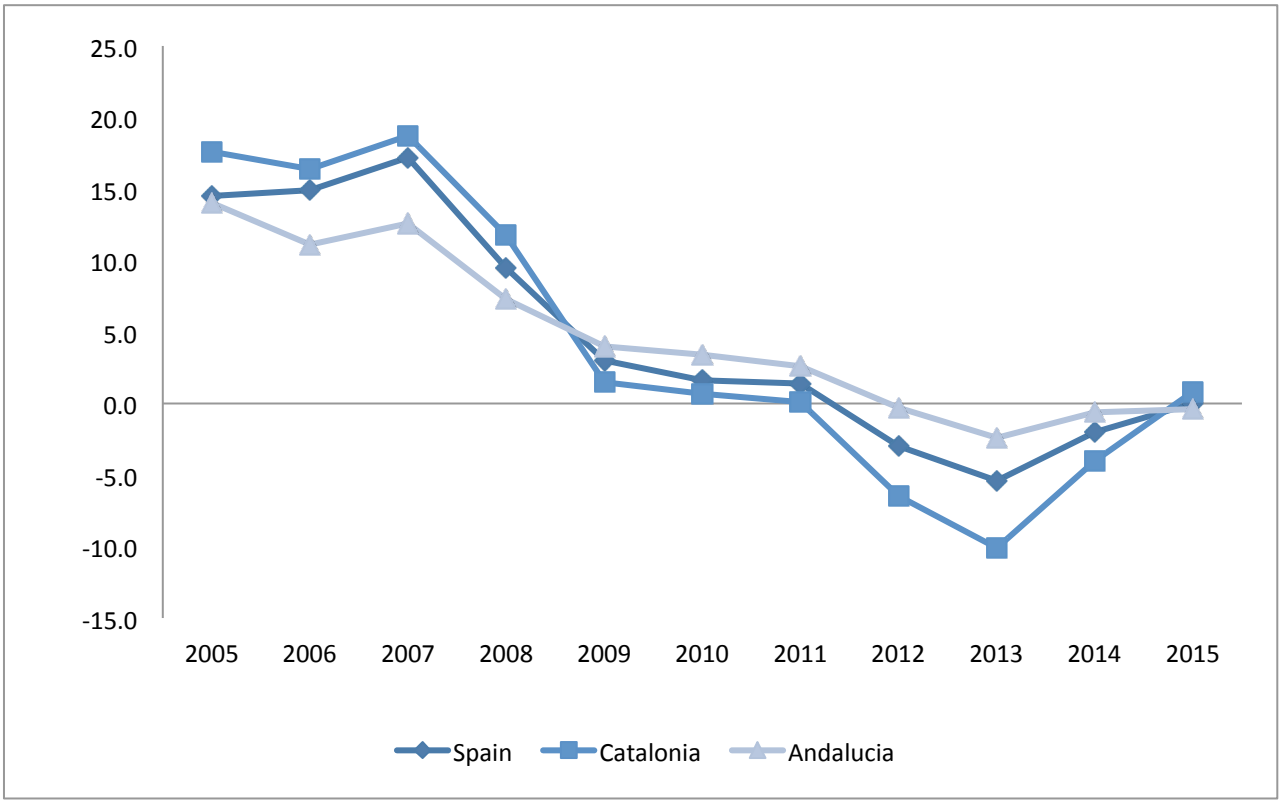
Spain shares a condition of low fertility with other advanced EU countries, as the fertility rate was 1.32 in 2015. Catalonia and Andalusia had higher fertility rate compared to Spain (1.39). During the past decades, fertility has remained constantly low while the age at which a woman has her first child increased from 29.4 to 30.7 between 2005 and 2015 (EU28 average in 2015 was 28.9).

Spain is a country of recent immigration, above all from Spanish-speaking countries. During the middle nineties migration started to grow and reached one of its peaks

before the economic crisis. From 2007 migration has been increasingly diminishing as the economic crisis reduced the attractiveness of the country. The crude rate of net migration went from its peak of 17.2 in 2007 to 0 in 2016, meaning parity of migration flows, after already having reached negative signs years before.

Currently, policies targeting young adults are crucial for the effective social inclusion of the foreign-born population in the country. Significantly, while foreign-born individuals amounted to 10% of the whole population, in 2017 this proportion scored 13% among 20- to- 24 year-olds and 16% among 25- to- 29 year-olds (INE, 2017)[6]. Failing to cater to the needs of these generations threatens to aggravate ethnic cleavages in the long term.

Figure 2. Crude rate of net migration plus statistical adjustment



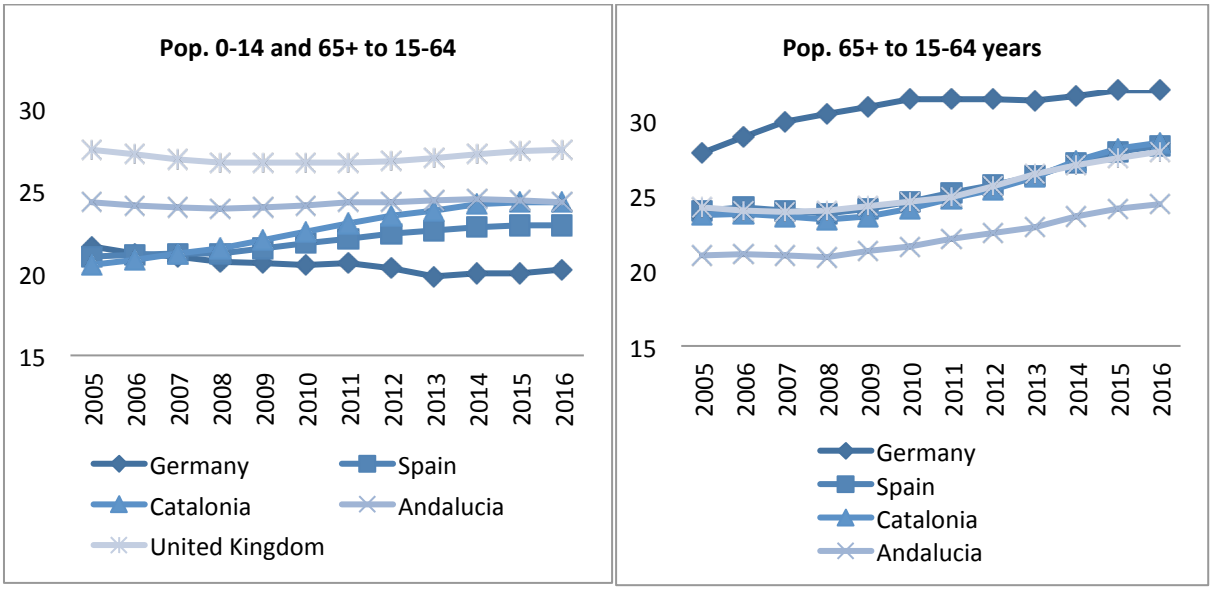
Source: EUROSTAT

The combined effect of living longer and fewer children is transforming the demographic structure across the European countries. The demographic pyramids are changing and dependency ratios are often used to compare the size of such groups and

6Source: Instituto Nacional de Estadística- INE (2017) Cifras de Población (CP): *Población residente por fecha, sexo, grupo de edad y nacionalidad*. Retrieved from http://datos.gob.es/es/catalogo/e00121204-cifras-de-poblacion-cp-poblacion-residente-por-fecha-sexo-grupo-de-edad-y-nacionalidad on 28 July 2017

they generally relate central age groups with dependent (young and old). In figure 5, age dependency ratios are plotted together with other European countries. The level is lower for Spain although a fast increase in the share of dependent among the population is registered since 2009 onwards (the first variant of the age dependency ratio raised from 45 until 51.2 in 2016). The increase in the dependent population is similar, although in Andalusia is lower compared the both the Spanish average and Catalonia. When comparing the oldest share of the population to central ages, a general increase in the share of the population 65 and over is revealed; the trend is similar in Andalusia and Catalonia.

Figure 3. Age dependency ratio. On 1st variant (population aged 0-14 and 65 and more to pop. aged 15-64)



Source: EUROSTAT

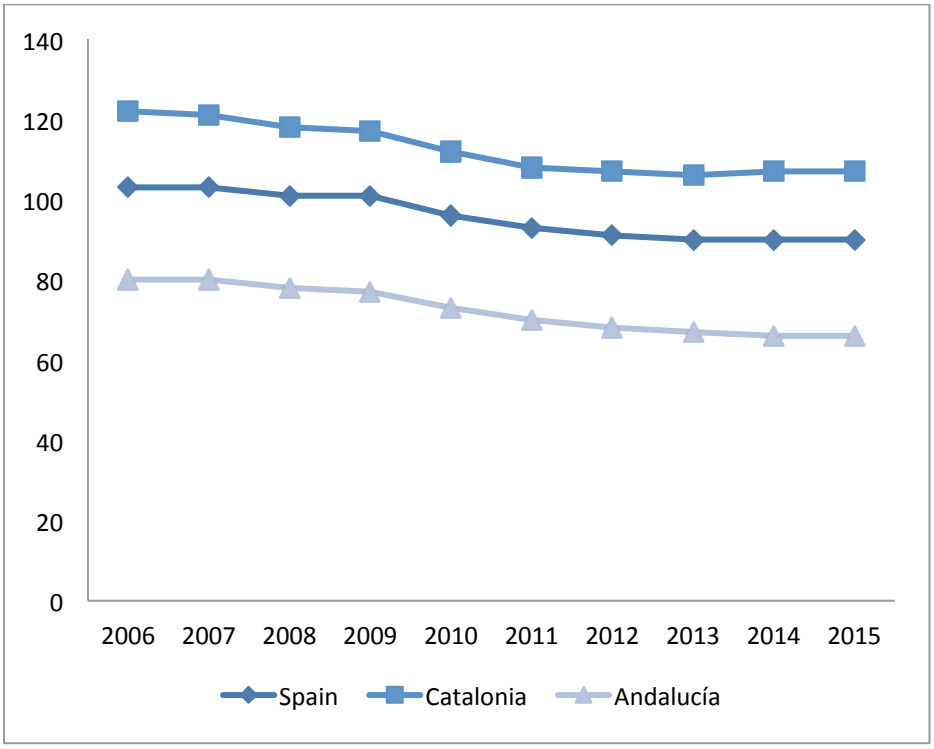
The percentage of young adults living with parents is 69.6% against the 55.4% of the EU27 average (for men 74.3 and 64.8 for women). Over the last decade this indicator has remained stable, although it reached its lowest peak in 2010, being 65.2%.

1.2. The structure of the economy

During the last decade, the Spanish economy has experienced difficulties adapting to the impact of the economic crisis. From 2006 to 2015, GDP increased from 25.500 to 25.900 euro per inhabitant, but it has diminished in relative terms losing 13% compared to the

European average. In the same period, the GDP of Andalusia decreased both in absolute (2.5%) and relative terms (14% compared to the EU28), while it increased in Catalonia (2.6%) but dropped in relation to EU28 (-15%). The impact of the economic crisis seems to have hit the economic outlook, although some signs of recovery seem to be emerging together with growing economic disparities within the country.

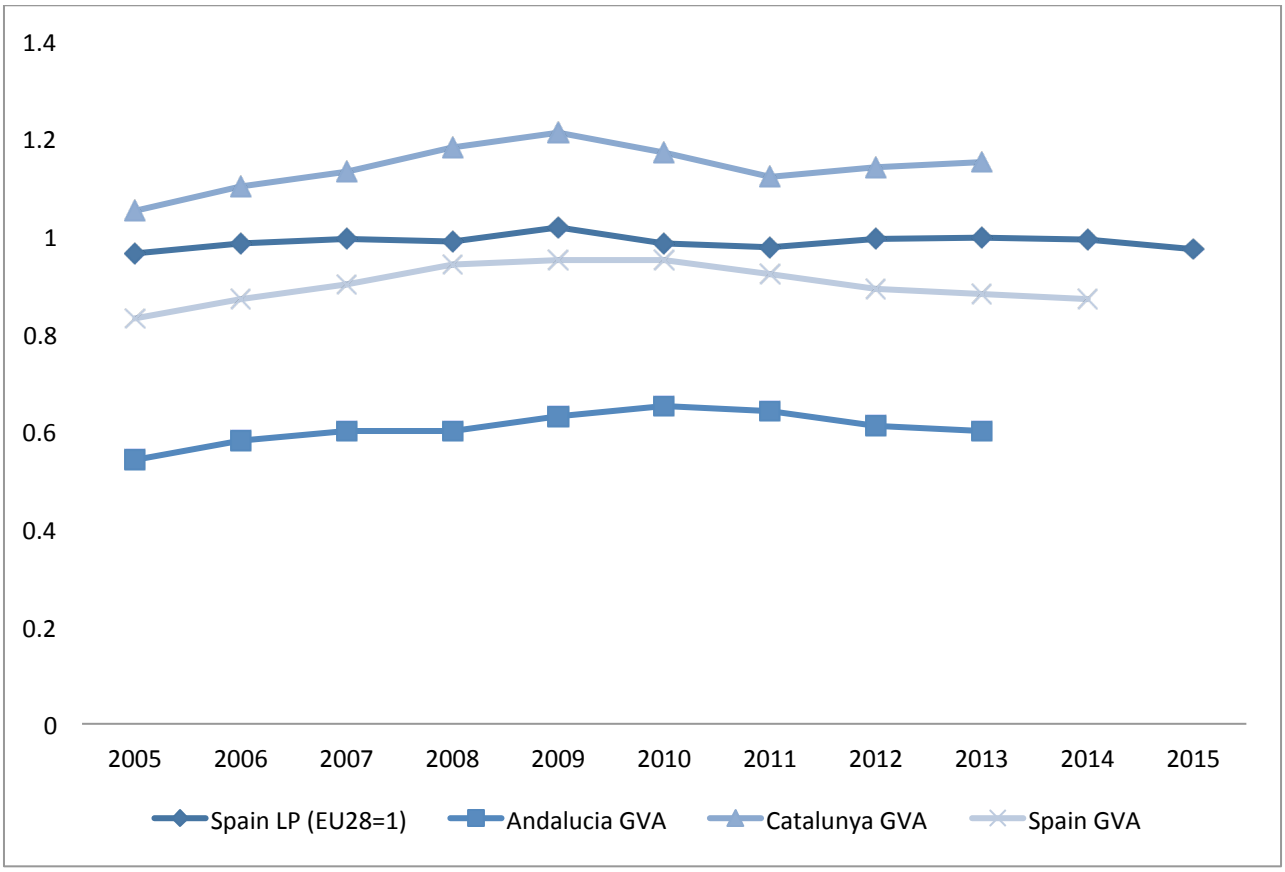
Figure 4. GDP at current market prices, Euro per inhabitant in % of European average (EU28=100)



Source: EUROSTAT

In Spain, the real growth rate of regional gross value added (GVA) showed a negative sign in 2009 (-3.4%) and it stayed negative until 2013, although it started to recover. Additionally, labour productivity measured in GDP per hour worked stayed below EU28 average for almost a decade although it reached the parity in 2009. It started to drop again after the economic crisis, being 97.1% of EU28 in 2015.

Figure 5. Labour productivity EU28=1 and real growth value added



Source: EUROSTAT

Services are prevalent in the structure of the Spanish economy, representing 73.8% of the share of GDP, This is similar to the EU28 (73.9%), although it has a slightly higher share of the agriculture sector overall. The reduction in the industry sector was remarkable in the last decade since it used to be higher compared to the European partners. The economic structure of the country is mainly made up of small firms: in 2014, enterprises with less than 10 employees are equal to 94.8% of the total, enterprises with 10-19 employees are equal to 2.9%, while big enterprises with more than 50 employees represent less than 0.7% over the total. The infrastructural and transportation network, which plays a relevant role for the economy, appears to be quite developed; railway lines and motorways cover respectively 32 and 30 kilometres every 1.000 square kilometres with important territorial differences partially coherent with the population density within the autonomous regions.

The percentage of researchers in all of the economic sectors over the active population is low compared to European partners (0.9% in 2013, 1.3% in Germany and 1.4% in

UK), with some territorial differences; for example in Catalonia it is 1% and Andalusia 0.7%.

The percentage of the GDP in PPS[7] in research and development in the government sector is 1.24% in Spain (in the EU28 it was 2.04%). Over the last decade it increased slightly more than 0.1% of the GDP. Territorial differences emerged: in Catalonia this share is 1.49%, while in Andalusia it is 1.05%, with a quite similar evolution across time.

Expenditure in research and development in the government sector is concentrated in Catalonia (653 million in PPS, the national average is 392 million in 2013 and Andalusia 173). The pattern of the indicator has a U shape with a peak in 2008 and a constant and slow decrease until 2013.

The share of people employed in the public sector is roughly stable after 2010 and equal to 7.6% of total employment in 2014, with some territorial differences (5.3% in Catalonia and 9.5% in Andalusia), while employment in education started to decrease in 2013, and was equal to 6.6% in 2014. Andalusia again shows higher employment in education (7.2%, compared to Catalonia's 6.4%). Finally, people employed in the health sector and in social work make up 8.2% of total employment, which is lower compared to European partners (UK 13.3, Germany 12.5%). Some territorial differences emerge; employment in health sectors was 7.8% in Andalusia, while it was 8.2% in Catalonia in 2014.

1.3.Education

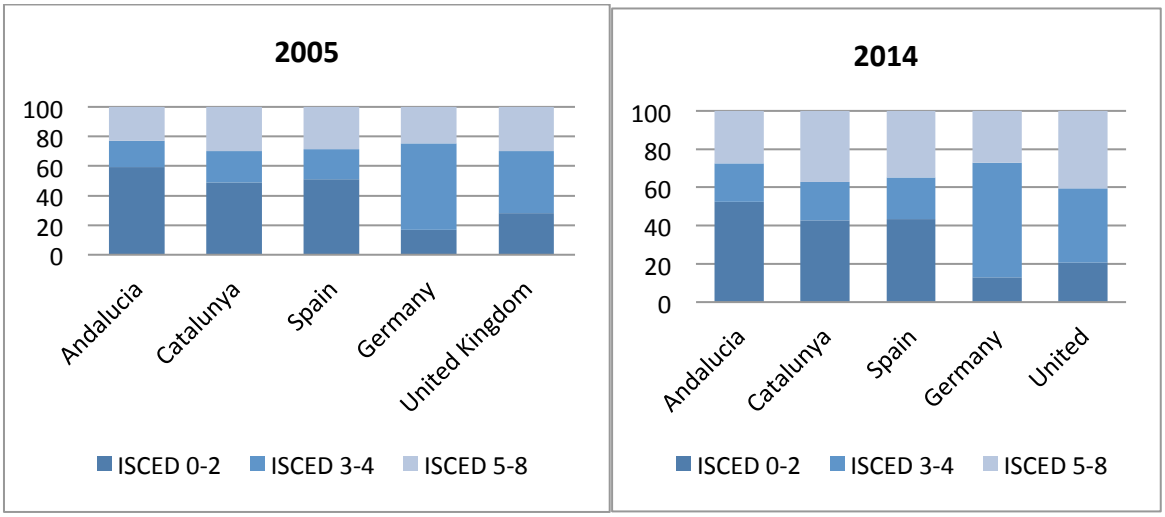
The Spanish education and training system is comprehensive and partially decentralized at the regional level. The government expenditure in education was 4.3% of the national GDP in 2013 and this has remained almost stable over the past two decades. Full-time education is compulsory until the age of 16, although recent legislation seeks to lower this to 15. Spanish secondary education is four years long, with students at the end of the third year being able to choose between either *Bachillerato* (Baccalaureate equivalent) or *Ciclo de Grado Formativo Medio*, the latter being geared towards vocational training. Indeed, there are two programs of vocational training, a shorter and a longer program, lasting three and five years, respectively. All students successfully

[7] Purchasing Power Standard (PPS) is a special case of Purchasing Power Parity PPP adjustment as carried out by Eurostat.

completing secondary education can access university after passing a general entry examination organized by each public university.

Spain still lags behind its European partners in terms of educational attainment. This is in part due to a highly unequal distribution of education across the age cohorts. The population aged 56-65 has one of the lowest average years of schooling of all the European countries according to PIAAC. In 2005 more than half of the population (51%) aged between 25 and 65 years attained lower secondary education (ISCED 2), while in 2014 this diminished to 43% representing 18% reduction over the past 10 years. Nevertheless, the rate of reduction is lower compared to other European countries.

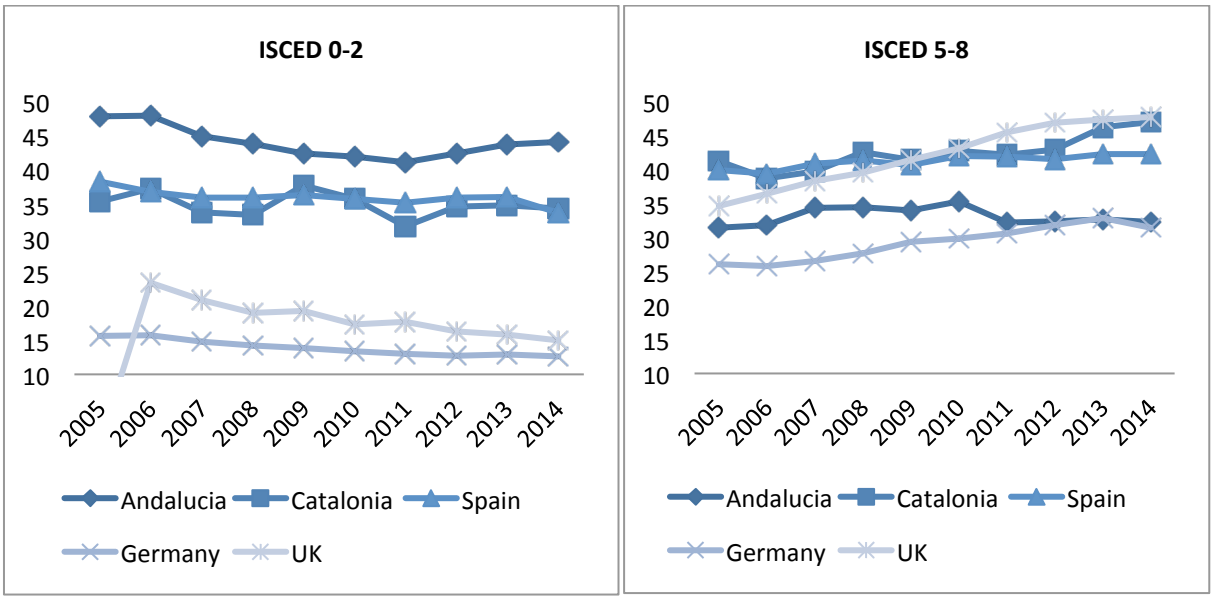
Figure 6. Population attainment by ISCED levels, 25-64 years over the correspondent age group



Source: LFS, EUROSTAT

Examining tertiary education, 34.7% of the population aged between 25 and 64 years have at least attained ISCED 5 with an increase of 22% from 2005. The stock of tertiary educated people is lower compared to other European partners and it has strongly increased. However, there is important variation between regions; 23% in Andalusia and 30% in Catalonia in 2005. Over the last decade, this has increased to 27.6% in Andalusia and in Catalonia 37%, increasing the gap between the two regions.

Figure 7. Young adult's education attainment by ISCED levels, 30-34 years over the correspondent age group



Source: LFS, EUROSTAT

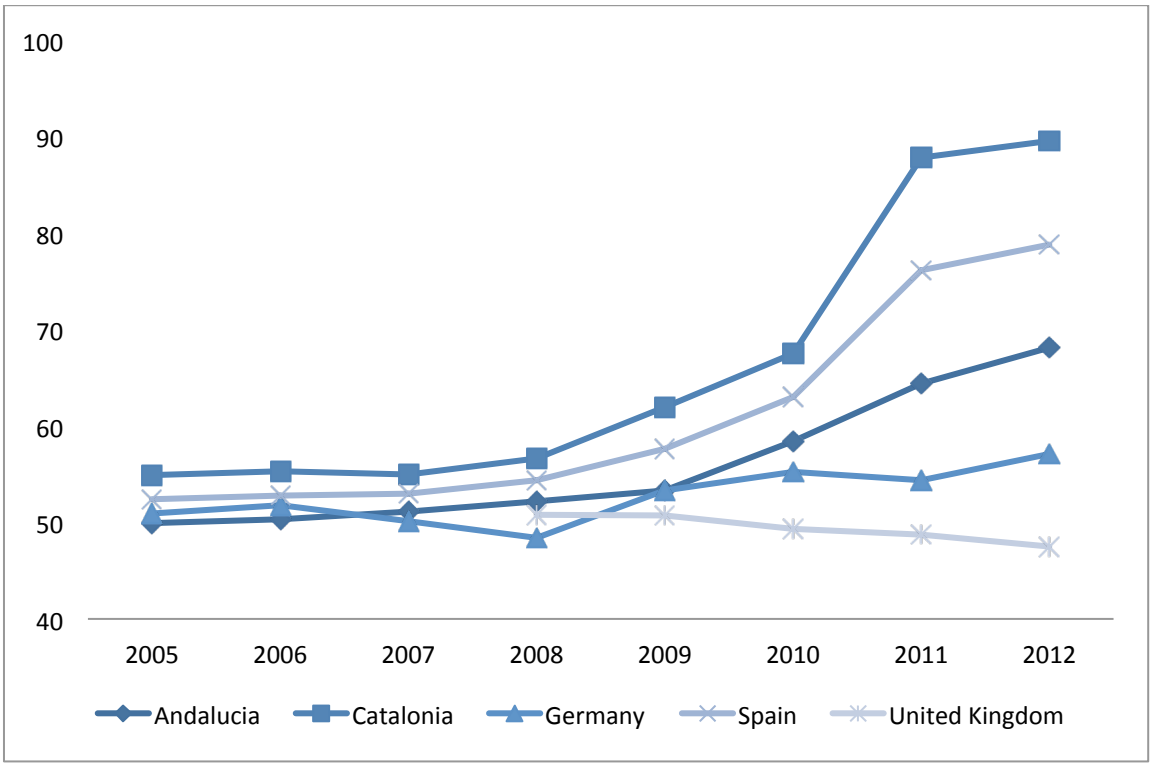
When we look at young adults, Spain has a very high tertiary education attainment, higher than European partners; in 2005 almost 2 out of 5 people aged 30-34 have attained tertiary education, while in 2014 the proportion increased by roughly 6%. In 2005, in Andalusia 31% of the population aged between 30 and 34 had tertiary education and this remained almost stable over the past decade (the increase was of 0.9%), while for Catalonia the attainment was 41.2% and it increased to 47% in 2014. Moreover, women are more likely to achieve tertiary education attainment; 102 women over 100 male attained it in 2005 and this ratio increased to 111 in 2014.

Examining lower education attainment of the population aged 30-34, Spain has a higher proportion of population with less than secondary education compared to European partners. It was 38.3% in 2005 and this decreased reaching 33.7% in 2014. There are high territorial variations in secondary education attainment. In Andalusia almost half of the population aged between 30 and 34 attained secondary education while in Catalonia it was a third, in line with the Spanish average. When comparing this with European partners, Spanish secondary education attainment is almost the double of UK average and three times of that of Germany. Gender differences are very relevant; secondary education attainment among women was 27.9% while for men it was 10 points higher; this gap has been maintained over the past decade. This difference between gender is not presented in countries like Germany or UK.

Overall, there is high polarization of education attainment and high variation between regions. Andalusia and Catalonia represent two extreme cases in Spain and this is indirectly related to the socio-economic attractiveness of the two territories. Finally, it is worth noticing that traditionally vocational programmes at upper secondary level are not effective in bridging the transitions to the labour market and this represents an important factor in the education attainment polarization.

In Spain, there is no compulsory pre-primary school system, but many parents decide to prepare their children for primary school by enrolling them to the so called "*escuela infantil*", which is relevant in developing cognitive and non-cognitive abilities and buffering the influence of the familiar background. Although pre-primary education is not compulsory in Spain, the participation rate of 4 years-old in education was traditionally very high and remained high during the past decade with almost a full coverage, reaching almost the entire population of 4 years olds for whom enrolment is sought and there's not significant variation between regions. In 2012 the EU-28 average was 93.9% whereas the average in Spain was almost 4% higher (97.4%).

Figure 8. Tertiary education access of the population aged 20-24 years over the correspondent age group



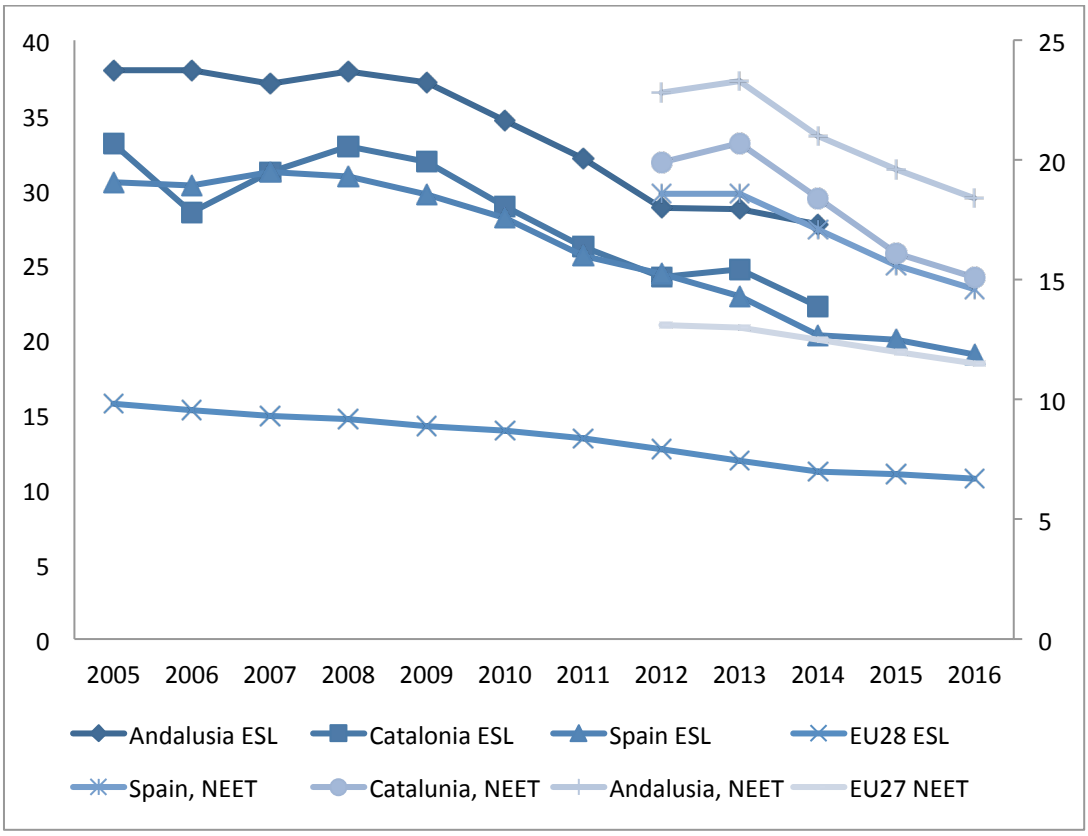
Source: EUROSTAT

In Spain, the level of tertiary education access is high compared to Germany or the UK. In 2005, Spain had higher tertiary access compared to Germany; overall 1 over 2 individuals between 20 and 24 years was enrolled in a tertiary education program. Over the last decades access to university has increased, following a historical trend that started 4 decades before. In 2012 4 out of 5 people accessed tertiary education and the territorial differences are very relevant. In Catalonia, 9 out of 10 people attended university, while, in Andalusia, this was approximately the case for 7 out of 10, with more than 20% difference between the two autonomous regions. This difference is partially due to the attractiveness of Barcelona both for national and international students and the substantial presence of academic institutions. Tertiary education access in Spain is high compared to European partners, possibly as a consequence of economic crisis and the reduction of opportunity cost of attending university.

In Spain, the ratio of early school leavers (ESL) (the percentage of the population aged 18 to 24 having attained at most lower secondary education and not being involved in further education or training) was equal to 19% in 2016, compared to the EU28 rate of 10.7%. Marked gender differences emerged; the prevalence of early school leavers among women was 15.1% in 2016, while for men it was 22.7%. The trend towards a decrease of low educated individuals is almost identical for both genders (around 60%) and the rate of reduction increased after 2009. In the last decade, early school leavers diminished from being 3 out of 10 to less than 2 out of 10 people between 18 and 24 years. Important territorial differences emerged both in the level of early school leavers (in Andalusia 27.7% in 2014, while in Catalonia they were 22.2%), and in the rate of reduction over the past decade where Catalonia is similar to Spain average while Andalusia is slightly below.

Similarly to ESL, the proportion of young people neither in employment nor in education and training aged between 15 and 24 years (NEET) diminished from 18.6% (13.1% in the EU27) in 2005, to 14.6% in 2016 (11.5% in the EU27), although important territorial differences emerge, similar to those observed for ESL. Overall, the link between education and the labour market is still not smooth and many young adults are excluded or have difficulties in finding a job.

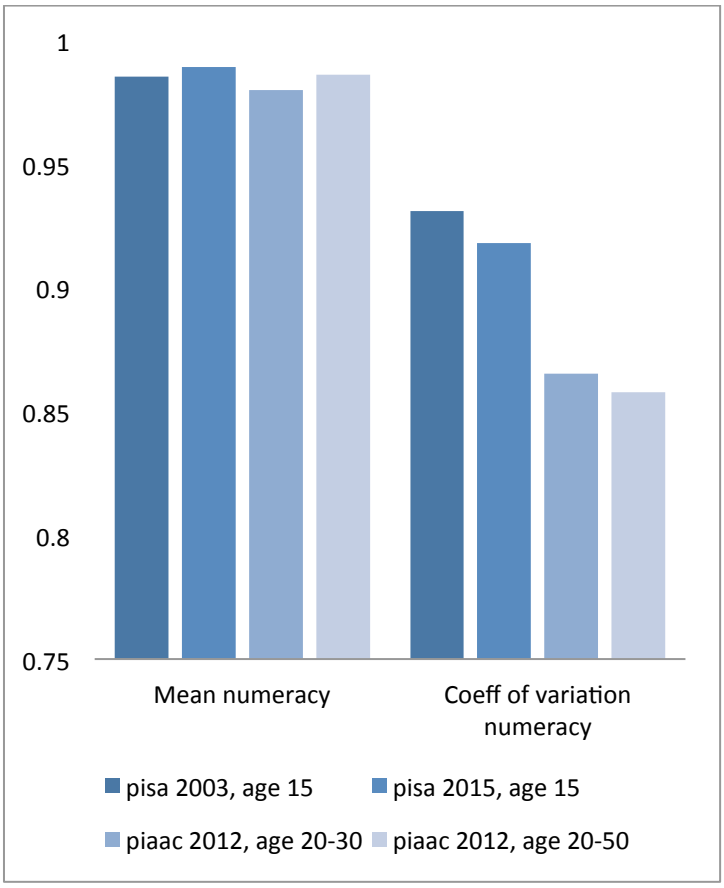
Figure 9. Early School Leavers 18-24 years, ESL (left axis) and population Neither in Employment Nor in Education 15-24 years, NEET (right axis)



Source: EUROSTAT

The former data depict a particular portrait of polarised educational inequalities. Between 2005 and 2014 the proportion of 30- to- 34 year-olds who achieved at most both ISCED 0-2 and ISCED 5-8 exceeded the scores of Germany and the UK. In 2012 about 75% 20- to- 24 year-olds entered tertiary education. In 2016 the rate of early school leavers was 19%, that is, 9 percentage points above the EU average. In addition, PISA and PIAAC tests have recently noticed that young adults have not acquired the same level of competences than the majority of countries included in these assessments. Therefore, many young adults appear to follow non-standard educational pathways insofar as they leave school early but afterwards enrol in other programmes that lead them to tertiary education. However, these experiences are insufficient for many of them to learn the basic academic competences.

Figure 10. PISA and PIAAC competences, European average=1

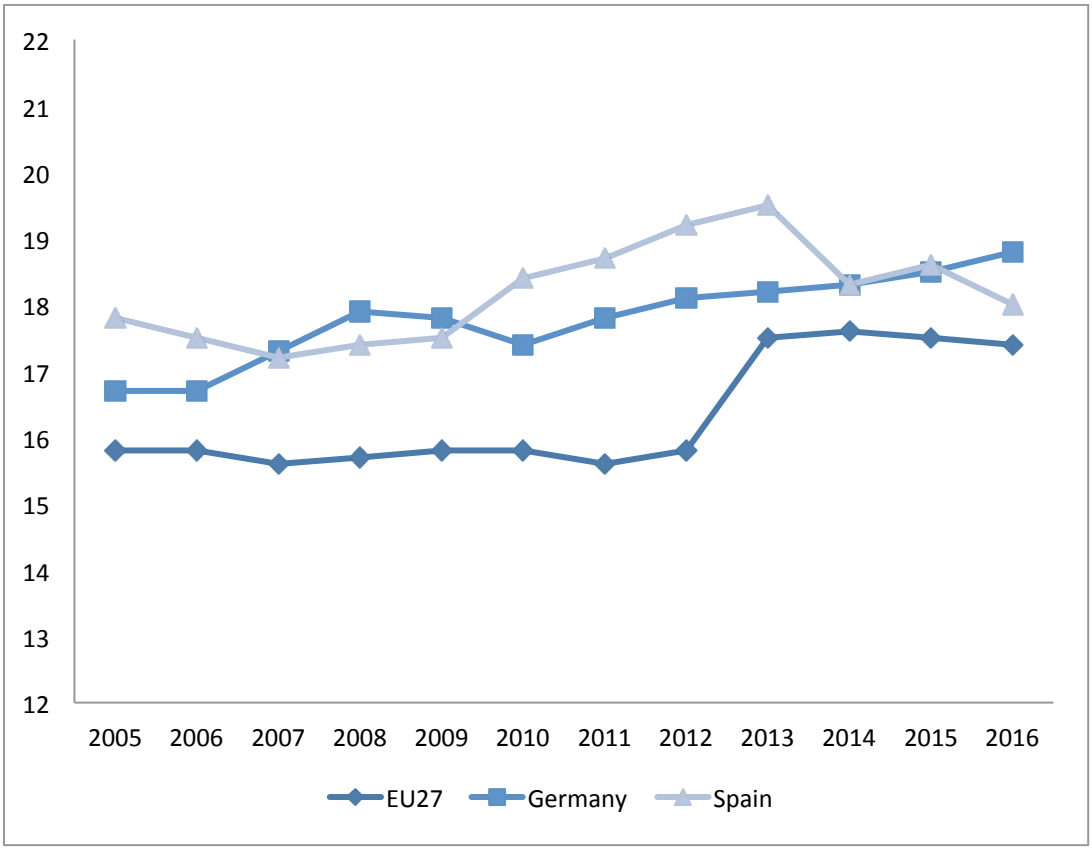


Source: PISA and PIAAC

In terms of the few data available on the competences of the young population, two assessments offer a partial view of the level and distribution across Spanish population: PISA and PIAAC. This data is not representative for the case of PIAAC at regional level which is the most valid proxy because it assesses specifically young adults. However, we include PISA in our analysis because it provides a proxy of competences at the moment of completing secondary education. According to the PISA assessment, Spanish 15 year old students perform slightly below the European average. In PISA 2003, they perform 7 points lower in numeracy and 13 in literacy compared to European average. In 2015, this gap diminished by half a point, although the standard deviation and the coefficient of variation for Spain are lower than average (10 points and 0.02 respectively). This shows lower dispersion of the overall distribution and this pattern is similar across PISA waves and literacy domains. Looking at PIAAC adult competences, young adults aged 20-30 score 5 points lower the European average and this appears to be coherent with the assessment of PISA on 15 years old pupils. The disadvantage of Spanish young adults

compared to European peers is similar across the two domains assessed in PIAAC (in numeracy is 7 points lower). If we look at 20-50 years population this gap persist. However, the distribution is more concentrated and in both the domains the variation among respondents was lower than EU average (the standard deviation was 8 points lower in numeracy and 5 in literacy), pointing out the coexistence of a lower level of adult competences with a relatively even distribution among young adults (Valiente & Scandurra 2015).

Figure 11. Participation rate in education and training (last 4 weeks)



Source: EUROSTAT

Regarding adult participation in education and training, In Spain people who have participated in adult education in the last four weeks before being interviewed are 18% in 2016 which is slightly above EU27 average (17.4%). The pattern over the last decade has a U shape: it starts above EU27 average, it increases strongly between 2009 and 2013 and starts to decrease during the last 4 years.

1.4.Labour market

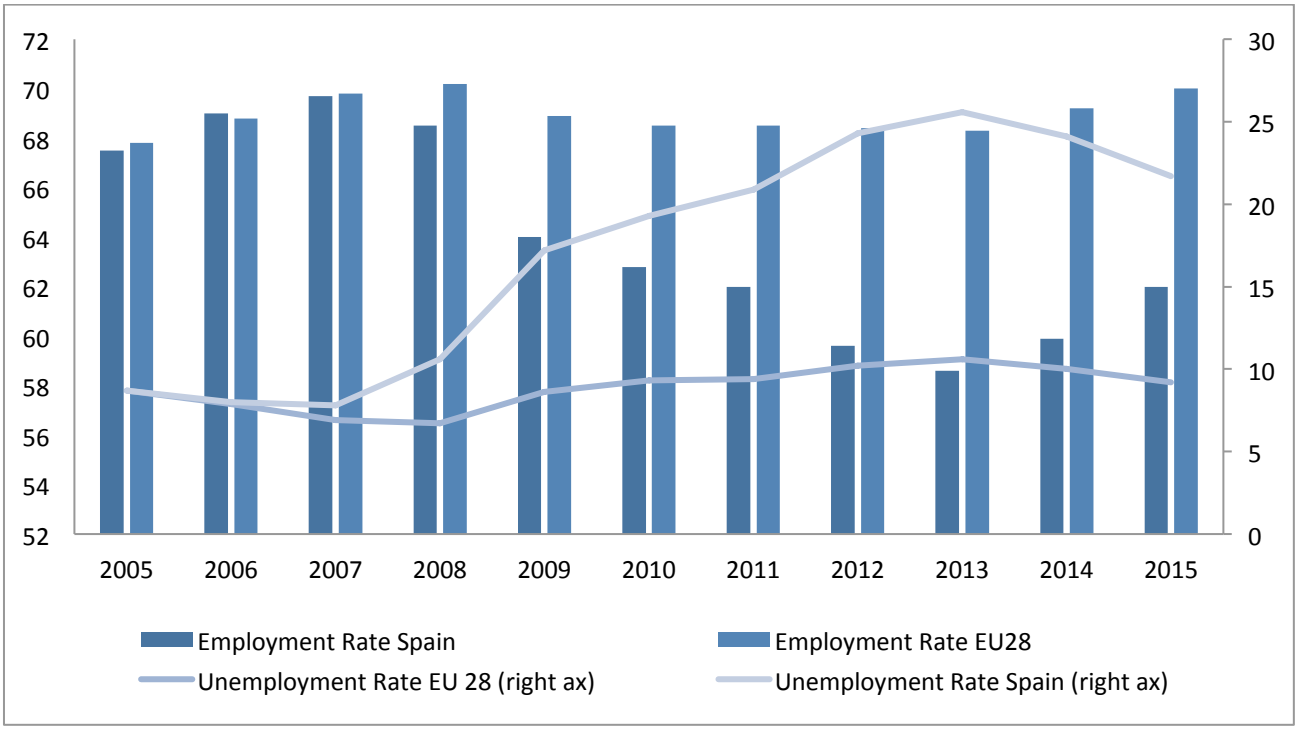
Spain operates a male breadwinner model, although, until the effects of the economic crisis were felt, there were signs of fast change, increasing the access of women to paid employment. The labour market has traditionally suffered from very high unemployment, but this was gradually reduced in the 20-year period up to 2009. Youth unemployment has been especially high during the recent years as economic crisis has lowered the access to the labour market and the transition between education and the first job became especially precarious. Additionally, employment is more concentrated in low skilled occupations, while high skilled white-collar occupation represents only 19% vs. 27% compared to EU27 of the population employed in 2015. This feature of the Spanish labour market and skills level of the overall population play a central role in explaining divergence in labour market access across European countries (Calero & Choi 2017).

During the time span 2006-2015 the overall economic employment rate for adults aged between 20 and 64 was below the EU-28 average. This gap started to increase in 2008, and in 2015 it reached 8% difference (Spain 62 vs. EU27 70.1%). Low employment rate is particularly high in youth population (people aged between 15 and 24), being almost half of the EU27, with important territorial differences. Before 2007, Spain had higher youth employment rate compared to EU27, but after it decreased dramatically being 17.9% in 2015, which is almost half the proportion of EU27.

Focusing on unemployment rate, Spain registers high unemployment rate (in 2015, 21.7% compared to 9.2 of EU28). There are huge territorial variations with 13% difference between Catalonia and Andalusia. After 2008, unemployment on aggregate in Spain increased dramatically compared to the European partners and from 2013 it has started to decline very slowly. Unemployment is particularly concentrated on youth, where almost half of the active population aged 15 to 24 years is unemployed, which is more than double the rate of European partners. Again, huge territorial differences emerge, in Andalusia youth unemployment being 56.8% and 42.3% in Catalonia. In addition, the percentage of active population unemployed for more than one year reached 10.4% in 2015 (EU27 4.5%), increasing dramatically from 2008 when it was 2% almost in line with EU27. This represents an important human toll as these people are likely to have lower chance to get employed and lose their will and ability to work. Again, important territorial differences emerge; in Andalusia long term unemployment

in 2015 was 14.8%, while in Catalonia it was 10.4%. Some authors have shown that the chances to lose a job were concentrated in low skilled occupation, which were the first to show job losses. Particularly youth population employed in low value-added activities associated with real estate or tourisms sectors suffered the most during the economic crisis.

Figure 12. Employment (left axis) and unemployment rate (right axis), population 20-64 years



Source: EUROSTAT

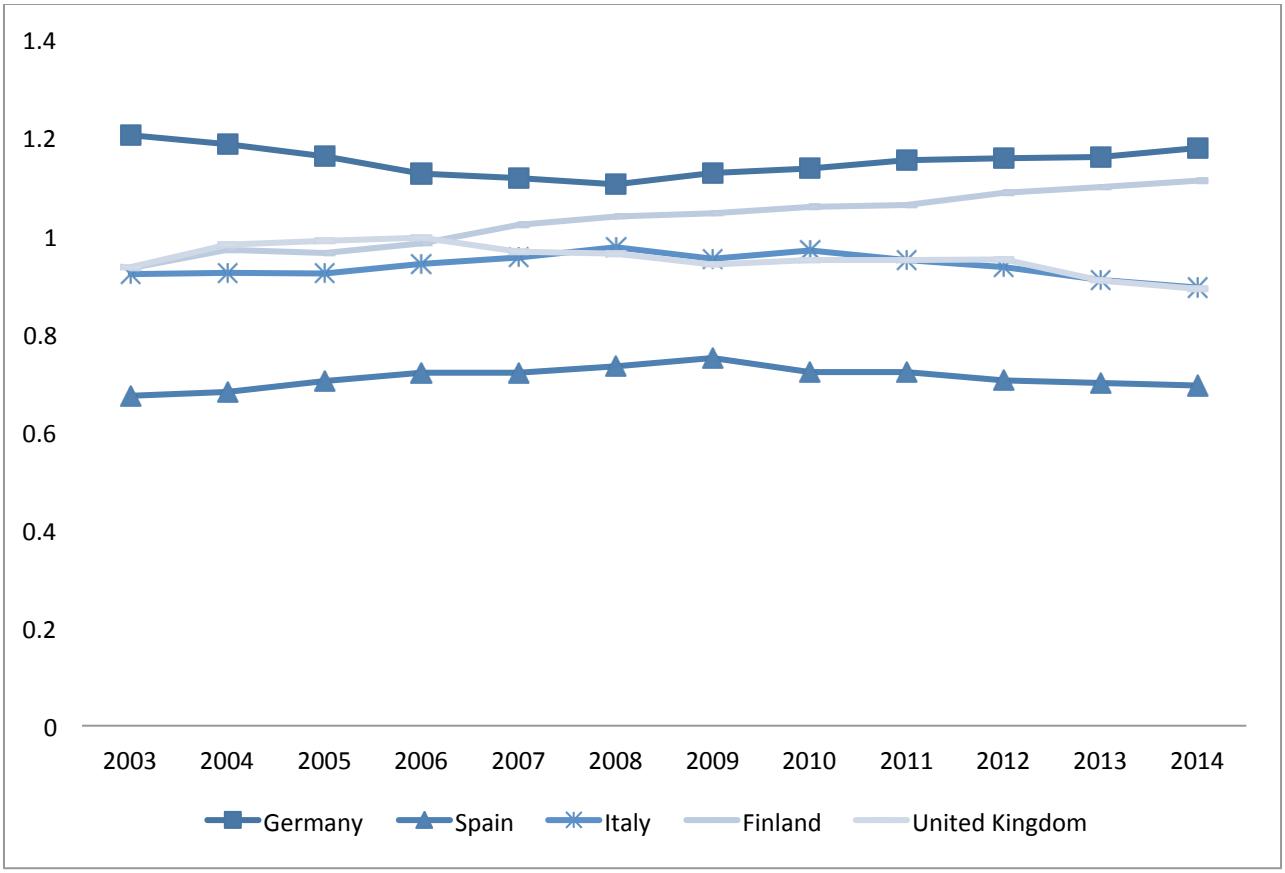
In 2014 Spain invested in the overall labour market policies an amount of resources equal to 3% of the GDP, similar to Finland which is one of the countries with highest investment. Expenditure increased due to the first impact of the crisis in 2008-2009 and reached its peak in 2010, then started to decrease. Almost 2.4% out of 3% (80%) is directed toward out-of-work income maintenance, although cut and reduction to the entitlement have lowered the share of GDP. Active labour market represents a very small share of the overall LMP, where training is 0.12% of GDP, a half of German and a fourth of Austrian GDP share.

1.5.Redistribution and social inclusion

Spanish net expenditure in social protection rose from 19.4% to 23.9% in the time span 2007-2014, with a strong increase taking place between 2007 and 2011 in order to cope to the consequences of the economic crisis. In Spain, government expenditure is more funded by central government compared to EU28 (47,3% in 2015), autonomous regions accounts for 26,3%, local government of 11,1% and social security funds 14,9%.

According to ESPROSS, expenditure on social protection is provided to household and individuals affected by a specific set of social risks and needs. In the case of Spain, resources spent for social protection benefits were equal to 6.079 euro per inhabitants in 2014, which means almost 70% of the EU19 average and 76% of the EU28. The expenditure increased in the last decade, but this share remained constantly below that of European partners.

Figure 13. Expenditure in social protection in PPS per inhabitant as % of EU19

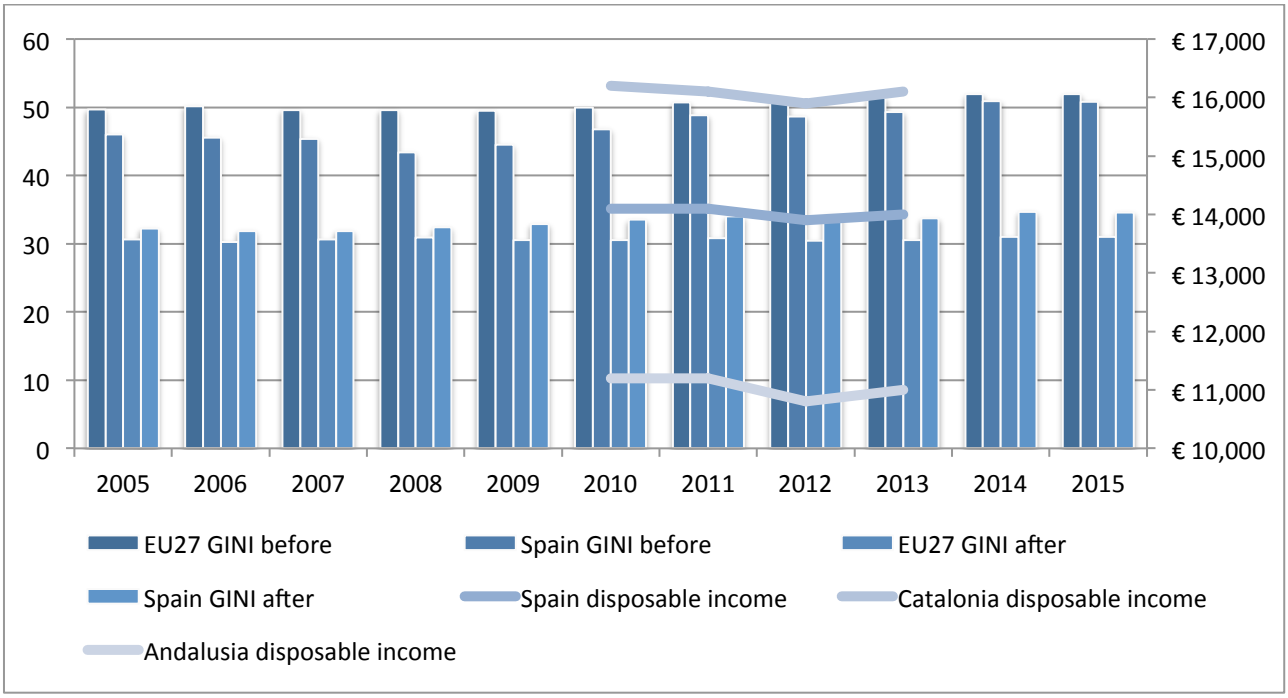


Source: ESSPROS, EUROSTAT

This shows the traditional low generosity of the Spanish welfare state. The main share is spent for pensions and retirement (old age), that is also the indicator showing the strongest increase (45%) between 2007 and 2014, rising from 6 to 8.8% of national GDP, below European partners. Spain registered an increase of spending in the health care system in the years preceding the economic crisis, but following the crisis its growth fell rapidly and became negative in real terms in 2010 and 2011. Some scheme of the welfare state remain under-financed compared to European partners such as health (being 79% of EU-28 expenditure in 2012), family (being 39% of EU-28 in 2012), social exclusion (51% of EU28 in 2012), family (59% of EU28 in 2012).

The disposable income for households is the amount of money that a household earns each year after taxes and transfers, representing the money available to a household for spending on goods or services. In Spain this is lower than the European partners, being 68% of the average for Germany and 83% of the UK average in 2013, and it has remained stable during the former 4 years. The disposable income in Catalonia was 14% higher than the Spanish average, while in Andalusia it was 21% lower. For this indicator longer series are not available and for this reason it is not possible to compare the recent trend with the pre-economic crisis level.

Figure 14. GINI index before and after taxes (left axis) and disposable income (right axis)



Source: EUROSTAT

In terms of income inequality Spain is similar to European partners (50.8 compared to 51.9 EU27), and it follows the general trend of widening the gap between the rich and the poor. Between 2005 and 2015 the Gini index[8], which is one of the key measures for inequality, shows that the concentration of income went from 46% to 50.8% against EU27 values of respectively 49.7% and 51.9%. However, the redistributive capacity of the welfare state appears reduced, as the Gini index after social transfers drops down to 34.6% in 2015, accounting for a 31.8% reduction of income inequalities (EU average was 40.3%). In addition, household wealth appears much more unequally distributed than income. In 2012, the richest 10% of Spanish households owned 43% of overall household wealth, being the median 300.000 US dollars, 50% than the 17 OECD countries included. In addition, half of the population results in a high level of indebtedness which is mainly concentrated in real estate assets (OECD, 2016).

The rate of people at risk of poverty or social exclusion started to grow in 2008 and in the last four years it has been between 10% and 20% higher than the EU27. Territorial differences between Catalonia and Andalusia are very relevant and in the last ten years they have grown; In 2005 the share of people at risk of poverty in Andalusia was 31%, which is 78% more compared to Catalonia (30% compared with Spain average), while in 2015 it reached 42.6%, representing 118% compared to Catalonia and 50% more than Spanish average. From 2010 territorial differences started to enlarge reaching a peak in 2015.

When we look at the severe material deprivation rate[9], apart from 2005, Andalusia has experienced higher level of extreme poverty over the last decade. Spanish average was 4.1% in 2006 equal to Catalonia, while in Andalusia it was 6.5%. In 2015 it was 6.4% in Spain, 6.7% in Catalonia and 8% in Andalusia, showing a general increase in the country, but less inequality within regions. EU-SILC data point that over the last decade growing inequality seem to be concentrated not on the extreme poor but on people at risk of poverty and the share of poor is growing largely among regions in Spain.

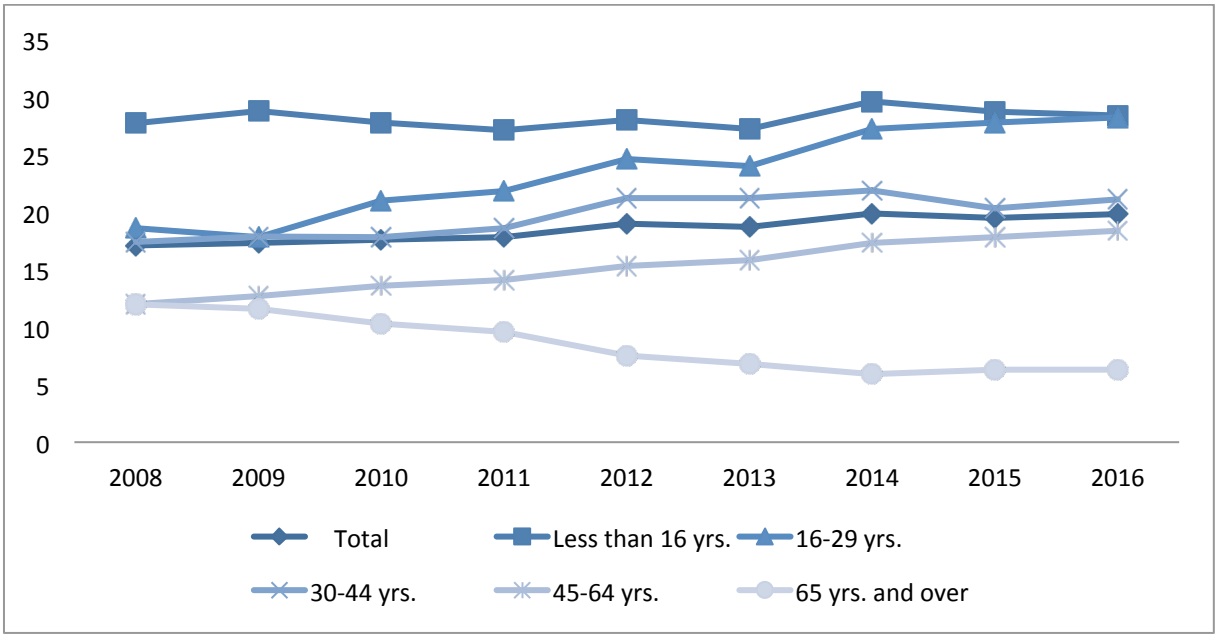
[8] The Gini coefficient measures the extent to which a distribution deviates from a perfectly equal distribution. In this case, GINI is applied to equalised disposable income within a country. Generally it ranges from 0 to 100, however it could also be expressed on 1-point scale. A coefficient of 0 expresses perfect equality where everyone has the same income, while a coefficient of 100 expresses full inequality where only one person has all the income.

[9] Severe material deprivation rate is defined as the enforced inability to pay for at least four basic items such as: 1. to pay their rent, mortgage or utility bills; 2. to keep their home adequately warm; 3. to face unexpected expenses; 4. to eat meat or proteins regularly; 5. to go on holiday; 6. a television set; 7. a washing machine; 8. a car; 9. a telephone.

One of the main drivers is the massive loss of job experienced during the economic crisis. In fact, the share of people living in households with low work intensity (population aged 0 to 59 years) experienced a dramatic rise until 2014 for Spain, representing 17.1% while in 2005 it was 6.9%. The same trend was experienced by Catalonia and Andalusia. From 2005 until 2015 the increase ranged between 4.1% in Catalonia to a maximum of 14.1% in Andalusia.

Finally, although the regional data are limited, it is interesting to look at the rates of poverty across age groups since the financial crisis (See Figure 15[10]). In fact, the proportion of 16- to- 29 years-old who were exposed to the risk of poverty increased from 18,1% in 2008 to 29,6% in 2016. The leap exceeds the 150% of the value scored in the initial year.

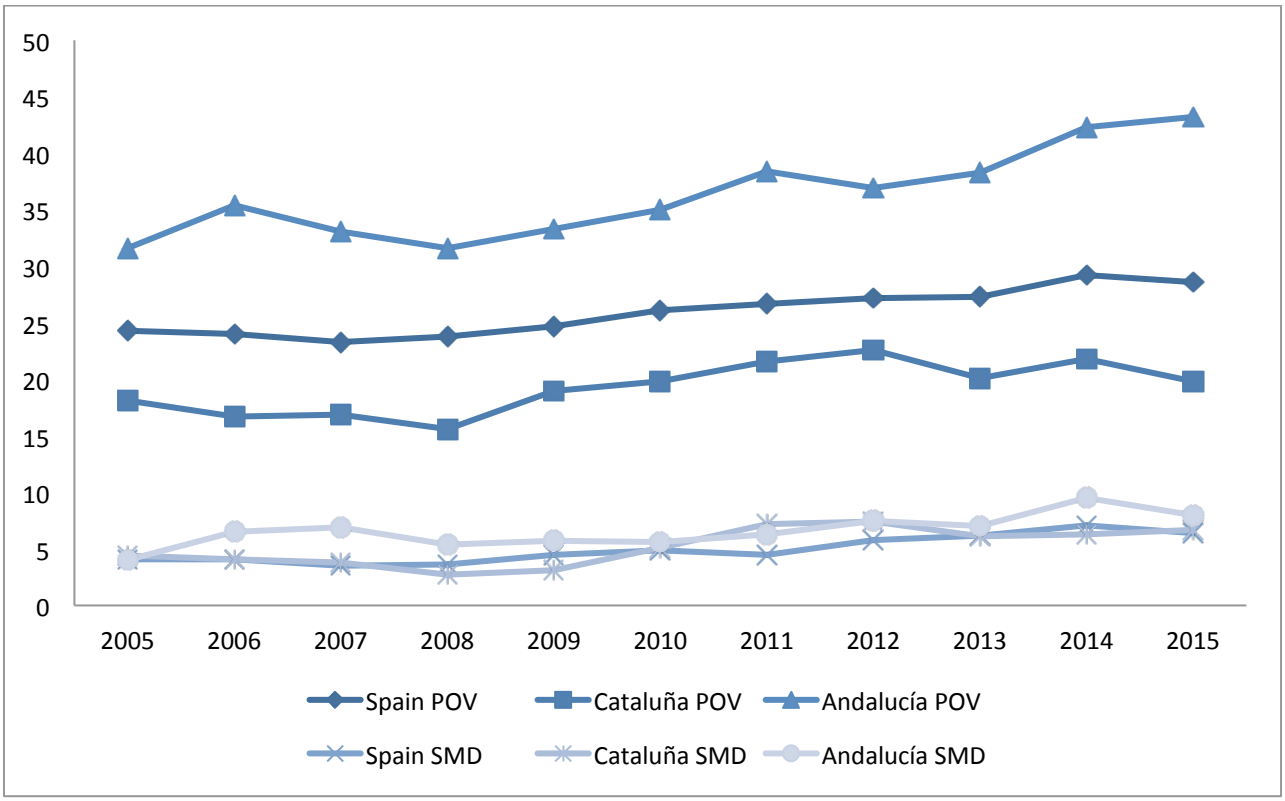
Figure 15 Risk of poverty, rent imputed on the base of income of the year before



Source: INE, 2017

10 INE, Riesgo de pobreza (renta año anterior a la entrevista). Retrieved from, http://www.ine.es/jaxiT3/Tabla.htm?t=9958 on 18, July 2017.

Figure 16. Population at risk of poverty or social exclusion, % (POV) and severe material deprivation population, % (SMD)



Source: EU-SILC, EUROSTAT

Concerning the public sphere and civic participation in Spain, data on voter turnout in national elections, which is one of the proxy of citizens' participation in the political process, expresses a clear trend of decline, common to many other EU countries. The percentage was equal to 75.3% in 2006, but participation decreased to 68.9% in 2011, lower than the European average. A similar decline is also shown by turnout data in regional and EU parliamentary election. In 2010 according to the quality of government index[11] the Spanish mean was 0.09 in 2010 and 0.13 in 2013, being the mean of the European average[12] 0.23 in 2010 and 0.21 in 2013. Territorial differences are present; Catalonia scored on this scale -0.43 and -0.05, while Andalusia scored -0.15 and 0.02 for 2010 and 2013 respectively. The perceptions about the quality and the trust of

[11] The European Quality of Government Index (EQI) is the result novel survey data on corruption and governance at the regional level within the EU, conducted in two waves in 2010 and 2013. The data focus on both perceptions and experiences with public sector corruption, along with the extent to which citizens believe various public sector services are impartially allocated and of good quality. The data is standardized with a mean of zero, and higher scores implying higher quality of government.

[12] It refers to all 28 European member states and two accession countries (Serbia and Turkey).

Spaniards appear to be very low compared to EU average and this is particularly the case of Catalonia.

1.6.Health and well-being conditions

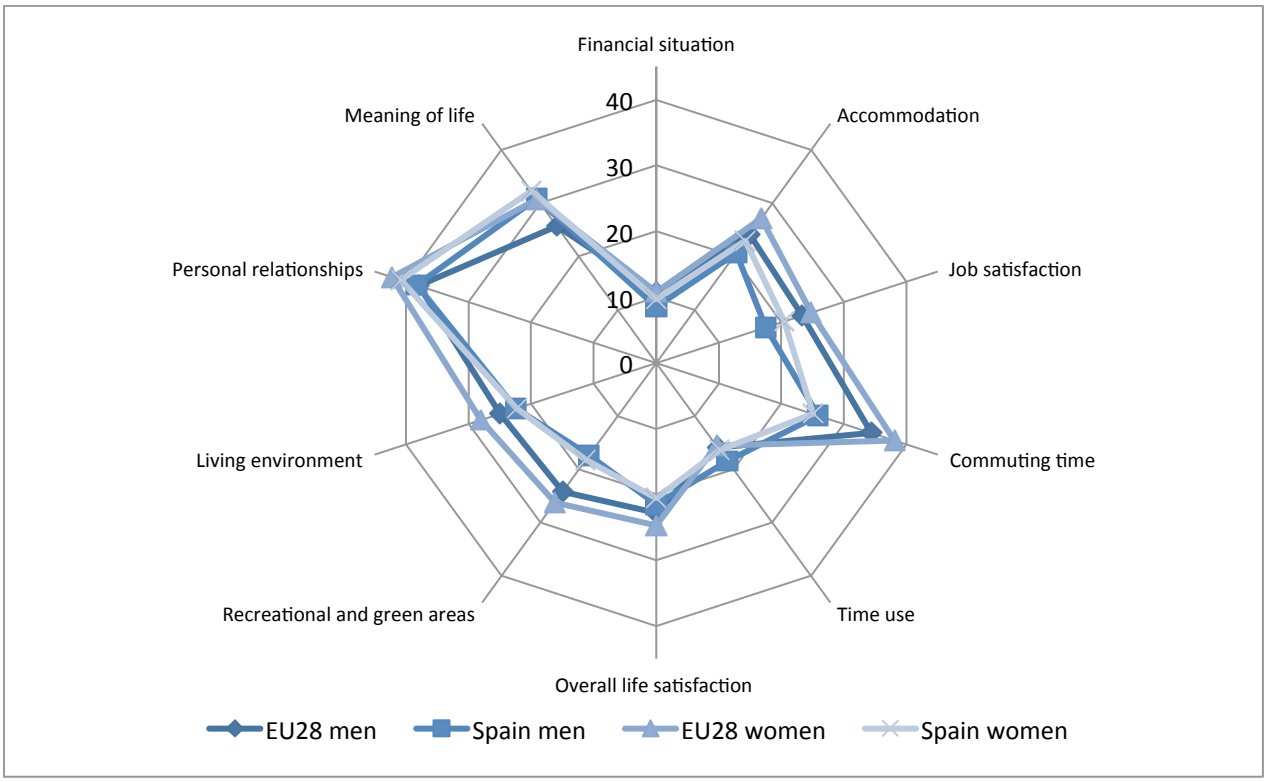
Health and well-being conditions are very difficult dimensions to assess. Many data gaps emerged and there is neither enough information at regional level nor for targeted age group. We will refer to general condition of health and well-being in this section. Spanish population has experienced an improvement in life expectancy together with an increase in healthy life years. In 2015 Spanish both women and men had 65 years of healthy life years above the European partners like UK (64.2 for women and 63.2 for men or Germany respectively 56.5 and 56.4). Total self-perceived health was very high: people reporting very good or good self-perceived health were 72.6%, being 5.6% higher than EU27 average. However, the trend of this indicator showed high increase before 2011 and it dropped almost 3% in the last three years. This is caused by an increasing share of people who report bad self-perceived health as the ratio between high and low self-perceived health went between 2011 and 2015 from 14 to 12.5 while in the EU27 it was 8.96 reaching 8.7 in the last period reported.

Looking closer to the young adult population, some information about life satisfaction is available for European member states in the EU-SILC 2013. In 2013 a special ad-hoc module of EU-SILC assessed satisfaction in different domains of life. We report in the **Figure 17** the percentage of young adults aged between 25 and 34 who report being highly satisfied in the 10 domains assessed. Generally both women and men Spanish young adults experienced lower satisfaction in all 10 different domains compared to EU28, expect in time use (+1.7%) and meaning of life domain (+3.2%). Biggest gaps are revealed in commuting time (-10.7%), recreational activities (-7.5%), satisfaction with living environment (-4.3%), accommodation (-3.9%) and job satisfaction (-5.1%).

We also report an overall factor[13] of life satisfaction for people aged between 18 and 30 years for all the items included except labour market and commuting items. This population has similar overall satisfaction compared to the EU28, being respectively -0.018 and -0.013. However, women seem to experience less overall satisfaction compared to men and the EU28 average; the dispersion of the index is also higher for them compared to men, but lower than the EU28.

[13] The factor is derived from a principal component analysis. The population aged between 18 and 30 years are included. Items included are PW030, PW040, PW120, PW160, PW200, PW210.

Figure 17. High satisfaction in various life domains, population aged 25-34, EU28 and Spain, 2013



Source: EU-SILC, EUROSTAT

There are very few proxies available at regional level regarding access to health services. Some of them are closely related to health system such as hospital staff and doctors available in the area. Of course these proxies are a measure of the coverage of health access. The availability of hospital staff and resources revealed a gap between the two regions Catalonia and Andalusia. In 2015, the availability of total beds[14] in hospitals infrastructure in Spain was 297 beds per 100.000 people while in Catalonia and Andalusia was respectively 435 and 259. In the last decade, the availability of hospital beds declined as in other European countries such as Germany, but the decrease was more important for Spain since it accounted for -11.7% compared to 2005 (Catalonia registered a -12.5% and Andalusia -16%). This reveals a lower health access particularly if we consider that there was a pre-existing gap between Spain and other European

[14] Total hospital beds are all hospital beds which are regularly maintained and staffed and immediately available for the care of admitted patients. The overall account for hospital beds which are regularly maintained and staffed and immediately available for the care of admitted patients. These are then broken down between: Curative care (acute care) beds; Psychiatric care beds; Long-term care beds (excluding psychiatric care beds); Other hospital beds.

partners and that the overall level was increasingly lower (being in 2015, almost 2/3 lower than Germany and 1/3 of Finland). Considering the availability of nurses and midwifes in hospital, Spain registered 514 per 100,000 inhabitants in 2015, which is lower compared to other European partners. Catalonia has 602 nurses and midwifes, while Andalusia 370; this represents respectively 116% and 72% of the national average. Catalonia faced important decrease in 2010, while in Andalusia this drop has been registered from 2012.

Regarding the availability of medical doctors, Spain has a similar share of doctors, similar to Finland and lower (-8%) than Germany. The share has increased slightly over the past decade, but a slight decrease has been registered from 2011 onwards. Substantial territorial differences are present, compared to Spanish average. Andalusia has 29% less while Catalonia has 5% more medical doctors. This gap has increased over the last decade, while in 2005 Andalusia had 5% less doctors and in 2015 it had 28.3% less than the Spanish average. Meanwhile, Catalonia remained slightly above the mean (+2% and +5%).

Going beyond subjective perception, we should look at some other indicators related to the personal well-being, ranging from security to alcohol consumption and smoking, in order to have a better picture of well-being in Spain. We can rely on the better life index elaborated by the OECD which collect national composite index for different domains. One of them is the homicide rate (the number of murders per 100 000 inhabitants) as a quite reliable measure of a country's safety because, unlike other crimes, murders are usually always reported to the police. According to the latest data, Spain has a very low share of murders, the seven lowest among EU28 and it decreased compared to the period 2000-08. Catalonia homicide rate was 0.54 in 2016 and this data has dropped, much lower than the OECD average of 4.1._Alcohol consumption has been decreasing over the last decade from 12.3 in 2002 until 9.3 litres per capita for the population aged 15 and over. This is similar to UK (9.4) and Finland (9.1).

2. Final remarks

Limitations in the availability of data produce a scattered overview of the young adults living conditions. In this sense, the present report raises awareness of two huge challenges for further research and policy evaluation.

First, limited information constrains the scope of academic debates. The general accounts of educational trajectories use territorial average rates of enrolment and early school leaving in order to discuss the effects of the legal reforms passed in 1970 and 1990 (Merino, 2013; Felgueroso et al, 2014). This strand of research is problematic because the data conflate individual and collective trends. In addition, it asks research questions in the vein of methodological nationalism, that is, invites specialists to take the nation- state as the basic unit of analysis.

Second, not only data collation requires enormous endeavours, but also the partnership between the Chamber of Commerce of Catalonia and the Department of Education has neither been effective. Strikingly, this state of the art contrasts with the most recent recommendation of the European Union regarding early school leaving:

> "[The Council of the European Union], alongside the EU early school leaving indicator, [invites the member states to] explore opportunities for developing or enhancing national data collection systems which regularly gather a wide range of information on learners, especially those at risk and early school leavers. Such systems, covering all levels and types of education and training and in full compliance with national legislation on data protection, could:
> (…)
> (d) facilitate the availability of data and information at different policy levels and their use in steering and monitoring policy development;
> (e) provide the basis for developing effective guidance and support in schools with a view to preventing early school leaving, as well as follow-up measures for young people who have left education and training prematurely" (Council of the European Union, 2015: 7).

Although this briefing paper unfortunately cannot provide details at the levels of autonomous communities and NUTS3, a brief glance of data for the whole of Spain inspires a few general conclusions on the social conditions of young adults. Strikingly, the point is that many young adults are foreign-born, these cohorts are divided by polarised educational inequalities, and a growing share of young adults have been exposed to income poverty since the financial crisis. These trends highlight both the crucial relevance of the policies addressed to this age-based target group and the huge challenges that these policies have to overcome.

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