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OVERVIEW OF THE LABOUR MARKET SITUATION OF LOW-EDUCATED AND ROMA POPULATION AND REGULATIONS AFFECTING THEIR EMPLOYMENT

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Introduction: aim and construction of the report

The report serves an important function in accomplishing the WP19 of NEUJOBS project by providing background against which the fieldwork may be designed and its results evaluated. It gives a broad overview of the working of the labour market for low educated population and within this, Roma population specifically. As such, it comprises three consecutive sections – (1) situation of the labour market situation of low educated population, (2) the situation and chances of employment of the Roma/Gypsy population, and (3) labour market regulators and that may have an important role in the employability of the population in question. We are investigating low educated population because this is the reference group against which Roma's labour market situation may be contrasted. It is hoped that the combination of these three sections will give a decent background to understanding the circumstances of Roma employment (or the lack of it) in European countries. The report summarizes existing knowledge on the questions.

The first section compares the relative position of low educated individuals vis-à-vis their more educated counterparts across the labour markets of five European Union (EU) countries – Bulgaria, Spain, Hungary, Romania, Slovakia. It is needless to say that the majority of the low skilled population is not Roma, still the generally low educational level of the Roma population in all of the countries may legitimize out decision to contrast Roma's labour market characteristics to this population subgroup. We specifically look at the odds of a) labour market participation b) chances of finding employment c) quality of their employment. Rather than treating the low educated population as a homogenous group, the internal structure of the low educated population in each country is subjected to an analysis and the final results are presented with respect to this heterogeneity. The primary method of our analysis is desk research of existing literature and original statistical analysis – including descriptive statistics as well as binary probabilistic models – of the data from the EU Labour Force Survey.

The *second* part of the paper summarizes available data on Roma employment in the countries researched. This part scrutinizes upon possible reasons behind the low employment rates as well as provides a comparison of labour market position of Roma across the five countries. It utilizes available national data as well as the cross-comparative data of the most recent UNDP survey in 2011.

The third section of the report introduces and contrasts labour market and welfare regulators between countries, because they provide the framework in which decisions both on the supply and demand side are taken by labour market actors. Based on available information, it overviews macro level regulations that define the frame of employment opportunities of the targeted population: it gives an estimation of the costs of workforce, their distribution across educational level (level of minimal wage, level of taxes and allowance imposed on wages) and welfare allowances (including family allowances, early pension, disability pension and other welfare allowances) which frame the supply side of the labour market.

The report ends with concluding the various aspects of employment of Roma people and molds the knowledge pools provided by various disciplines such as economics, labour economics, sociology and anthropology.

Executive summary

Part 1.

➢ Theoretical literature, as well as empirical studies have confirmed low education as a factor that is detrimental to the position of individuals in the labour market. This is especially true in a modern, "knowledge-based", economy, which the EU subscribes to as to a model for its development.

➢ There is a high level of divergence between EU member states countries in terms of structure of low educated population and the severity of the impact of low education attainment on the chances of an individual on the labour market.

➢ Spain is the country, where the low educated are both numerous and well-integrated in the labour market. On the other hand, only a rather small proportion of population in Slovakia is low educated, but those who fall into this group face significant disadvantage in the labour market.

➢ Certain groups (younger, less experienced low educated individuals, people living in sparsely populated areas outside of the region of the capital city, but in some cases also women) face especially adverse odds of succeeding at the labour market. Other groups (like older workers who can offer experience as a compensation for their lower formal education) are better able to overcome the disadvantage in education.

Part 2.

➢ An important obstacle of having a clear picture on employment situation of Roma people is the great deal of variation in methodologies applied in surveying Roma and constructing indexes for employment.

➢ Rates of formal employment are extremely low among Roma population in Europe – ranging from 20% to 45%. There is a significant gender and ethnic gap in employment levels. Significantly smaller number of Roma are in employment when compared to non-Roma living in their proximity. The gap between men and women employment rates is even higher among Roma than the non-Roma. Consequently, Roma women suffer multiple disadvantages.

➢ Three important reasons may explain the low employment levels: (1) the lack of education and qualification valued by the labour market; (2) regional disadvantages – Roma typically reside in those regions of countries which are hit by economic hardship and (3) ethnic discrimination in the labour market.

➢ Getting a closer look, it becomes evident that although most of the Roma people are excluded from the formal jobs, their involvement in the informal and atypical segments of the labour market is significant and exceeds participation of non-Roma to a great extent. This segment – non-contracted, casual, day work

and family businesses - however, may be characterized by low salaries, instability, insecurity and lack of welfare and health insurance.

➢ There is an interesting contradiction concerning educational levels and employment rates: in South East and Southwest European countries (Bulgaria, Romania, Spain) where the lowest levels of education are registered among the Roma population we see higher employment levels compared to Central Europe, where educational levels are higher. The explanation for this contradiction is partially related to economic history of the countries and also to structural reasons. In southern countries of Europe traditional Gypsy communities and subsistence strategies could survive to some extent. On the other hand, economic sectors – i.e. construction industry, tourism, agriculture - which could absorb unqualified workforce are weak in Central European countries compared to South and South East Europe.

Part 3

➢ Employers' side of the labour market:

- o There are sizeable differences in terms of burdens imposed on employment (minimum wage, taxes, health insurance, social security contribution), which after all define the cost of labour, especially in the lowest segment of the labour market.

- o The cost of labour, however, that is the total sum, that burdens the employer when considering the hiring of a person, seems to be decisive in terms of what proportion of Roma have the opportunity to enter the labour market.

➢ Employees' side of the labour market:

- o In Central and South East European countries households where adults become unemployed suffer significant losses.

o The largest incentive for people to enter employment (where unemployed loose the most income) are Romania, Bulgaria in the first row, and Slovakia and Hungary in the second, and Spain in the third.

o There are further important differences, however: in Bulgaria and Romania families suffer great losses in household income if any of the adults become unemployed, but the relative loss in income with the second unemployed is not that large. In contrast, in Hungary and Slovakia the opposite is true: families with one unemployed reach the 74-85% of the income of a household in which both adult are employed, while they suffer great losses at the point when both adults become unemployed.

Part I.

Position of Low Educated Individuals in the Labour Market

By Brian Fabo and Martin Kahanec

1.1 Introduction to the Debate and Method of the Analysis

The aim of this section is to introduce how the academic discourse, mainly in the fields of economics, political economy and sociology, has approached the issue of education in connection to the labour market. We do so because the focus of workpackage 19 is the "Roma" population which is characterized by generally low level of education, therefor their labour market situation should be contrasted rather to those with low education than the entirety of working age population. In addition, to give the reader an idea about the main topics that have been in the focus of the epistemic community, empirical works relevant to the five countries that are analysed in this report – Bulgaria, Spain, Hungary, Romania, Slovakia – are briefly introduced as well. Finally, to complete the basic overview, the major documents produced by the European institutions on the issue, along with relevant research that has been done so far under the umbrella of the NEUJOBS project are also briefly introduced. Due to the complexity and salience of the issue a throughout state of art meta-analysis of the relevant research is beyond the scope of this section and thus this short introduction should be understood as a basic roadmap for orientation in the logic of the mechanism discussed in this text.

1.1.1 Overview of Theoretical Debates and Existing Empirical Research

The importance of skills and knowledge for economy has been recognized in economics from the classical times. Becker's work on human capital (Becker, 1964) is of particular importance to this report. Focusing on time dimension of accumulation of human capital, Becker showed that investments in the human capital tend to be

concentrated in the early phase of life, devoted largely to education and less to production and consumption in expectation of future returns from increased productivity. Over the time, as the potential for return gradually diminishes due to the decreased amount of time left for reaping the benefits of increased productivity the equilibrium shifts towards production and leisure. (Becker 1975) Consequently a person who fails to make a significant investment in education in their youth will see lower returns from any effort to accumulate human capital, through education or otherwise, later in his or her life. (Keep, James 2010) Implicitly, young persons with low level of education are likely to remain disadvantaged, in terms of access to decent jobs, throughout their whole life vis-à-vis their more educated peers. A Pareto-optimal equilibrium would, therefore, result in a society, in which everyone invests in education up to the point, where the costs of continued education cannot be justified by gains from increased productivity.

According to the literature, the returns to education depend on many factors. Firstly, a worker benefits, in terms of his or her earnings, from each additional year of schooling, at a decreasing rate for each additional year of schooling. Experience has a similar positive effect on earnings, which signals that education can be to a degree be replaced by experience. (Mincer 1974) According to a more recent study, the returns to an additional year of schooling (in terms of earnings) vary between 4 and 10 percent in developed countries. (Brunello, Comi and Lucifora, 2001) Additionally, more educated individuals spend more hours working, which allow them to compensate for the time spend at school. (Card 1999, 1809)

However, as noted by Boeri and van Ours, there is a number of barriers to investment in education. Firstly, capital markets are incomplete and individuals are therefore restricted in their decision making by the existing limitations resulting in suboptimal decisions (e.g. by being forced to enter into labour force early at the expense of education to sustain the living of their families). Secondly, private rate of return from investment differs from social rate of return, which makes some kinds of education desirable from social, but not from personal perspective. Finally, there is a long time gap between educational decisions and returns to these decisions, which may cause

individuals to behave in a myopic manner, focusing on short-term benefits at the cost of lower potential gains in the long run.[1] (Boeri, van Ours 2008, 158) Hence, the structure of education in a society should not be expected to be fully optimal in reality. A relatively large body of both economic and non-economic literature has been devoted to the study of this issue, mainly focusing on the structure of the educational system. A review of this research has been produced by Akerlof and Kranton (2002, 1168-1172)

In addition to the economic literature, the socio-economic outcomes of low-educated workers have also been analyzed as a function of their stigmatization. According to numerous psychological and anthropological inquiries,[2] certain groups, including ethnic minorities, physically handicapped individuals or people who are not deemed to be educated according to the prevailing societal norms suffer a stigma, which affects the treatment the affected individuals receive from the society at large.

Just like it is the case with other kinds of capital, the value of human capital is determined by the interaction of the supply and demand sides. Empirical studies have shown, that while in the early industrial (*Fordist*) era of economic development accumulation of physical capital was considered the most important, modern (*Post-Fordist*) economies give priority to accumulation of human capital. (Abrahamovitz, David (2000); Goldin, Katz (2001)) In practice, this takes form of increased polarization between high-skilled and low-skilled jobs and *displacement* of low educated workers from medium-level jobs by their more qualified competitors at the labour market. (Manning 2004; Mayer, Solga 2008) A large stream of literature exists devoted to study of the dynamics of supply and demand for education on the labour market. (Dolton and Vignoles, 2000; Hartog, 2000; Bourdetand and Persson, 2008) As far as the conceptualization is concerned, low education is most commonly attributed to those individuals older than 16 years of age, who did not acquire any sort of secondary education (between 0-2 in ISCED classification) (McIntosh 2002; Lyly-Yrjänäinen 2008)

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[1] However, there is little consensus in the economic literature as far as the exact nature of preference for short-term versus long-term gains are concerned. (Shane et al, 2002).

[2] A summary of the classical literature on the subject has been published by Crocker and Major (1989).

The five countries that are of interest for this paper are all very relevant for understanding the variation in the 'human capital market' mentioned above. Four of them share the historical experience of centrally planned economy and subsequent transition towards market economy, while Spain has a historically very large portion of low educated population, which is still a very salient phenomenon (Lyly-Yrjänäinen 2008), even though upper-secondary attainment rates have been improving rather quickly in the recent period. (OECD 2012) These historical legacies resulted in the countries being laggards in accumulation of human capital in the European context. Furthermore, the five countries share another relevant common trait, namely significant Roma communities. Roma are especially vulnerable to being left behind by the education system, according to World Bank more than 75% of young Roma people does not complete secondary education. (World Bank 2012) (more details on this topic is given by Chapter 2)

In regard to the stigmatization discourse, the low education attainment of Roma and others who find themselves stigmatized in a similar fashion can lead to modification of behaviors or perhaps even preferences of the affected individuals. In turn, it is possible that some groups do not participate in the overall improvement in the access to education due to the prevalence of the self-fulfilling prophecy about their perceived inability to become educated. (Crocker; Major 1998, 210)

There has been some literature aiming at understanding the role of education on the labour market in the particular contexts of the selected countries. An important paper discussing the specificity of the situation in the former communist countries during the transition period has been written by Munich, Svejnar and Terrel. The paper identified a robust increase of importance of education throughout the period of transition, with a high level of variation between industries. (Munich et al 2005) Sadly, the situation from the latter half of 2000s onward has not yet been systematically analyzed. As far as Spain is concerned, much of the discussion is centered around the topic of high unemployment in the country, especially among young Spaniards. An important finding from empirical studies focusing on Spain is that the recent improvement in country's education outcome cannot be linked to improvements in productivity (de la

Escosura, Roses 2010), which has been attributed to rigidity of labour market in Spain that hindered job creation (Dolado et al 2000, 955).

1.1.2. EU Policy Efforts and Relevant NEUJOBS Research Findings[3]

The governance of education has traditionally been in the domain of member states in the EU. Nevertheless, especially since the 2000 Lisbon Summit, where the heads of the EU member states adopted the strategic goal "to become the most competitive and dynamic knowledge-based economy in the world", the member states have been publishing joint work programmes every other year. (Council 2000) Five such reports have been published so far: in 2004, 2006, 2008, 2010 and 2012.[4] In addition to these regular reports, the European Institutions deal with the issues of education on an *ad hoc* basis, for example in connection with the Roma integration agenda. (EC 2012) The EU has also set goals addressing the issue of low education attainment in the Lisbon Strategy (at least 85% of 22 year olds to have at least upper secondary education) and in the Europe 2020 program (Reducing school drop-out rates below 10%)

In regards with the marginalized communities, such as the Roma, another very important set of legislation is the Employment Equality and Racial Equality Directives, which has been introduced in 2000, following the amendment of EU primary law by the Amsterdam Treaty of 1999. The Treaty introduced in particular the 13th article of the Treaty establishing the European Community (Since the Lisbon Treaty, the anti-discrimination principle is included as Article 19 of Treaty on the Functioning of the EU), which prohibits discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation. The protection of vulnerable minorities has been included in the EU Charter of Fundamental Rights, which had, however, not been incorporated to the primary low until the adoption of the Treaty of Lisbon. More recently, the EU has sponsored an expert effort to develop an understanding of

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[3] In this section we only highlight the most important EU policyframework, a detailed analysis of country specific and EU policies will be addressed by the workpackage's next deliverable (D19.2) due in Spring 2012.

[4] These reports are avaivable online at http://ec.europa.eu/education/lifelong-learning-policy/progress-eports_en.htm

discrimination of vulnerable groups such as LGBT (Lesbian, Gay, Bisexual and Transgendered) people, older citizens, or ethnic minorities.[5]

The issue of labour market position of the low educated individuals has also been addressed within the NEUJOBS project. Kureková, Haita and Beblavý proposed an innovative way to the measurement of low-skillness based on labour market outcomes. (Kureková et al, 2012) The same authors performed an original empirical analysis on the data obtained from online job vacancies portal in order to determine which skilled are in demand among the low educated workers by the employers (Kureková et al, 2012). While they identify an important role of formal education, they highlight the role of soft skills for employment. Nelson addressed the reconciliation of work and welfare, stressing the importance of education as „social investment" that weakens the dependency of individuals on state support. (Neslon, 2012) Finally Beblavý, Kureková, Drahokoupil, Myant and Domonkos analyzed labour regimes and their impact on education in the IT and automobile sectors, highlighting the role of education as a part of labour regime that enables (or hinders) growth in these two key sectors. (Beblavý et al, 2012)

1.1.3 Aims and Method

In this section we address the issue how educational attainment and other socio-demographic characteristics affect employability in the studied countries. More specifically, we understand labour market success along three dimensions: Being active on the labour market, having a gainful employment, and maintaining a decent quality of the job (operationalized as having a full-time, permanent contract). Thus, the main objective of this section is to develop an understanding as far as the following question is concerned: *How does low educational attainment affect the odds of an individual in the selected countries to succeed in the labour market?*

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[5] Individual reports as well as their synthesis is available online at
 http://ec.europa.eu/justice/discrimination/experts/index_en.htm (12/20/2012)

In addressing this question, we first refer to the statistics published by Eurostat on the basis of the Labour Force Survey (LFS) data, from which it is possible to determine the main characteristics such as participation, employment and unemployment rates of the low educated labour force. We then perform an original statistical analysis of the EU LFS in an effort to identify the characteristics of the low educated workers. We address questions such as in which sectors do the low educated work, what their characteristics are, and how their odds of success in the labour market are influenced by their low education status versus other characteristics: age, gender, region and degree of urbanization. To determine the answers to this latter question, a statistical analysis using a probabilistic binary choice model (Logit) has been performed on the 2010 EU Labour Force Survey (LFS) data, with the aim to quantify the independent effect of low educational attainment on labour market position of different groups in the society.

Box 1: Data Selection

The statistical inference is performed using the EU LFS data for the year 2010. Only respondents reporting being economically active (either employed ("carries out a job or profession, including unpaid work for a family business or holding, including an apprenticeship or paid traineeship") or unemployed, but not studying, not in military, not retired, not disabled), aged between 15 and 62 and living in one of the five analyzed countries were taken into account. The sole exception is the analysis of economic activity, which is performed including also inactive individuals. Furthermore, all cases which contained a missing value in one of the crucial variables of the analysis (age, gender, region and degree of urbanization) were excluded. The age cut-off points were selected based on data availability (age brackets due to anonymization in the EU LFS dataset). The data from the Eurostat presented here are for the 15-65 age group. The total number of observations for the analysis of economic activity is 517,708, while the number of observations used for all remaining analyzes is 342,668.

All analyzed countries are members of the EU following the EU accession of Hungary and Slovakia in 2004 and Romania and Bulgaria in 2007 and thus participate on the common market. These countries are put into contrast to better identify the various labour market environments reflecting specificity of conditions in every particular member state. For the purpose of determining the aforementioned conditions, a comparative analysis of the structure of the low educated population in each of the studied countries is performed covering aspects such as age, gender, region and level of urbanization of the places where the examined individuals live.

Following the comparative overview of the structure of low educated population of the countries in question, a logistic regression is employed to determine what the odds of different segments of population are in securing employment and finding a full time and permanent position. In addition to the characteristics mentioned above, family situation (e.g. marital status and number of children) is taken into account. Besides studying the direct effects of low education on labour market outcomes, we identify the interactions of low education with a number of variables, such as age, gender and the type of settlement where the individual resides. This approach enables us to identify the heterogeneity of the impact that lack of education has on particular subpopulations across the studied countries.

1.2 Low Educated Population and the Labour Market

1.2.1 Overview

The low educated people in all the examined countries have relatively low employment rates. "Low education" was conceptualized as ISCED 0-2, that is people with lower secondary education at most. Being aware of the essential differences in educational systems of the studied countries, and limitations of comparability posed by these differences, we will use categorization of the Eurostat. The situation is least adverse in Spain, where nearly half of the low educated strata of population have a job. On the other side of the spectrum, in Hungary and Bulgaria record the employment

rate of loweducated population close to only a quarter of the respective population. Unemployment is widespread among the low educated people in all analyzed countries, with the exception of Romania. In Slovakia the unemployment of low educated reaches more than 44.3 %. In addition to unemployment rate, the low educated Slovaks also have a very low economic activity rate (25.60 %). Romania combines low unemployment rate (7.2 %) with relatively high economic activity rate (46.30 %). Low educated Spaniards are more economically active than their counterparts in all the other examined countries; however, they also face rather high unemployment rate (27.5 %).

Table 1.1. Economic Activity, Employment and Unemployment Rates of the Low Educated

	Economically Active Population (1000s)	Economic Activity Rate (%)	Employment Rate (%)	Unemployment Rate (%)
Bulgaria	484.7	37.1	28.5	23.1
Spain	9,910.8	66.5	48.2	27.5
Hungary	568.6	34.6	25.9	25.3
Romania	2,102.2	46.3	43.0	7.2
Slovakia	163.4	25.6	39.7	44.3

Source: Eurostat. Note: The numbers are valid for the low educated population aged 15-64 and represent annual averages for 2010.

Low educated workers also tend to be concentrated in certain economic sectors.[6] In Romania, nearly 70 % of workers in this group find employment in agriculture. This sector is much less important in Spain, Hungary and Slovakia, where the share is only about 10 %. Low educated in all countries, with the partial exception of Romania, find employment in manufacturing. The highest share of low educated workers who work in manufacturing is recorded in Hungary, where almost one in three low educated persons in employment works in the sector. Construction industry is another important sector among the low-educated, particularly in Bulgaria and Spain, and retail, especially in Spain, along with transportation and accommodation/food

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[6] See Annex 1 for a detailed breakdown.

services. The public sector also employs a significant share of low educated workers, especially in Slovakia and Hungary.

1.2.2 Analysis of Educational Structure

A quick look at the education structure of the five countries reveals a great deal of diversity between countries in terms of education of their population. While less than 7 % of Slovaks belong to the low educated group, almost half of Spaniards are low educated. Interestingly enough, Spain is also the country with the relatively largest group of highly educated individuals, suggesting that educational attainment cannot simply be measured on a linear scale, but it develops in a unique structure in every society reflecting local conditions. Consequentially, it is entirely possible to have a society with a large population of well-educated individuals living alongside a significant population of low educated people.

Table 1.2. Education structure of population in the analyzed countries

	Low	Medium	High
Bulgaria	18.28	58.83	22.89
Spain	44.14	22.75	33.12
Hungary	18.22	64.46	17.32
Romania	22.72	62.07	15.21
Slovakia	6.86	75.98	17.16

Source: Own calculation based on the LFS data from 2010, Economically active respondents aged 15-62 only

Furthermore, the low educated citizens are not evenly spread in the population. As detailed in Figure 1.1 the low educated individuals tend to be concentrated especially among older age groups and among the very young. While the latter finding is due to the exclusion of students from the sample, the former signals that the education systems expanded over the post-war period, making younger generations more likely to secure higher education vis-a-vis their parents.

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Figure 1.1. Share of the Low educated in Different Age Groups.
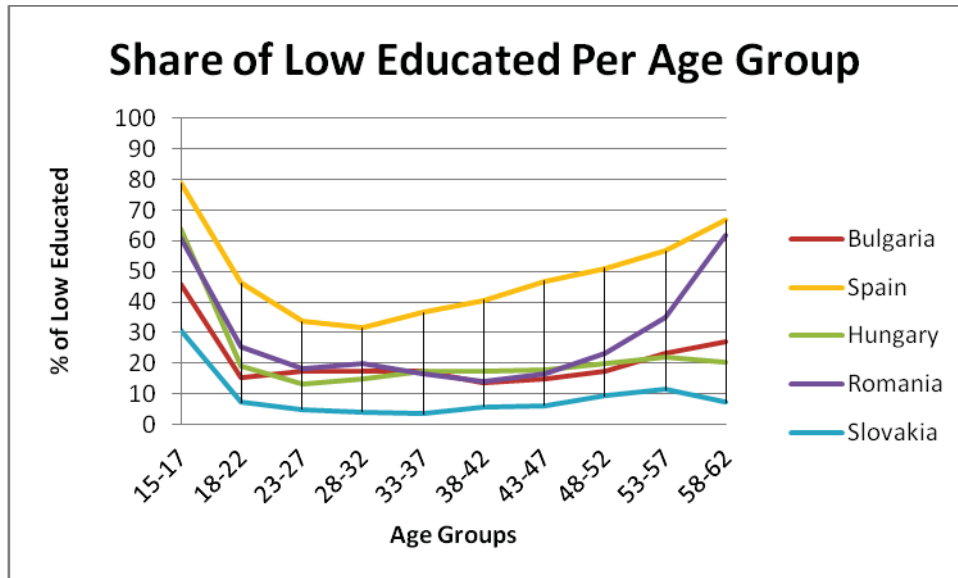
Source: Own calculation based on the LFS data from 2010, Economically active respondents aged 15-62 only

We find an interesting interplay between age and gender. Figure 1.2 shows percentage difference between share of low educated women in each particular age group and the share of low educated individuals of both genders. There is an educational gap between men and women in the age cohort of 40-50 years in Slovakia, Hungary and Romania. Especially in the latter two countries, mature women are by large margins more likely to be low educated than their male counterparts. In Spain, women of all groups are less likely to be poorly educated than men, however the difference is much less dramatic in the older segments of population. Bulgaria thus remains the only country, where older women, do not differ much in terms of education attainment as far as the low level of education is concerned from their younger counterparts. Another interesting phenomenon is visible among younger age groups, including individuals aged up to 30 years of age. Young women belonging to these age groups are present in the low educated subgroup to a lesser degree than men. This is visible in Bulgaria, Hungary, Spain, and Romania; however this trend is not observable in Slovakia. The gap is very large especially in Hungary and in Spain, where the proportion of women

with low education attainment is between 10 and 20 per cent lower than the portion of men of similar age.[7]

Figure 1.2. The difference in rates (in percent) of low education attainment between women only and men.
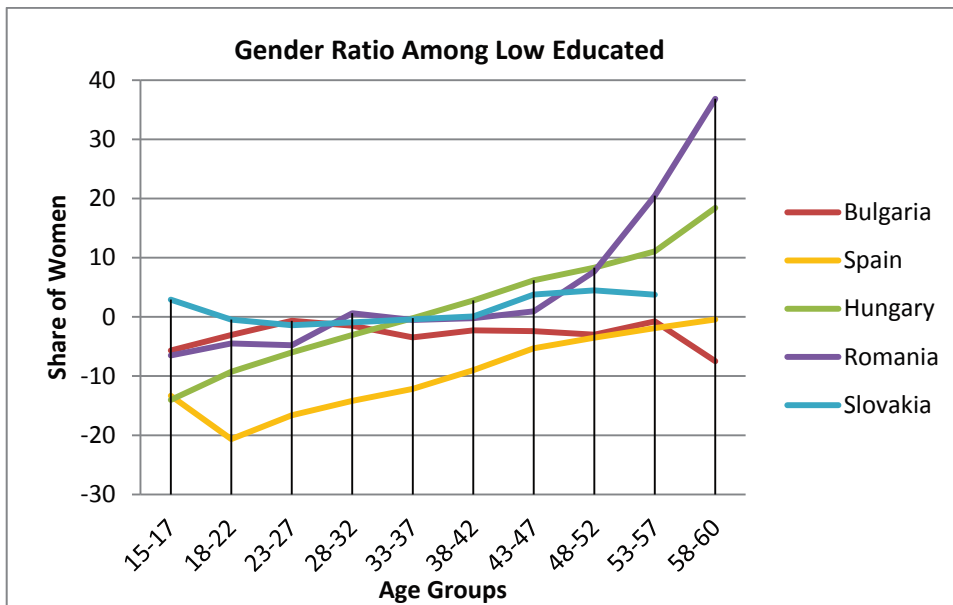
Notes: 0 = no difference between men and women, positive values = more low educated men, negative values = more low educated women.
Source: Own calculation based on the LFS data from 2010, Economically active respondents aged 15-62 only.

In addition to gender and age, it is also important to consider the contextual variables related to the place of residence. Unsurprisingly, low educated individuals form much larger portion of population in sparsely populated countries than in densely populated cities, as evidenced in Table 1.3 below. This is observed across all the examined countries.

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[7] The detailed table with results for both gender is attached to this report as Appendix 1.

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Table 1.3. Distribution of low education attainment per urbanisation level

	Dense	Intermediate	Sparse
Bulgaria	8.75	17.81	26.54
Spain	35.09	46.67	54.51
Hungary	9.43	15.78	22.03
Romania	5.46	14.18	33.52
Slovakia	3.00	5.91	9.12

Source: Own calculation based on the LFS data from 2010, Economically active respondents aged 15-62 only

Furthermore, the region of residence[8] is also important in some countries. Spain and Romania both have a significant level of divergence in terms of low education attainment prevalence.[9] While two Spanish regions - País Vasco and Madrid have only a quarter of their population falling into the low educated group, in five regions - Extremadura, Illes Balears, Andalucía, Murcia and the African enclave of Melilla, the rate is above 50 per cent. Similarly in Romania, the recorded rate of low educated in the region of the country capital and its surrounding Bucureşti - Ilfov the rate falls below 10 per cent, almost a third of population of the north eastern (Nord-Est) region falls into the low educated category. The difference between capital and periphery can also be seen in Slovakia and Hungary. While the region of Bratislava, the capital of Slovakia, has less than 5 per cent of its population in the low educated category, the share is almost double in the eastern part of the country (Východné Slovensko). In Hungary, the central region (Közép-Magyarország) along with the western Transdanubia (Nyugat-Dunántúl), along with borders with Austria record relatively low rates of low education attainment (around 12.5 and 15 per cent respectively), the rate in Southern Transdanubia (Dél-Dunántúl) nears 23 per cent. Bulgaria is thus the only country, which does not have a region with a share of low educated significantly higher than the nation's average. Nevertheless, the western regions of Yugozapaden

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[8] NUTS2 coding of regions is used for the analysis.

[9] See table attached to this report as Appendix 2.

(containing the country capital) and Severozapaden have relatively low number of low educated inhabitants (approximately 11 and 14 per cent respectively).

1.2.3 Education Attainment and the Labour Market

High level of divergence between the five examined countries is also visible when it comes to the effects of low education in the labour market. To measure the independent effect of low educational attainment on employment probability a probabilistic binary choice model (Logit) is estimated for the five countries.[10] The model contains controls for age, gender, urbanization, whether the respondent lives in a sparsely populated area or not, marital status and the number of children in the household. The variables in the model are defined in the Box 2 below. Interaction effects of having low education and being, separately, a woman, elderly, young, in sparsely populated area, not in the capital are also studied.

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[10] See Box 1 for description of the data used in the statistical inference, note that the first model (with economic activity as a dependent variable) is representative for everyone aged 15-62, the second one examining employment for economically active population and finally the indicators of job quality are analyzed on the sample of employees.

Box 2: Independent Variables in the Regression Model	
Low Education – Does the person's education fall into ISCED categories 0-2 (Y/N)	High Education – Does the person's education fall into ISCED categories 5-6 (Y/N)
Age -Age of the person, effects measured for each additional year (continuous age variable generated from the categorized age variable available in the EU LFS)	Age (52-62) – Is the person aged between 52 and 62 years (Y/N)
Age (15-22) - Is the person aged between 15 and 22 years (Y/N)	Children – Does the person have childrenunder the age of 25 living with him or her in the same household? (Y/N)
Children (#) – Number of children aged less than 25 in the household	Children (3+) - Does the person have three or more children under the ageof 25 living with him in the same household? (Y/N)
Married – Is the person married? (Y/N)	Not Capital - Does the person live outside of the capital city of his or her country?
Sparse – Does the person live in a sparsly inhabbited area (Y/N)	15-22_Low - Interaction between variables 15-22 and Low Education
52-62_Low - Interaction between variables 52-62 and Low Education	NotCap_Low - Interaction between variables Not Capital and Low Education
Sparse_Low Education between variables Sparse and Low Education	

A high degree of heterogeneity of the effects of low education on the labour market outcomes across the five examined countries shows up. In Spain, where the low education attainment is widespread, relative to medium educated individuals the direct effect of low education on the odds of finding a job is -11% and -8% for females and males, respectively, while in a country like Slovakia, which has a very low share of low educated individuals, the odds are decreased by 19.5% for males and females alike. Looking at the shares of low-educated across the five countries, the large negative effect in Slovakia is not very surprising, as it may reflect that low-education is relatively uncommon and thus may signify relatively lower ability of low-educated workers than in countries where low-education is more common in the population, such as in Spain.

In **Bulgaria** we observe that low education is a sizeable disadvantage vis-à-vis medium- and even more so high-educated people as concerns labor force participation and employment. Low-educated women appear to be more disadvantaged then males,

facing a 25.9% lower probability of activity vis-à-vis their medium-educated counterparts, and an *additional* 13.6% disadvantage vis-à-vis those with high educational attainment. The corresponding figures for males are 17.4% and 7.1%. Low-educated women who participate in the labour market are more disadvantaged than their male colleagues also when it comes to employment chances, although the gender difference is somewhat smaller than for participation in the labour force. The effects on probability of permanent or full-time contract are modest. We also observe that the disadvantage due to low education is generally smaller for the elderly (excepting the probability of having a permanent contract for females). However, labour force participation is particularly problematic for young low-educated individuals. Living outside the capital negatively affects males' chances to get a permanent contract and to have a job for females. Further disadvantages arise for low-educated living in sparsely populated areas.

Table 1.4. Low education and labour market in Bulgaria

	Male				Female			
	Activity	Empl.	Perm.	Full Time	Activity	Empl.	Perm.	Full Time
Low Edu.	-0.174***	-0.154***	0.00144	0.00794	-0.259***	-0.116***	0.0529	-0.00842
High Edu.	0.0711***	0.0916***	-0.0509***	0.00294	0.136***	0.103***	0.00719	0.0155***
Age	-0.0145***	-0.000534	-0.00326***	-0.000467	-0.0229***	0.00259***	-0.00163	-0.00121***
Age (15-22)	-0.0733***	-0.0301	0.00928	-0.00274	-0.0537**	-0.0513***	0.0292	0.00908
Age (52-62)	-0.478***	-0.126***	-0.0779**	-0.0247***	-0.774***	-0.0633***	-0.0266	-0.0424***
Not Capital	0.0175	-0.0844***	-0.0380***	-0.0105**	-0.024	-0.0566***	-0.014	-0.0109*
Sparse	0.0443***	-0.0639***	-0.0391***	-0.00439	0.0419***	-0.0434***	-0.0267**	-0.00166
Children	-0.115*	0.0888	0.446***	0.0319	-0.182**	0.0681	0.171	0.0306
Children (#)	-0.00126	-0.0477	-0.256***	-0.0152	-0.0581	-0.0297	-0.0913	-0.0201
Children 3+	0.0527	0.0136	0.325***	0.00798	0.0458	-0.0522	0.0605	0.0066
Married	0.115***	0.0774***	0.021	0.00940**	0.0860***	0.0211**	-0.00923	0.00865*
52-62_Low	0.133***	0.0538***	0.0421	0.0081	0.142***	0.0258	-0.0523**	-0.00381
15_22_Low	-0.0884***	0.0203	0.0418	0.0117	-0.0978**	0.0127	-0.0462	N/A
NotCap_Low	-0.00564	-0.00719	-0.0728**	-0.00956	-0.0397	-0.0532**	-0.0466	0.00114
Sparse_Low	-0.0161	0.0184	-0.125***	-0.0214**	0.0376	0.0207	-0.142***	-0.00995
Constant	0.905***	0.331***	0.445***	0.0991***	1.385***	0.166***	0.326***	0.140***
Observations	8,275	6,354	5,209	5,209	8,379	5,463	4,581	4,557
Pseudo R^2	0.2062	0.1052	0.0443	0.0568	0.2149	0.1296	0.0489	0.0569

Source: Own calculation based on the LFS data from 2010. Note: Marginal effects from Logistic regressions. Asterisks represent levels of significance as follows: *<0.05, **<0.01, ***<0.001.

In **Spain** the findings generally follow the same pattern, whereby the low-educated are significantly disadvantaged vis-à-vis their medium- and high-educated counterparts. Low-educated males face a 4.2% (marginally significant) disadvantage compared to medium-educated ones, and an additional disadvantage of 4.7% compared to the high-educated ones. The corresponding figures for females signify a significantly more severe disadvantage of 18.7% and 15.2%, respectively. The situation is not better when it comes to employment chances, with low-educated males disadvantaged by 11.0% vis-à-vis the medium-educated and by additional 5.9% vis-à-vis the high-educated ones. The situation is not better for females, with the respective figures of 8.4% and 6.4%. Generally low-educated have difficulties finding employment of good quality. This is especially true for females' access to full-time contracts, who face an 11.5% disadvantage compared to their medium-educated colleagues and an additional 6.9% disadvantage compared to the high-educated ones. Interestingly, it is the young among the low-educated who seem to be able to overcome some of the difficulties, with the elderly low-educated rather facing a double disadvantage. Low-educated women living outside of the capital seem to be somewhat more active than those in the capital, and low-educated males and females alike have additional difficulties accessing permanent jobs.

In **Hungary** we again observe a significant disadvantage of low-educated individuals vis-à-vis medium- and even more so high-educated ones in labor force participation, employment, but also permanent or full-time contracts. Low-educated males face a 19.7% and 13.3% disadvantage compared to their medium-educated counterparts in access to the labor market and employment, respectively; the corresponding figures for females are 17.7% and 12.4%. The gaps with respect to high-educated males and females are even larger. The low-educated elderly seem to be able to overcome some of these disadvantages, whereas their young compatriots generally suffer from a double disadvantage, excepting access to employment for females. Low-educated living outside of Budapest and even more those living in sparsely populated areas are also double-disadvantaged.

Table 1.5. Low education and labour market in Spain

	Male				Female			
	Activity	Empl.	Perm.	Full Time	Activity	Empl.	Perm.	Full Time
Low Edu.	-0.0415*	-0.110***	-0.0345	0.00736	-0.187***	-0.0836***	-0.0115	-0.115***
High Edu.	0.0468***	0.0592***	0.0549***	0.00607	0.152***	0.0644***	0.0234**	0.0685***
Age	-0.00765***	0.00333***	0.00072	0.000649**	-0.0101***	0.00533***	0.00585***	0.00221***
Age (15-22)	-0.123***	-0.0245*	0.0360**	-0.0141*	-0.147***	-0.0119	-0.0184	0.0382**
Age (52-62)	-0.400***	-0.0718***	-0.244***	-0.0590***	-0.570***	-0.0782***	-0.190***	-0.172***
Not Capital	-0.0464***	-0.0341**	-0.0908***	-0.0111	-0.0810***	-0.0102	-0.0922***	-0.0329*
Sparse	0.00582	0.0340***	-0.0606***	0.0132***	-0.00505	-0.0112	-0.0517***	-0.00954
Children	-0.113***	0.0511	0.0719	0.0515***	-0.158***	-0.0575	0.113*	-0.0835*
Children (#)	0.00368	-0.0213	-0.0383	-0.0170**	-0.0277	0.011	-0.0596**	-0.00636
Children 3+	-0.0394**	-0.00286	-0.0253	0.0136	-0.0479*	-0.0425	0.0595	0.0174
Married	0.160***	0.0928***	0.0455***	0.0264***	-0.0365***	0.0241***	0.00405	-0.0298***
52-62_Low	-0.0172	-0.0211	-0.0616***	-0.0062	-0.0648***	-0.0292*	-0.0822***	-0.0901***
15_22_Low	0.0567***	0.0264*	0.112***	0.0199***	0.0860***	0.0216	0.123***	0.109***
NotCap_Low	-0.000792	0.0124	0.00404	0.00663	0.0732**	-0.0204	-0.00374	0.0433
Sparse_Low	0.0163	0.00488	-0.0835***	-0.00978	-0.0204	0.0146	-0.0890***	0.0199
Constant	0.634***	0.0996***	0.180***	0.0856***	0.930***	0.0455*	0.0265	0.213***
Observations	26,666	21,126	17,197	17,197	26,972	17,196	13,860	13,860
Pseudo R^2	0.1857	0.0854	0.0347	0.0765	0.1835	0.0715	0.0328	0.0474

Source: Own calculation based on the LFS data from 2010. Note: Marginal effects from Logistic regressions. Asterisks represent levels of significance as follows: *<0.05, **<0.01, ***<0.001.

Table 1.6. Low education and labour market in Hungary

	Male				Female			
	Activity	Empl.	Perm.	Full Time	Activity	Empl.	Perm.	Full Time
Low Edu.	-0.197***	-0.133***	0.0344*	-0.0181***	-0.177***	-0.124***	-0.0247	0.00515
High Edu.	0.0931***	0.130***	0.0109*	0.0164***	0.180***	0.117***	0.0486***	0.0423***
Age	-0.0234***	-0.000661*	-0.00390***	-0.00101***	-0.0147***	0.00382***	0.00142***	-0.00110***
Age (15-22)	-0.119***	-0.0252***	-0.00688	-0.00199	-0.303***	-0.0449***	-0.0432***	-0.0199***
Age (52-62)	-0.827***	-0.0862***	-0.106***	-0.0382***	-0.688***	-0.0559***	-0.0898***	-0.0495***
Not Capital	-0.0286***	-0.0160***	-0.0112	0.00432	-0.00408	-0.0210***	-0.0122*	0.0101**
Sparse	0.0141***	-0.0131***	-0.0144**	-0.00765***	0.0237***	-0.0151***	-0.0348***	-0.0160***
Children	-0.172***	0.0722***	0.0211	0.0298***	-0.125***	0.0273*	0.0548**	0.0127
Children (#)	0.0211***	-0.0345***	-0.0209**	-0.00622**	-0.0771***	-0.0245***	-0.0357***	-0.0149**
Children 3+	-0.0202*	-0.00421	0.00101	-0.00159	-0.128***	-0.0141	0.0167	-0.0121
Married	0.113***	0.103***	0.0200***	0.00816***	0.0541***	0.0203***	0.00909*	0.00488
52-62_Low	0.134***	0.0293***	0.115***	0.0147***	0.0608***	0.0404***	0.0939***	0.0181***
15_22_Low	-0.116***	0.0193*	-0.0965***	-0.00819	-0.198***	0.0661***	-0.00357	-0.0335***
NotCap_Low	0.00942	-0.0692***	-0.0731***	-0.0140**	0.0115	-0.0526***	-0.0530***	-0.0478***
Sparse_Low	-0.0350***	0.0371***	-0.0932***	-0.000755	-0.0423***	0.0115	-0.0329**	0.0132
Constant	1.414***	0.249***	0.397***	0.149***	1.070***	0.104***	0.210***	0.224***
Observations	71,253	47,443	38,541	38,541	72,581	39,316	32,770	32,770
Pseudo R^2	0.2936	0.101	0.0167	0.0444	0.2255	0.1008	0.0249	0.0299

Source: Own calculation based on the LFS data from 2010. Note: Marginal effects from Logistic regressions. Asterisks represent levels of significance as follows: *<0.05, **<0.01, ***<0.001.

In **Romania** the low-educated experience severe gaps as concerns their participation in the labour force or employment. The participation gap for low-educated females is estimated at staggering 43.5%, with employment gap of 9.7%. The corresponding figures for males are a hefty 27.3% and 15.7%. As in the other countries, further disadvantages arise vis-à-vis high-educated individuals. The elderly among low-educated appear to be able to overcome some of the gaps when it comes to labour force participation or employment, but especially for elderly females low-education results in a significant penalty in access to permanent jobs. The young among low-educated appear to experience a modest double disadvantage in participation; however, they also face a small advantage in access to employment. Interestingly, low-education seems to be a particularly severe problem for employment and access to full-time jobs in Bucharest region, although the opposite is true as concerns access to permanent contracts.

Table 1.7. Low education and labour market in Romania

	Male				Female			
	Activity	Empl.	Perm.	Full Time	Activity	Empl.	Perm.	Full Time
Low Edu.	-0.273***	-0.157***	-0.0103	-0.137***	-0.435***	-0.0972***	0.0895	-0.123***
High Edu.	0.113***	0.0494***	0.185***	0.0777***	0.266***	0.0317***	0.202***	0.0660***
Age	-0.0112***	0.00192***	-0.00756***,	-0.00138***	-0.0138***	0.00187***	-0.00398***,	-0.000704***
Age (15-22)	-0.237***	-0.0378***	0.0406***	-0.00751*	-0.278***	-0.0171***	0.00196	-0.0107**
Age (52-62)	-0.489***	-0.0629***	-0.141***	-0.0355***	-0.617***	-0.0457***	-0.146***	-0.0411***
Not Capital	-0.0323***	-0.0696***	-0.174***	-0.0458***	0.00228	-0.0461***	-0.219***	-0.0619***
Sparse	0.0468***	0.0281***	-0.355***	-0.118***	0.0286***	0.0132***	-0.400***	-0.109***
Children	-0.150***	-0.0178	0.0738***	0.00379	-0.194***	0.0139	0.0462	0.0014
Children (#)	-0.00335	0.00595	-0.0361***	-0.00248	0.00481	-0.00261	-0.0265*	-0.00528*
Children 3+	0.0224	-0.0198*	-0.026	-0.0132**	-0.0606***	0.00824	-0.0540**	-0.00624
Married	0.145***	0.0489***	0.121***	0.0287***	0.0951***	0.0238***	-0.0376***	-0.000542
52-62_Low	0.180***	0.0289***	-0.0422***	0.0201***	0.262***	0.0540***	-0.114***	0.00592
15_22_Low	-0.0579***	0.0376***	-0.0472*	0.00375	-0.0566***	0.0158**	-0.0215	0.00794
NotCap_Low	0.0159	0.0761***	-0.181***	0.0271*	-0.0162	0.0274**	-0.116**	0.0683***
Sparse_Low	0.136***	0.0673***	-0.198***	0.0586***	0.271***	0.0744***	-0.376***	0.00738
Constant	0.828***	0.136***	0.860***	0.322***	0.869***	0.0822***	0.939***	0.305***
Observations	58,758	41,691	37,487	37,487	57,598	31,788	29,442	29,442
Pseudo R^2	0.2094	0.0752	0.2649	0.1408	0.1876	0.0995	0.401	0.1836

Source: Own calculation based on the LFS data from 2010. Note: Marginal effects from Logistic regressions. Asterisks represent levels of significance as follows: *<0.05, **<0.01, ***<0.001.

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Finally, we observe considerable labour market gaps for the low-educated in **Slovakia**. Low-educated males and females have a 30.9% and 37.2% lower probability to participate in the labour force than their medium-educated counterparts, respectively. The corresponding figure for access to employment is 19.5% for males and females alike. Additional gaps arise vis-à-vis high-educated males and females. Access to permanent or full-time contracts does not seem to be much affected by low educational attainment. The elderly among the low-educated appear to be able to overcome some of these gaps, whereas the low-educated young are in a double-disadvantage, excepting males' access to employment where the opposite is true. Living outside of Bratislava further disadvantages the low-educated in access to employment, although in sparsely populated areas they appear to have a higher probability of labour force participation.

Table 1.8. Low education and labour market in Slovakia

	Male				Female			
	Activity	Empl.	Perm.	Full Time	Activity	Empl.	Perm.	Full Time
Low Edu.	-0.309***	-0.195***	0.0404	-0.00952**	-0.372***	-0.195***	-0.0246	-0.0103
High Edu.	0.0336***	0.103***	-0.0045	0.00581***	0.0738***	0.145***	-0.0038	0.0207***
Age	-0.0229**	-0.0005	-0.00121*	-0.000129	-0.0195**	0.00239*ʼ	0.0007	-5.9E-05
Age (15-22)	-0.0019	-0.0194*	0.0445***	0.00286	-0.272***	-0.0301**	-0.0285**	-0.0105*
Age (52-62)	-0.681***	-0.0874**	-0.0053	-0.0012	-0.762***	-0.0906**	-0.0735**	-0.0145**
Not Capital	-0.0084	-0.0449**	0.0116	0.00590***	-0.0091	-0.105***	0.00152	0.00842**
Sparse	-0.0136**	-0.0459**	-0.0066	-0.00375***	0.0207***	-0.0165**	-0.0129**	-0.00108
Children	-0.125***	0.0858***	-0.0355	-0.00422	-0.251***	0.0896***	-0.0554	-0.0163
Children (#)	0.0175*	-0.0337**	0.00711	0.00464	-0.0284**	-0.0446**	0.0177	0.00887
Children 3+	-0.0066	-0.011	-0.0429*	-0.0133***	-0.0503**	-0.0112	0.0259	-0.0270**
Married	0.132***	0.128***	-0.0202**	0.00221	0.0497***	0.0219***	-0.0025	0.00291
52-62_Low	0.253***	0.160***	0.0555	0.00321	0.108***	0.112***	0.0981***	-0.00785
15_22_Low	-0.170***	0.106***	-0.164**	-0.0102**	-0.280***	-0.0459	N/A	N/A
NotCap_Low	-0.0298	-0.144***	-0.0321	-0.00101	0.05	-0.0867**	0.0484	-0.018
Sparse_Low	0.0838***	-0.0047	-0.0389	-0.000535	0.0574***	-0.0507**	-0.0624	0.00428
Constant	1.302***	0.245***	0.264***	0.0331***	1.325***	0.224***	0.204***	0.0930***
Observations	26,884	19,628	16,145	16,145	27,267	15,515	12,663	12,663
Pseudo R^2	0.351	0.1512	0.0051	0.0561	0.2534	0.1385	0.0099	0.0295

Source: Own calculation based on the LFS data from 2010. Note: Marginal effects from Logistic regressions. Asterisks represent levels of significance as follows: *<0.05, **<0.01, ***<0.001.

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Looking at marginal effects of education on labour market outcomes across the studied countries, a couple of general observations can be made. These are summarized in Figures 1.3 and 1.4, which plot the coefficients on education from Tables 1.4 – 1.8. Firstly, educational attainment influences very strongly individuals' probability of being active in the labour market. In terms of labour force participation the highest penalties vis-à-vis medium educated individuals are observed for Romanian and Slovak females, followed by their male counterparts. In Spain and Hungary the penalties are relatively smaller, especially for Spanish males. The highest penalties vis-à-vis high-educated individuals are observed for Romanian females, but Slovak and Bulgarian females and Romanian males are also highly disadvantaged. In terms of employment it is Slovak low-educated males and females who are most disadvantaged vis-à-vis their medium- and high-educated colleagues. The smallest employment gaps are observed in Spain and for Romanian males, with males and females in Hungary and Bulgaria, as well as Romanian females, somewhere in between.
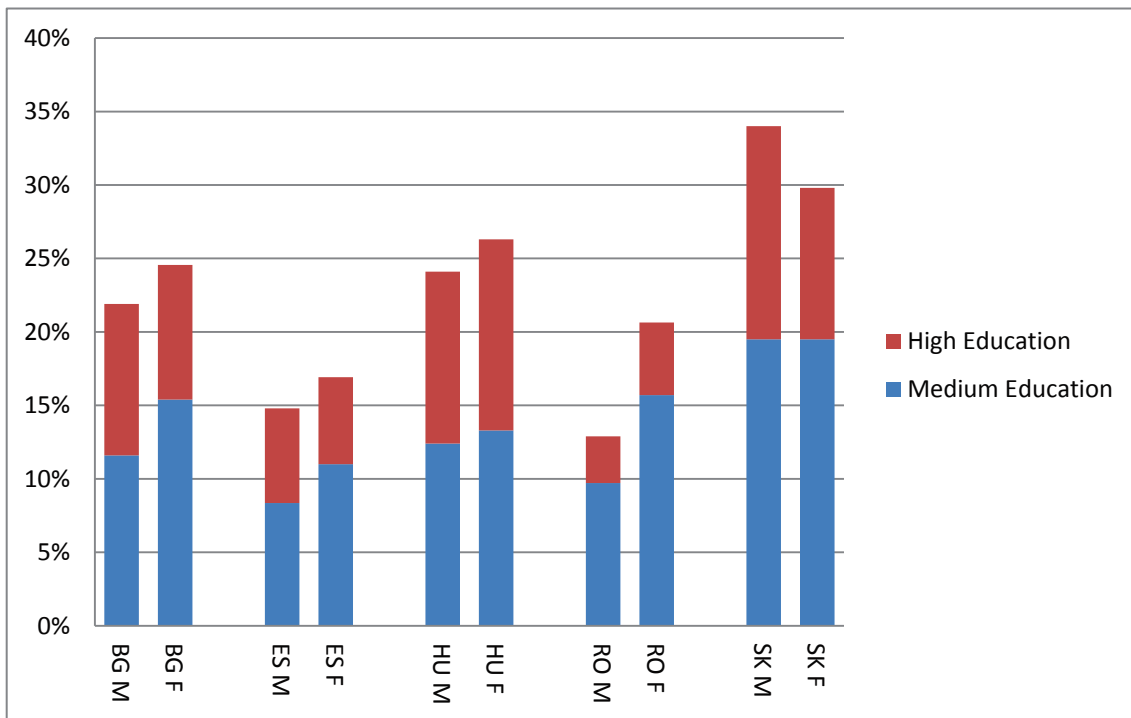
Figure 1.3. Participation penalty of the low-educated vis-à-vis medium- and high-educated ones
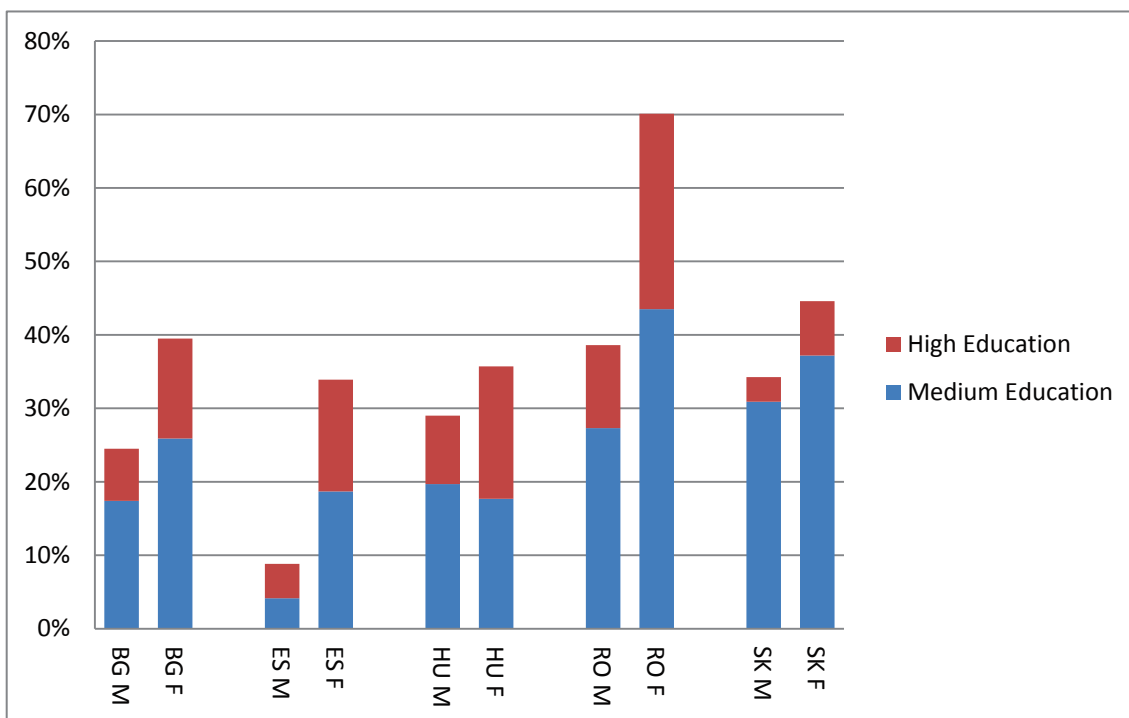
Note: The figure displays the percentage disadvantage of low-educated individuals in terms of the probability of being active in the labour market, taken from Tables 1.4-1.8. The size of the blue bar depicts

the percentage disadvantage vis-à-vis comparable medium-educated individuals, and the combined blue and red bars display the disadvantage in comparison to high-educated individuals. The bars are calculated for men and women in each examined country separately (BG M represents Bulgarian men, BG F Bulgarian women and so on). Source: Own calculation based on the LFS data from 2010, representative for all respondents aged 15-62.

Figure 1.4. Employment penalty of the low-educated vis-à-vis medium- and high-educated ones.

Note: The figure displays the percentage disadvantage of low-educated individuals in terms of the probability of being employed in the labour market, taken from Tables 1.4-1.8. The size of the blue bar depicts the percentage disadvantage vis-à-vis comparable medium-educated individuals, and the combined blue and red bars display the disadvantage in comparison to high-educated individuals. The bars are calculated for men and women in each examined country separately (BG M represents Bulgarian men, BG F Bulgarian women and so on). Source: Own calculation based on the LFS data from 2010, Economically active respondents aged 15-62.

1.3 Conclusion

The analyzed group of countries is very diverse in terms of their labour market characteristics and educational level of their population. While there are certain general patterns, such as progressively decreasing share of low educational attainment in their populations, relative low share of low educated in the capital and that low educated individuals have a harder time in the labour market (and are less likely to even be

active on the labour market to begin with). Each of the studied countries has a specific quality, that differentiates it from all the other countries that are of concern to this paper: Bulgaria has a very egalitarian tradition in its education system, in Spain the low educated workers are integrated to a relatively high degree, Hungary has a large share of its population inactive in the labour market, Romania employs many of its low educated citizens in agriculture and Slovakia has a very low share of low educated in population, but these have great difficulties succeeding in the labour market.

Furthermore, the results show very uneven impacts of low education on different segments of the population. Women tend to face a multiple disadvantage when low-educated. With the exception of Spain, elderly people are able to compensate their low educational attainment by profound on-the-job experience. They may also be less likely to be stigmatized as low-educated due to higher proportion of low educated workers in older cohorts. Low-educated young people appear to be able to overcome their educational disadvantage in Spain relatively well compared to the rest of the population. In the other countries they are similarly able to secure a better quality of jobs, but they seem to face a double disadvantage in terms of labour force participation potentially resulting in a new generation of excluded youth, a problem which have become known under the acronym NEET (not in education, employment or training). The role of low educational attainment varies not only between but also within countries, being more disadvantageous in some regions than others.

Finally, all the studied countries have unique situation making it unlikely that a single "one size fits all" labour market policy approach can be useful for all of them. Consequentially, it seems sensible to always consider which country and what population is in the focus of the analysis when making claims about labour market outcomes conditioned on the low educational level.

Part II.   Employment situation of Roma people

By Vera Messing

2.1   Context

In this chapter a specific focus on the employment situation of Roma people – one of the most vulnerable groups in terms of labour market and social exclusion - will be given in the five countries under scrutiny. It is a common lace that Roma employment in Europe is characterized by extremely low levels and high instability. Various sources of data demonstrate that there is a huge ethnic gap concerning labour market participation. While the European Union's paid employment rate was 69% in 2010 (EUROSTAT) the same index for vulnerable Roma people was notably lower ranging from 15% (in Slovakia) to 34% (in Bulgarian) (UNDP 2011). (Table 1) Another commonplace, that still needs to be indicated here relates to the term "Roma": Roma of Europe is a highly heterogeneous population in terms of ethnic identity, social status, language use, level of integration/segregation, and consequently their labour market position. Even, within one country several Roma subgroups reside having distinctive ethnic identities, using different languages and relating to majority society in completely different manners. To further complicate the picture, a great proportion of those whom are perceived as Roma have multiple identities and/or are born from mixed marriages. It is the majority societies and institutions, which look at this population as one homogeneous group. With this comprehension in mind, we will still need to refer to "Roma" as any available statistical information and data uses this homogenizing category.

It is well known, that in the context of economic crisis the most vulnerable segment of the population in terms of qualification, access to jobs, interpersonal supporting network, and distance from jobs is hit hardest. (Vaugham, Whitehead 2011) With the economic crisis industrial segments with demand for low-skilled jobs suffered most:

i.e. construction industries, agriculture. It is reasonable to assume that with the diminishing number of jobs and increasing competition for these positions (even higher educated people might have appeared in this segment following their loss of job) vulnerable population was seriously affected. There is some evidence for this statement: the UNDP 2004 Roma Regional survey was conducted in Bulgaria and Romania out of the 5 countries studied here. The data reflect, that employment rates of Roma have decreased by 4 percent in Bulgaria and 15% in Romania. The Spanish experience is similar: preceding to immigrant workforce Roma were the first to lose their jobs following the crisis hitting the Spanish industry in 2008. (Bereményi, Mirga 2012) Country specific data in Hungary show a similar trend: a large scale survey conducted in 2010 shows, that employment rate among Roma (20%) has significantly shrank since the last similar measurement in 2000 (29%)[11]. (Kertesi 2005, Mód 2011) Due to the variations in definitions and methodologies it is difficult to make statements on the actual degree of decrease, but it is evident that employment rates of Roma have shrank measurably within a few years. The economic recession of 2008-2012 has aggravated existing labour market inequalities, and positioned Roma in an even worse position.

Box 3. Recent data sources on employment of Roma people

Cross-country comparative data

UNDP, which has conducted comparative surveys on Roma in 2004 and 2011, produced a very important comparative data set on Roma[12]. However, these surveys do not represent Roma in Europe, because their design focused on settlements with a high(er than average) density of Roma. Data of the UNDP surveys speak about those Roma/Gypsy people, who live in Roma dense area, and thus are more likely to belong to the marginalized, socially excluded part of Roma/Gypsy population. Consequently the data do not speak about integration, inclusion and tell little about those Roma who successfully left behind their marginalized position in the society and assimilated or

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11 The two surveys are comparable, as both use the definition of the direct environment on who is considered as Roma, and both apply self-perception of employment status.

12 The 2004 survey covered five countries of. The 2011 survey was conducted in cooperation with the Fundamental Rights Agency (FRA) and the World Bank. It covered 12 countries of Central and South East Europe.

integrated into the society. Nevertheless, these data are important information sources on many – if not majority of –Roma in Europe, if one keeps in mind not to equal these data with the Roma population as a whole. FRA, in parallel and in coordination with UNDP conducted a survey among Roma in eleven EU member states. The methodology of sample selection of the two surveys was identical, however questionnaires as well as countries covered differed to some extent. Specifically, questions on employment status differed to a significant extent producing large differences in labour market participation data. The UNDP applied the ILO standards, and considered employed those who had any paid work last week, while the FRA recorded self-perception about employment status.

EU Inclusive survey was conducted in four countries (Romania, Bulgaria, Spain and Italy) in 2011. The sample includes 1100 to 1400 self-identified Roma over 15 years of age / country and is representative of the countries' Roma population.

Country specific data

Census data in all of the countries include at least one question on ethnic identity, and a few questions on employment status. However, regularly conducted large scale labor market surveys do not include questions on ethnic belonging in most of the countries. Census data are of limited use for two reasons: (1) they include very limited number and depth questions on labour market status; (2) questions on ethnicity are in most of the cases exclusive and do not allow dual or multiple identities, most of the Roma may be characterized with, or any variations of Roma identities. Due to this, and other factors (such as resistance to declare Roma identity for historical experiences, stigmatizing social environment, widespread racial prejudice) census data significantly underrepresent Roma population in each country.

A number of country specific data sources on Roma is available, however their use in comparative analyses is harshly limited due to the diverging sampling methodology and the wide range of conflicting indicators on the most important background variables such as educational level, employment status.

There is a wide range of sociological and anthropological researches using in-depth qualitative methods available in all of the studied countries. They do not represent "Roma " of the given country, but provide very important insights into the functioning of local labour markets, mechanisms that are at play and barriers to Roma employment. Very importantly, also, these studies do differentiate between various sub-goups of the Roma populations, and provide an understanding of the heterogeneity of the population.

2.2   Labour force participation rates

To consider the actual labour market potentials labour market activity rates[13] should be addressed first. The chart below reveals that indexes for labor force participation are around 50% in most of the countries. Activity rates are somewhat lower for Roma than non-Roma, but the ethnic gap remains below 10% in all of the countries with the exception of Bulgaria.

The gender gap in activity rates is larger than the ethnic gap, while the intersection of ethnicity and gender produces particularly large differences: Roma women's labour market participation rates – that ranges from 34% (Sl) to 50% (Bg)- are extremely low in all of the countries when compared to non-Roma men's rates (60-71%). Nonetheless, it has to be noticed also that labour market participation rates of Roma men are very close to or might even exceed (in Hungary) the rates of non-Roma men living in the same environment (with the only exception of Romania). This together with the low rates of employment suggests that there is a large labour force potential in this population segment.

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[13] ILO standards: shareofemployedandunemployed (laborforce) as a percentageofthose in theworkingage (15-64)

Figure 2.1.Rates of economic activity (labour market participation) for Roma and non-Roma living in their proximity in 5 countries of the EU. (UNDP 2011)

Activity rates (24-659
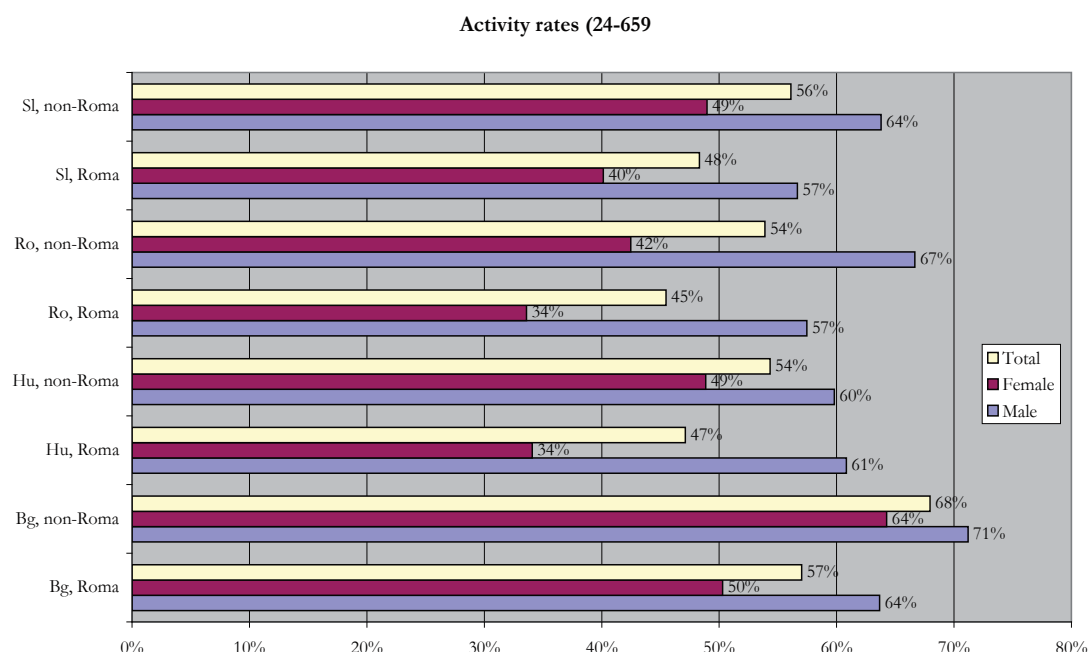
Source: UNDP 2011

2.3   Employment rates – formally and the world of reality

An important obstacle of having a clear picture on employment situation of Roma people is the great deal of variation in methodologies applied in surveying Roma and constructing indexes for employment. The table bellow summarized some of the most reliable data on the employment situation of Roma, and notes bellow inform about methodologies, indexes and the limitations of comparability:

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	UNDP 2011[1]	FRA 2011[2]	EU Inclusive 2011[3]	National survey[4]
Bulgaria	34%	35%	31%	
Hungary	23%	36%		20% (A modul) 26% (B modul)
Slovakia	15%	29%		
Spain		19%	44%	60%[4]
Romania	30%	32%	36%	40%

1. UNDP applied the ILO definition of employment rate; the population measure was 15-64 years. Definition of employment rate in the UNDP research considered employed those who had any paid work last week: thus it includes informal, irregular, day work as well as formal, contracted employment. It does not include activities that are not paid (collecting good, selecting garbage, work in kind) though.

2. FRA used a simple measure – self perception about employment; the population measured was 20-64years old;

3. The EU Inclusive project is a representative survey of self-identified Roma aged 16 and over and measured salaried employment;

4. In Hungary: a survey conducted in 2010 used parallel definitions: the "A" modul used identification of Roma by the environment, while the "B" modul was based on self-identification. The employment status is based on self-declaration of formal employment status.

In Romania a large scale representative survey on Roma population was conducted in 2007-08 funded by PHARE (Fleck, Rughinis 2008) Employment reflects the proportion of those, who declared themselves as having regular or casual work at the moment of the survey. (18-59 years Roma population).

Spain: Proportion of Roma in employment in the population 16 and over in 2005. (FSG 2005)

Data above display that depending on the definition and measurement of "employment", the age cohort, the definition of who is considered as Roma/Gypsy, employment rates may vary significantly. Using a refined methodology some country specific measurements may be though more precise than cross-country comparative surveys, still for the purpose of this paper UNDP dataset will be used mostly as it applied the ILO methodology for measuring labour market indexes and thus is comparable with country-level data on the entire population. Two disadvantages of this dataset have to be kept in mind however: (1) these data do not speak about all Roma, but those who live in Roma dense locations (2) it does not include data on Spain (see box1). At certain points the paper will refer to other data sources, in case they show important mechanisms uncovered by UNDP survey.

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There are significant country specific differences in employment rates of Roma. Depending on the data-source 30-40% of Roma in Romania and Bulgaria are employed, while the situation seems to be the worse in Slovakia, were just one fifth-fourth of working age Roma are in employment. The case of Spain deserves some explanations: the data on this country demonstrate extreme variations, which may be explained only partially with methodological causes. The EU-Inclusive survey data calculated employment rates for Roma in Spain (44%) and Italy (38%) incomparable to FRA's 2011 survey, which measured that only one out of five Roma is reported to be in paid employment.14 In any case, the significant decrease of employment rates between 2005 and 2011 in Spain reflects the consequence of the European economic crisis, which hit extremely hard the Spanish economy and within it its construction and agricultural segments, the ones which offered jobs for most of the Roma prior to 2008.

By measuring non-Roma living in the proximity of Roma the UNDP 2011 survey offers excellent opportunities for interethnic comparison. The smallest employment gap was measured in Romania, where the difference between Roma and non-Roma employment rates was a bit higher than 10%, while the worst situation is in Slovakia, where the lowest employment rates (only 15% of Roma mentioned s/he had paid work in the last week) are coupled with highest ethnic gap between Roma and non-Roma. The gap is even much higher if Roma employment rates are compared with figures of the total working age population. In the four CEE countries these rates range from 61% (in Bulgaria and Hungary) to 67% Slovakia.

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14 The explanation of these differences in the magnitude of employment rates between the various surveys are difficult to explain. One factor at play is the difference in the cohort (FRA 20-64, while EU Inclusive 16+), the other factor lays in varying definitions of who is considered as Roma (FRA and UNDP surveyed marginalized Roma, while EU Inclusive used the self-identification). A third methodological factor explaining the differences relate to how employment was asked in the questionnaire. FRA measured subjective employment rates (reflecting respondents' perception of his/her employment status), while surveys using ILO standard (International Labour Organization) consider anyone as employed, who fulfilled paid work at least for an hour the previous week, in dependently of its formal nature or type. The later category is obviously much wider.

NEUJOBS

Figure 2.2. Employment rates for Roma and non-Roma living in their proximity in 5 countries of the EU. (UNDP 2011)

Employment rates of marginalized population by ethinicity and gender
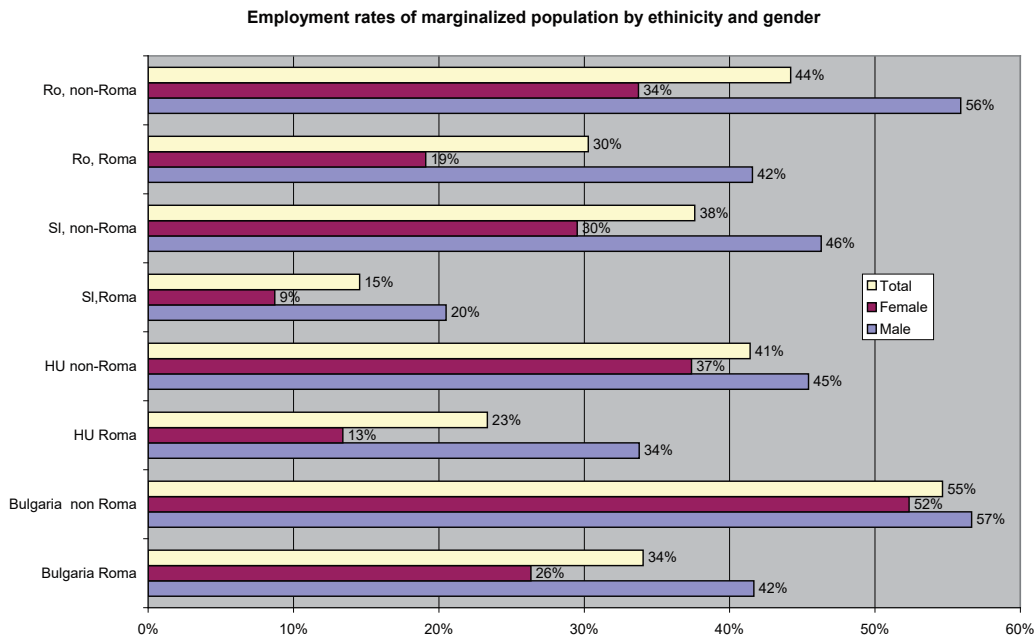
Source: UNDP 2011

Having a closer look at the data three different patterns of Roma employment may be identified in countries of Europe under scrutiny. Tendencies in South-East European, in Central European region and in the old member states of southern Europe are visibly different.

As to Central Europe, for a better understanding one needs to go back a few decades in history: Gábor Kertesi's (Kertesi 2005) analysis on the transition of labour market position of Roma demonstrates how economic and social transition after 1989 has affected the labour market situation of Roma. Although Kertesi's analysis focused on Hungary, but many of the statements may apply to other Central European post-socialist societies. Roma, in this region, were extensively employed as unskilled or semi-skilled workers in the labour-force intensive "socialist" heavy industry and mining. After being offered stable, though low paid jobs, and were encouraged to stay in these positions for long-term, masses left their traditional rural residences together with traditional communities and activities in order to move to industrial, urban areas in the 1960-ies and 1970ies. (Kertesi, 2005) The semi-skilled or unskilled Roma working

at unproductive, poorly performing heavy industrial state-owned companies were the first to lose their jobs after firms went bankrupt due to the collapse of the state socialist political system. Only in Hungary out of the CEE region there are reliable longitudinal data available for "Roma". These data reveal that employment rates of Roma male were close to the ratios of the majorities in the 1970ies and 1980ies: the employment rate of Roma was 85% in 1971, 77% in 1984 67% in 1989. Within 4 years after the transition the majority of Roma dropped out from the labour market: their employment rate had dropped to less than half of the 1989 level (31%). (Kemény, Janky, Lengyel 2004) Most of Roma have never recovered from the crisis caused by economic restructuring that took place in the 1980ies and 1990ies: two third of the jobs Roma have occupied in the socialist era were wiped out after 1989 in Hungary. (Kertesi 2000).

In South-East Europe industrialization during the communist era left several parts of these countries remained untouched by the extensive expansion of heavy industry and an important part of the population was unaffected by these processes. Archaic patterns of subsistence and occupations remained to function in parts of Romania for many Roma communities. (Fleck, Ruhiggis 2008) In Bulgaria, Roma were "re-qualified" in the 1960ies and 70ies according to the needs of the state-socialist economy. Wandering was forbidden in 1958 and all Roma groups had to settle and take on a job in the large state owned industrial factories and agricultural plants. The special feature of the Bulgarian situation is that some of these mega-plants and factories survived till today and provide employment to low qualified workers, among them some of the Roma. This explains the relatively high employment rates of Roma, at least partially. (Pamparov 2009)

In the old member states of southern Europe (Spain, Italy, Portugal), with a lack of the history of communist industrialization and nationalization, Roma communities were left alive and many of the Roma maintained family businesses. The Spanish data (FSG 2005) tells that still today 44% of the employed Roma work as self-employed or members of a family business; 4 out 10 work in traditional business of mobile trading (and many others in business related to collection, scrap metal collection etc.)

occupations, that were eradicated in the times of communism in Central Europe and pushed such work in the sphere of illegality. (Messing Molnár 2009)

An important fact about employment of Roma population is the huge gender gap. (Figure 2.2) The gap is observable also within the non-Roma population, but among Roma it is even more salient: in general, the employment rate among Roma men is more than double of that among women. This has to do with the gender gap in education levels and with the more extended families, traditional gender roles as well as to multiple discrimination Roma women face in the labour market.

The reasons for the low employment rates are well known and confirmed by comparative data:

(1) Low level of education: According to the UNDP research, educational level of Roma population across the region is dramatically low. The majority of Roma possess at most primary school education (62% of Roma in Romania and 48% in Bulgaria did not finish even the 8th grade of primary school; in Slovakia and Hungary the rates are much lower 18% and 7%). The proportion of Roma acquiring a qualification valued in the labour market is low. (A more detailed analysis of educational levels follows in the next section).

(2) Unfavorable regional dispersion of the Roma population in the region usually reflects well the map of economic performance: most of the Roma live in regions characterized by the lowest GDP/capita and structural economic crisis.

(3) High levels of labour market discrimination, especially in the CEE region.

2.4   Educational levels

Irrespective of the source of data a significant ethnic gap in educational levels is registered in all of the studied countries. While approximately 90% of non-Roma – even in marginalized environment – gained upper secondary school qualification (the lowest level of education that is valued by the labour market, and which provides good chances for stable jobs), just a small proportion of Roma got that far in education.

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Figure 2.3. Educational level of Roma and non-Roma living in their proximity(UNDP 2011)

Educational level by ethnicity
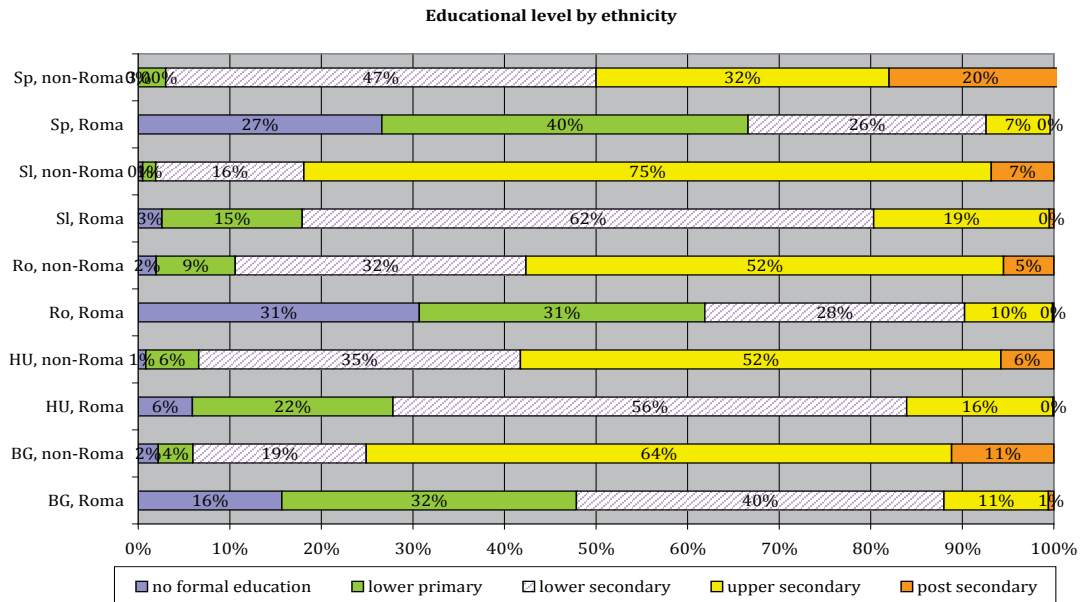
However, two patterns may be identified within Central Europe: that of Bulgaria and Romania, where at least half of Roma have lower primary education at most (4 years of school), and a minority of them have lower secondary education (and only 10-11% have upper secondary qualification, that is valued in the labour market). In Slovakia and Hungary the majority of Roma have competed lower secondary (or in their system 8 years of primary) education and a further 16-19% have completed upper secondary education. Interestingly, educational levels of Roma are even worse in the old memberstates of Europe: various sources of data (EU Inclusive, FRA 2011) reflect that the educational levels of Roma in South European countries (Spain, Italy, Portugal) are close to the South-East European situation. The reasons underlying low educational levels for Roma are very complex and well documented by a number of researches. The most recent European comparative research (EDUMIGROM), conducted under the umbrella of FP7 research framework identified the role of systemic factors (structural discrimination, institutional segregation, role of early selection and streaming, regional variations in educational quality) and institutional ones (schools' and teachers'

approach to ethnic diversity, transformed into grading, ethos of the school, teaching practices and methods. (Szalai 2011, Messing et al 2011, Feischmidt et.al 2010)

The above data (Figure 2.3) provide evidence for the well-known fact: the exclusion of the Roma population from the market of stable jobs is due to the lack of education valued by the labour market to a large extent. Any policy aiming at a better involvement of Roma in the labour market cannot disregard this relationship - labour market programs on their own are insufficient tools to increase the participation of Roma on the labour market.

Considering the future potentials of Roma employment the educational level of the 20-25 cohort is crucial. The next chart demonstrates that there is just a slight improvement in the educational levels of young Roma compared to the Roma population aged 25 and above.

Figure 2.4. Educational level 20-24 years old Roma and non-Roma living in their proximity (UNDP 2011)

Educational leveles of the adult and the 20-25 cohort Roma population
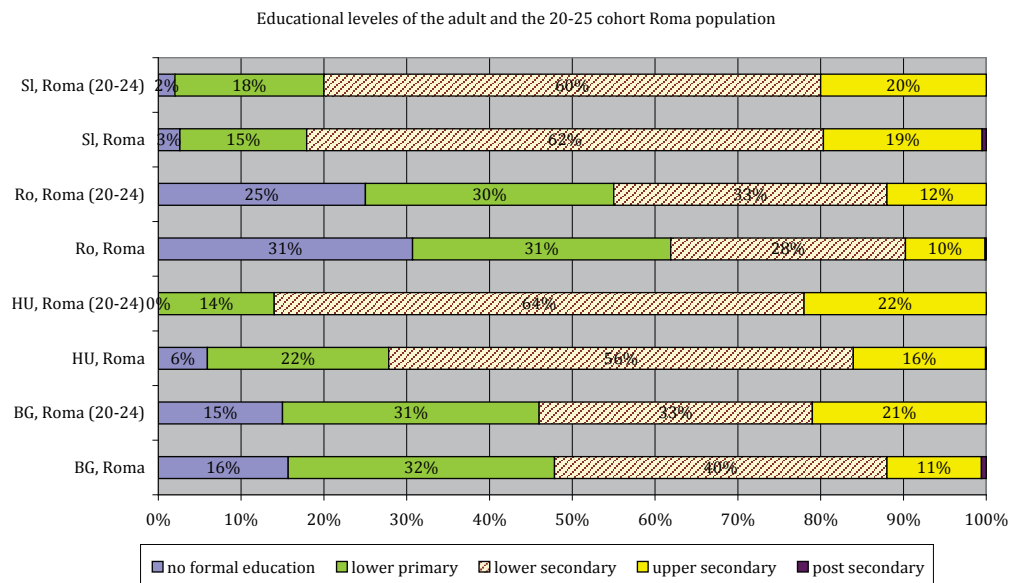
Only in the case of Hungary there is significant increase registered: the structure of educational level has shifted upwards significantly in the 20-24 cohort when compared to the 25 and older Roma. The proportion of young Roma with completed lower secondary education is 8 percent, and with completed upper secondary education 6

percent higher among 20-24 years' olds than among 25 and older Roma. In parallel, the share of those, having lower primary or no education is half among young Roma (14%) compared to 25 and older population (28%). This improvement may - at least partially - attributed to the strong equity-promoting educational policies and educational reforms of the Hungarian government between 2002 and 2010. There is some improvement in the structure of educational qualification of Roma in Bulgaria as well: the proportion of those acquiring upper secondary qualification is 10% higher in the cohort of 20-24 than among 25 above. These young Roma will have very good chances on the labour market. On the other hand, the proportion of those, who have lower primary education at most is very similar in the 20-24 and 25 and older cohorts.

Although it is obvious, that educational qualification has an important impact on employability and, more generally, on the labour market opportunities, the strength of this correlation might differ significantly across countries. In contrast to simple logic, the employment rates are the lowest in countries, where the level of education of Roma is relatively high (Hungary and Slovakia) and the ethnic gap in educational qualification is lowest in European comparison. In Spain (before the crisis), Bulgaria and Romania, there were relatively high employment rates registered while the educational level of Roma is extremely poor in these countries. The differences can only be explained by the differences in the patterns of Roma employment and the structure of the economy. In Romania and Spain some of the traditional Roma communities survived till today, a certain part of the Roma were able to maintain traditional crafts and occupations. Further in Spain, the economic boom in the decades of the 90ies and 2000 provided plenty of jobs for even the lowest segments of the labour market, including migrants and Roma. In contrast, in Slovakia and Hungary, traditional Roma/Gypsy communities were dispersed in the era of socialist economy, and with the collapse of the labour extensive socialist heavy industry low educated Roma were left without subsistence. In Bulgaria, where socialist industry absorbed unskilled and semi skilled Roma workforce, some of the mega factories and agricultural plants established in the communist era have survived till today and provide employment for many low educated people including Roma.

Besides the differences in economic history of these countries another factor adding to the disparities in opportunities to access labour market lays in their present economic structures. Economic sectors providing employment for masses of low skilled people, such as agriculture, construction industry, tourism, are more determining and prevalent in South-East and Southwest Europe than in Central European economies. (Eurostat 2011) These sectors absorbed unskilled and low educated Roma before the crises in large numbers, and still provide employment for many of them.

Country specific differences in returns of education in the labour market opportunities are a very important factor here. In chapter 1 of this report we demonstrated that in Slovakia the odds of finding a job for someone with low educational qualification is 19.5% lower than for one with medium educational attainment. In contrast, in Spain the odds for low educated decrease by much smaller extent. Unfortunately, there is only one country for which data specifically for Roma is available on this issue. The analysis of an in-depth survey on Roma population conducted in Hungary in 2010, tells clearly, that formal education is decisive in terms of labour market opportunities for Roma, here. Compared to a (Roma) person with lower than primary school education the chance of getting a regular job is 3.11 times higher for a person with completed lower secondary education, 7.57 higher for someone with a vocational qualification and 27 times higher for someone with completed upper secondary qualification. (Mód 2011) The huge gap in employment opportunities is between Roma with lower secondary education and completed upper secondary education. Interestingly, the situation *on the labour market of irregular and informal labour is very different* according to this survey. In this division of the labour market the chances of finding a job for a Roma person with upper secondary education is only 1.66 times higher than for one without education. Here work experience makes a much greater difference, than any other factor. Someone with significant work experience has 15 time larger chance to get a job than one without. And this leads us to another important characteristics of "Roma" employment, namely their participation in the informal economy.

2.5   Informal employment

A very important – and frequently unnoticed - fact, when speaking about labour market involvement (or the lack of it) of Roma population is their considerable participation in the informal segment of the labour market. Country specific, as well as European comparative surveys find that Roma participate on the labour markets through their informal, unregistered and irregular segments. Evidently, it is extremely difficult to measure this labour market sector, but irrespective of the definition and methodology all survey demonstrate that Roma, who have been excluded from the formal labour market due to various intersecting reasons discussed above (low educational levels, unfavorable geographical dispersion, discrimination), find labour opportunities in its informal segments.

The UNDP data, which defined informal employment as the share of employed people without a contract, suggests that although Roma employment rates are low in the stable and well paid segments of the labour market – a large share of the employment is driven out from formal to the informal labour, which involves low pay and the absence of any kind of job, health, pension or safety protection.

Figure 2.5. Informal employment among Roma and non-Roma living in their proximity (UNDP 2011)

Informal employment incidence by ethnicity
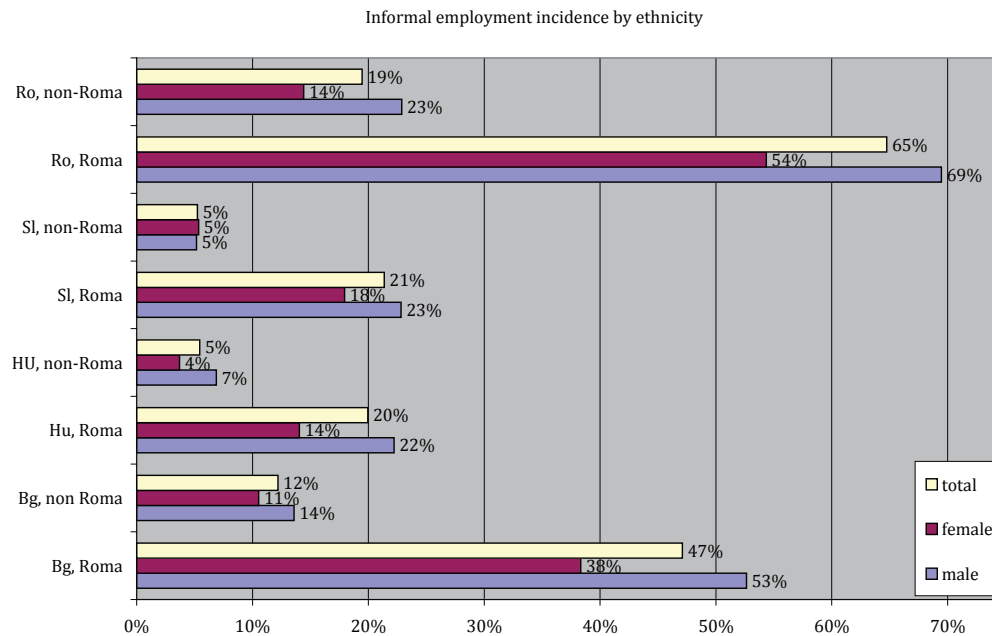
In all of the studied countries there is a large ethnic gap in this segment of the labour market: the proportion of employed Roma without a formal written contract is manifold to those non-Roma who live in the same neighborhood. This practice is significant in Hungary and Slovakia, where approximately one-fifth of working Roma are employed without any written contract, and thus lack any job and welfare security. In Romania and Bulgaria this phenomenon is shockingly prevalent: two thirds (Romania) and almost half (Bulgaria) of Roma work without any labour or welfare protection.

Another important characteristics is the high prevalence of casual work among Roma. This segment of the labour market is typically very poorly paid, and very often lack legal contract. In the Romanian survey on Roma researchers differentiated between regular and casual work, (but did not distinguish according to the formality of the job). While only 22% of Roma had regular jobs, almost as many (18%) had access only to casual work. (Fleck, Rughinis 2008). In Spain 70% of Roma workers had temporary contracts compared with 31% of the total Spanish population, and 49% of occupied

Roma claimed to be self employed. The authors of the Spanish research report claim "*their labour situation is "unique" [..] and could be better described as "unemployed or inactive" rather than true standard employment (even part time) because 98% of these workers affirm that "they did not undertake even one hour of remunerated work (in cash or kind) although a large proportion may have done non-remunerated work*" (FSG 2005, p.78)

 In Hungary, similarly, low formal employment rates are combined with extremely high rates of involvement in irregular and informal labour market. According to the most recent survey on Roma shows that while 22% of working age Roma are in official employment, two thirds of them are involved in some way in the labour market. Most of the Roma are excluded from the official, primary and secured employment sector and take on jobs in the irregular and informal job market. (Mód 2010) They take on jobs as casual – and most typically non-contracted - workers in the agriculture and in constructions and in the subsidized labour market, which provides short term (1-3 moths) and often part time work and where the salaries do not reach 75% of the officially established minimum wage.[15]

When analyzing the characteristics of informal and irregular work we can see very important differences in comparison to regular employment in patterns of involvement. One of these is the gender difference: while regular employment is characterized by a large gender gap in favor of men, in the case of some countries this relationship turn upside down: women even surpass men in informal employment. This phenomenon may be explained in the framework of multiple intersecting disadvantages of Roma women.

The involvement of Roma population in the informal and irregular segment of the labour market contradicts the public perception of Roma, unwilling to work. The data suggest just the opposite: Roma are ready to take on jobs even if they badly paid and insecure.

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[15] The Hungarian government in response to high unemployment introduced subsidized public employment programs for masses and linked it to social/welfare benefit entitlement. Since 2011 only those unemployed are entitled to social benefits, who completed at least 30 days of public work. Almost 200 thousand people are involved in the public employment.

Questions related to job security confirm this statement: in contrast to public perceptions, Roma, similarly to non-Roma, have a dominating preference to safe and regular jobs as opposed to unsafe and irregular jobs, even if the latter are better paid.

Figure 2.6. Job preferences among Roma and non-Roma living in their proximity (UNDP 2011)
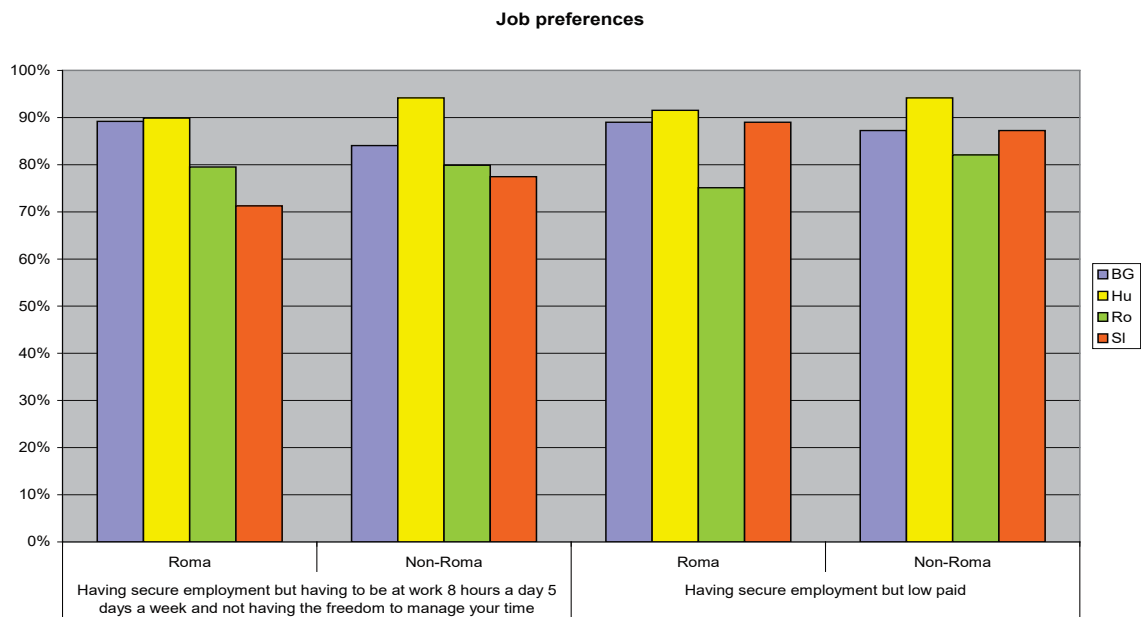
The chart show well the unambiguous preference of all marginalized groups – irrespective of ethnic belonging or country – to safe and regular employment. Only on tenth to quarter of the respondents preferred irregular or insecure job with more freedom and higher income.

2.6   Discrimination

Another substantial factor in the large ethnic gap in employment rates is the persistence of labour market discrimination in countries of Central Europe. Besides country specific measurements EU-MIDIS survey in 2009 and the FRA survey in 2011 provide some direction concerning the intensity and variations of this phenomenon. The FRA survey measured experiences of unequal treatment of Roma respondents

aged 16 and above who looked for work in the past 5 years. Such experiences were the most modest in Romania (27%), moderate but still significant in Spain and Bulgaria, where somewhat more than 30% of respondents recalled such occurrences. In Hungary and Slovakia over 40% of Roma mentioned that they experienced discrimination when looking for a job. The 2009 EU-MIDIS survey asked specifically about experiences of discrimination when looking for a job or at work in the past 12 months. Responding on this more specific question a third of Hungarian, 23% of Slovakian, 15% of Bulgarian and only 9% of Romanian Roma mentioned such occurrences. The country specific differences in these shares coincide with the differences of variations in employment rates between countries that refers to the probability that discrimination, indeed, plays a major role in the labour market opportunities of Roma people.

A further element in the employment situation of Roma people might be the recent trends in intra-European migration, especially relevant for Romanian and Bulgarian. The analysis of the role of migration in employment situation and subsistence is however beyond the scope of the present overview.

Part III. Labor Market Regulations affecting the employment of low educated people

By Klara Brozovicova and Martin Kahanec

The aim of this chapter is to offer an overview of the labor market regulations that may affect the employability of vulnerable groups, such as the low-educated individuals or the Roma people. The main question this part is trying to answer is **how does the playing field look like for the people who can only get a low paid job** in the five examined countries, Bulgaria, Hungary, Slovakia, Spain and Romania. For this reason we examine different income scenarios constructed around different common types of households – single individual with no children, family with two and five children, and single parent with two children. These scenarios illustrate the economic[16]incentives of low-educated individuals when considering various labor market strategies. We do so with the understanding that on the individual level low skilled – and especially Roma – people do not always have the choice due to discrimination, regional disparities of workforce-demand, lack of transportation infrastructure etc. Still, this angle provides an understanding of incentives for both the supply and the demand side of the labour market on a macro level. We consider the situation that employment occurs at minimum wages, which we think is a realistic approximation for low-educated individuals. The data have been gathered through desk research of available information from various publications, statistical offices, official governmental sources, or independently verified information.[17]

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[16] We do acknowledge, however, that the situation is not just a matter of economic considerations. Even though there has been a focus on making the labour market accessible to both men and women, the cultural and policy differences have not disappeared. The family-career balance remains a challenge that remains in the focus of scholarly attention. The issue has been covered in the NEUJOBS project. (Greve 2012)

[17] The social systems in question are very complex and are based on very different principles from each other, which makes throughout comparison or in depth analysis infeasible for a project of this scope. Further we do not deal with regulations at the subnational level nor private initiatives of non-governmental organizations (NGOs), trade unions, or churches. Additionally, no special circumstances

3.1 Labour market regulations and welfare allowances

3.1.1 Bulgaria

Table 3.1. Basic facts about Bulgaria

Population	7,369,431	Local Currency	BGN
GDP Per Capita (EUR)	10700	Share of Low Educated (%)	19.8[18]
Unemployment (%)	11.3	Inflation (%)	3.4

Note: Data obtained from Eurostat, relevant for 2011 (GDP valid for 2010).

Labor Market Regulations

In Bulgaria, the minimum wage is set to €148.28 a month (290 BGN)[19] effective from May 2012 (when it was raised from BGN 270). This sum is valid for full-time employees aged 23 or more. Part-time workers are entitled to a pro-rated fraction of the amount. Employees are obligated to pay 9.7% of their gross wage in social contributions (including unemployment insurance) and cover their health insurance of 3.2% of their gross wage. The larger part of responsibility for social security contribution is delegated to the employer, who is required to contribute 13% of gross wage to social security contributions (including unemployment insurance) and 4.8% of gross wage to mandatory health insurance (in total 17.8% of gross wage). The social security rates paid by the employer vary according to the nature of work and can reach up to 18.5 % in combination with the contribution to the health insurance in some

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(care for elderly relatives, disability) or earnings outside of employment are taking into consideration. Hence, the calculations presented here are useful for understanding the general situation in each of the examined countries, but are not necessarily representative for the specific situation of any specific inhabitant of either of these countries.

[18] 15-62 oldpopulation.

[19] http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=File:MW_map_EUR_July_2012.png&filetimestamp=20120802093553 (10/10/2012).

special cases. The income tax in Bulgaria is based on a flat rate of 10%.[20] The minimum net wage in Bulgaria is therefore €116.02 and the cost of labor in the case of a minimum wage employee is € 174.34.

The social system in Bulgaria is regulated by the Social Insurance Law from 2000.[21] The current social system protects employed persons in case of unemployment; however, it excludes self-employed workers. Unemployment insurance is covered by a contribution of 0.4% of gross earnings from the employee and additional 0.6% from the employer. The maximum monthly earnings used to calculate contributions are set to BGN 2,000 (€ 1019.26). Unemployment benefits cover at most 60% of the insured's average earnings in the last 24 months and this amount is paid for up to four months and is conditional on having at least three years of coverage. The minimum benefit is BGN 7.2 a day (€ 3.7 a day) paid for voluntarily unemployed persons and persons who are dismissed or who have become eligible for unemployment benefits within three years after previous entitlement. The benefit is pro-rated for part-time workers and can be supplemented with a disability pension and family benefits paid for a child younger than 18.[22]

The state in Bulgaria guarantees a modest minimum monthly income (месечнатапаричнапомощ)[23]. The amount is calculated as follows: all family units have an assigned coefficient of the family (or person in cases, where there is only one person in the household). This coefficient is multiplied by the guaranteed minimum income index of BGN 65; € 33.13. For example a person under 65 years of age living alone is entitled to € 24.18 (coefficient 0.73 multiplied by the index € 33.13). Parents raising a child (aged between 3 and 16 years, or up to 20 years if the child is receiving education have a coefficient of 1, so the guaranteed income amounts to € 33.13. State

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[20] Deloitte. Bulgarian taxes 2012. Available online: http://www.deloitte.com/assets/Dcom-Bulgaria/Local%20Assets/Tax%20mini%20brochure/Bulgarian%20Taxes%202012.pdf (10/11/2012). Comparedwith: http://www.worldwide-tax.com/bulgaria/bulgaria_tax.asp (10/11/2012).

[21] http://www.mlsp.government.bg/bg/law/regulation/index.htm (10/10/2012).

[22] Social Security Programs Through out the World: Europe, 2012: Bulgaria: http://www.ssa.gov/policy/docs/progdesc/ssptw/2012-2013/europe/bulgaria.html (10/10/2012).

[23] http://pomosti.oneinform.com/ (10/11/2012).

provides a social subsidy equaling the difference between the income[24] of the family unit and the guarantee.[25]

Welfare benefits in Bulgaria are not tied to employment status, but rather to the combined income of a family unit. Persons and families with minimum income are allowed to receive the monetary help for heating in three seasonal consecutive repayments (using the same formula as for the minimum guaranteed income discussed above). In the form of family allowances, each child older than 2 receives € 17.95 per month if the monthly income for each family member is not greater than € 179.5/person (except if the child is permanently disabled). The child must reside in Bulgaria, attend school (from age 7 to age 20), and must not be placed in a specialized child care institution.[26]

Income Scenarios

Table 3.2 summarizes the tax and social security system in Bulgaria. We then present income scenarios for four types of households.

Table. 3.2. Cost of labor for minimum wage in Bulgaria

Minimum Wage		148.28
SSC - social security contribution and health insurance	Employer	26.34
	Employee	19.09
Income tax (%)		10
Total tax wedge (%)		23.35
Net wage		116.02
Cost of labor		174.34

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[24] Including all benefits
[25] http://pomosti.oneinform.com/ (10/11/2012).
[26] http://www.ssa.gov/policy/docs/progdesc/ssptw/2012-2013/europe/bulgaria.html (10/10/2012).

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Scenarios 3.1

- **Single person, no children-**

  If **employed** - net wage of **€ 116.02**

  If **unemployed -** guaranteed minimum monthly income = **€ 24.33**

- **Family with two children-**

  If **both employed –** 2*net wage € 116.04 + 2* family allowance € 17.95 = **€ 267.98**

  If **one is employed, the other unemployed** - net wage € 116.04 (guaranteed minimum monthly income is € 104 per 2 adults and 2 children) + 2* family allowance € 17.95 = **€ 151.94**

  If **both unemployed –** guaranteed minimum monthly income € 104; 2* family allowance € 17.95 included = **€ 104**

- **Family with five children-**

  If **both employed –** 2*net wage € 116.04 + 5* family allowance € 17.95 (€ 89.75) + € 5.37 (guaranteed minimum monthly income 237.45 – net wage) = **€ 327.2**

  If **one is employed, the other unemployed** - net wage € 116.04 + 0 (194.42 guaranteed minimum monthly income) + 5* 17.95 family allowance = **€ 205.79**

  If **both unemployed –** guaranteed minimum monthly income € 194.42 (2* adult + 5* child); 5* family allowance included = **€ 194.42**

- **Single parent with two children-**

  If **employed** - net wage € 116.02 + 2* family allowance € 17.95 (€ 35.9) = **€ 149.92**

  If **unemployed -** guaranteed minimum monthly income € 93.41 (single parent + 2 children); 2* family allowance € 17.95 included = **€ 93.41**

3.1.2 Spain

Table. 3.3. Basic facts about Spain

Population	46.152.926	Local Currency	EUR
GDP Per Capita (EUR)	24,700	Share of Low Educated (%)	46.2
Unemployment (%)	21.7	Inflation (%)	3.1

note: Data obtained from Eurostat, relevant for 2011.

Labor Market Regulations

The minimum wage for year 2012 in Spain is set to €748.[27] The minimum gross salary is defined for full time employment; part time workers are entitled to a pro-rated fraction of the minimum wage. Employees are obliged to pay social security contribution of 6.35% of the gross wage, employers pay 23.6 % of gross wage, and these contributions already include health insurance (the total contributions per employee on average amount to around 30% of gross pay).[28]

The minimum wage for year 2012 in Spain is set to €748.[29] The minimum gross salary is defined for full time employment; part time workers are entitled to a pro-rated fraction of the minimum wage. Employees are obliged to pay social security contribution of 6.35% of the gross wage, employers pay 23.6 % of gross wage, and these contributions already include health insurance (the total contributions per employee on average amount to around 30% of gross pay).[30]

The Spanish tax system is characterized by its relative progressivity and complexity in terms of various deductions. The deductions depend on factors such as care for elderly and disabled relatives, purchase of a residents etc.Income up to €17,707 is taxed at the rate of 24.75% in 2012, following an increase of 0.75% from the previous year. Allowances deducted from personal income start at €4.080 in the case the income falls below €9.180 annually and progressively decrease for larger incomes. In effect, persons with minimum income are not likely to pay any significant tax Additional allowances are granted for parents with children, individuals taking care of their elderly relative and disabled individuals. In effect, individuals with minimal income

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[27] Available online.
http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Minimum_wage_statistics (10/25/2012).
[28] Available online: http://www.perezlegalgroup.es/social-security-health-benefits.aspx;
http://www.ssa.gov/policy/docs/progdesc/ssptw/2012-2013/europe/spain.html (10/25/2012).
[29] Available online.
http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Minimum_wage_statistics (10/25/2012).
[30] Available online: http://www.perezlegalgroup.es/social-security-health-benefits.aspx;
http://www.ssa.gov/policy/docs/progdesc/ssptw/2012-2013/europe/spain.html (10/25/2012).

are generally not contributing to the income tax. . [31]In turn, the net salary of minimal wage earning person is approximately €707,98 and the cost of such worker for employer is €924.53.

"RAI: Renta Activa de Inserción" is a grant set to increase the chances of return into the labour market for certain groups of unemployed Spaniards with special economic needs who find it difficult to find employment. In January 2012, the government changed the conditions of RAI funding. To receive this assistance, an applicant must fulfil at least one of the following four conditions: 1) Long-term unemployed and age over 45 years, 2) Returning emigrants and age over 45 years, 3) Victim of domestic violence, 4) Person with disability equal or greater than 33%.[32] The unemployed person, who applies for this benefit has to be registered as unemployed and sign the activity agreement, be aged under 65, cannot earn more than €481.05 per month and income of whole household divided by the number of members cannot exceed €481.05 per month. The amount received by the beneficiaries of RAI equals 80% of the so-called Public Multiple Effect Income (IPREM). In 2012 this equals to €426.[33]

RMI "Rentamínima de inserción," also known as social allowance (Salario Social),[34] is aid given to people at risk of social exclusion, without a minimum income to facilitate basic quality of life. The RMI allowance complements "RAI: Renta Activa de Inserción." The benefit for people at risk of social exclusion can be quite different in terms of length of availability as well as the actual amount depending on the particular region of Spain. Requirements for granting the allowance are determined by the region. In general, an applicant has to be aged between 25 and 65, be at risk of social exclusion, be enlisted in a social and labor integration project, reside in the particular region for the last 12 months, and earn less then certain threshold (varies between 62%

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[31] http://www.expatfinancialadvicespain.com/Spanish-Tax-Rate-2012.htm;
http://www.worldwide-tax.com/spain/spain_taxes.asp (10/25/2012).
http://www.minhap.gob.es/Documentacion/Publico/NormativaDoctrina/Tributaria/IRPF/Ley-35_2006.pdf (10/25/2012)

[32] Available online: http://www.citapreviainem.es/renta-activa-de-insercion/ (10/25/2012).

[33] Available online: http://www.preguntasfrecuentes.net/2009/11/24/rai-renta-activa-de-insercion/ (10/25/2012).

[34] Available online: http://www.ayudasparados.com/salario-social-o-renta-minima-de-insercion-rmi/498 (10/26/2012).

to 75% of the minimum wage).[35] The amount provided through RMI varies, for illustration, between €64.14 and €962.10 in Navarra, in Madrid the sum ranges in between € 375.55 and €532.51 (for a family unit consisting of than 3 persons), while in Andalucía it is between €397.67 (one person family union) and a maximum of €641.40 (three and more persons in the family).[36]

Family allowances benefits are currently governed by legislation from years 2005 and 2007 and cover certain families with children residing legally in Spain. The family allowance is income tested, the dependent child has to be younger than 18, the child's annual earnings must not exceed €8,979.60, and the recipients must not receive any other state family benefits. To maintain the benefits, annual family income cannot exceed €11,376.66 for a family with one child; € 13083.16 for family unit with two children; €17,122.59 in the case of a family unit with three children plus €2,773.39 for each additional child. The amount of family allowance benefit is €291 for each child younger than 18 a year; for large families, a single parent family, or if the mother has an assessed disability of at least 65%, an additional tax deduction of €1,000 is provided.[37]

Income Scenarios

Table 3.4 illustrates the social security and tax systems in Spain. We then examine income scenarios for selected household types (Scenarios 3.2).

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[35] Available online: http://langabezian.crearblog.com/?page_id=401;
http://www.ayudasparados.com/salario-social-o-renta-minima-de-insercion-rmi/498;
http://www.serviciossocialescantabria.org/index.php?page=renta-social-basica;http://www.navarra.es/home_es/Servicios/ficha/2468/Renta-basica (10/25/2012).

[36] Available online: http://www.ayudasparados.com/salario-social-o-renta-minima-de-insercion-rmi/498 (10/26/2012).

[37] Social Security ProgramsThroughoutthe World: Europe, 2012: Spain. Available online: http://www.ssa.gov/policy/docs/progdesc/ssptw/2012-2013/europe/spain.html.

Table. 3.4. Cost of labor for minimum wage in Spain

Minimum Wage[38]		748
SSC - social security contribution and health insurance	**Employer**	176.53
	Employee	47.50
income tax		0
total tax wedge (%)		23.46
net wage		€707.98
cost of labor		924.53

Scenarios 3.2

- **Single person, no children-**

  If **employed** - net wage of **€ 707.98**

  If **unemployed** - RAI: RentaActiva de Inserción = 80% of the indicator Public Multiple Effect Income (IPREM) force at the time: €426 per month for 2012 = **€426**

- **Family with two children-**

  If **both employed** – 2* € 707.98 net wage + 2* €24.25 family allowance = **€1464.46**

  If **one is employed, the other unemployed** - €707.98 net wage + €426 RAI + 2* €24.25 family allowance = **€1,182.48**

  If **both unemployed** – 2 * €426 RAI + 2* €24.25 family allowance = **€900.5**

- **Family with five children-**

  If **both employed** – 2* €707.98 net wage + 5* €24.25 family allowance = **€1537.21**

  If **one is employed, the other unemployed** - 426 RAI + 707.98 net wage + 5 * €24.25 family allowance = **€255.21**

  If **both unemployed** – 2 * 426 RAI + 5* €24.25 family allowance = **€973.25**

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[38]According to Eurostat for year 2012. Available online: (10/26/2012)

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- **Single parent with two children-**

    If **employed** - €707.98 net wage + 2 * €24.25 family allowance = **€756.45**

    If **unemployed** - €426 RAI + 2* €24.25 family allowance = **€474.5**

3.1.3 Hungary

General Information

Table 3.5. Basic facts about Hungary

Population	9,985,722	Local Currency	HUF
GDP Per Capita (EUR)	16,400	Share of Low Educated (%)	18.2
Unemployment (%)	10.9%	Inflation (%)	3.9

note: Data obtained from Eurostat, relevant for 2011.

Labor Market Regulations

For the year 2012, the minimum wage in Hungary is set to an equivalent of € 323 according to Eurostat data.[39] The whole amount is relevant for full time workers, regardless of the type of work. Workers are required to contribute to social security (10% of gross wage) and health insurance (7.5% of gross wage); the total contribution in case of minimum wage is €56.53. Employers are responsible for the larger part of the social security contributions: 24% of gross wage and health insurance co-payment of 3% of gross wage. The whole amount of employer's contribution is €87.21 for minimum wage. Hungary taxes incomes at 16% flat rate. The total tax wedge calculated for minimum wage is 195.42, bringing the cost of minimum wage labor up to € 410.21.

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[39] Available online:
http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Minimum_wage_statistics
(10/26/2012).

In Hungary, there are two types of welfare allowances since 2011. One is distributed by local governments (this category includes aid for heating, aid in case of emergency etc.) is available only on occasion and amounts to low sums. The other type of allowances is fixed and given to anyone, who is out of employment and who is not entitled to unemployment benefits anymore. Unemployment benefit is provided for 3 months and is 60% of the average income of the previous year. After the 3rd month, the unemployed person receives a minimum income allowance which is a fix amount of 22,800 HUF / (approximately € 80) month and is conditioned to participation in public work programs. The wage of public workers is around 47,000 HUF (approximately € 170) a month for full time job, but a significant percentage of employees work only 6 hour per day (which means less than € 130 per month). If an unemployed person refuses to participate in public works or is dismissed from the public work for any reason, he or she loses the access to the public assistance for 2 years.

The subsistence minimum is calculated every year by the Central Bureau of Statistics, based on a consumption index. The amount is differentiated for various households' types. For example a single person in household has a subsistence minimum of 75,000 HUF (approximately € 270), for a household with two adults and two children this is 243,429 HUF (approximately € 870) and for a family with two adults and four children it is 310,582 HUF (approximately € 1,100).

The family allowances in Hungary are not directly connected with employment or unemployment, except for child home care allowance, but rather they depend on the age of children. The family allowances cover Hungarian citizens and certain noncitizens residing in Hungary. The current legislation was enacted in between 1997 and 2011.[40] Family allowances are paid to recipients with children under 18 and are distributed to every parent (without regard to income of family unit). For one child is monthly amount equals to 12,200 HUF (€ 43.70), for two children it is 13,300 HUF (€ 47.64), for three and more children the sum is 16,000 HUF (€ 57.31). For a single parent family, the allowance is higher – 13,700 HUF (€ 49.07) for one child, 14,800 HUF

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[40] Office ofRetirementandDisabilityPolicy. Social Security ProgramsThroughoutthe World: Europe, 2012. Available online:

http://www.ssa.gov/policy/docs/progdesc/ssptw/2012-2013/europe/hungary.html (10/25/2012).

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(€53.01) for a family with two children, and 17,000 (€60.89) for three and more children. In Hungary the amount of the income tax is lowered by an annually set amount for every particular child, depending on the number of children. In the case of 1-2 child families the income tax may be reduced by 62,500 HUF/child/year (appr. 221EUR), in the case of families with 3 or more children the income tax may be reduced by 206,250 HUF/child/year (appr. 731EUR).

Furthermore, a family in which parents stopped working to care for children aged 3 or less is offered "child home care allowance" of 28,500 HUF (€102.08) per one child a month and a double the amount for twins. Another subsidy is known as "child-raising support," is paid to parents who raise three or more children and the youngest is aged 3 to 8 and amounts to 28,500 HUF (€102.08). In special cases, such as a single parent household, long-term illness of a parent or serious disability, or in the case of a parent being involved in full-time higher education "Regular child protection support" of 5,800 HUF (€20.78) is also paid. During the period in which child maintenance is not paid or family income decreased to amount less than 85,500 HUF (approximately €300), the court can establish the so called "advanced maintenance payment".

Income Scenarios

In this section we summarize key facts about the social security and tax systems in Hungary (Table 3.6), and provide income scenarios for archetypal family types (Scenarios 3.3).

Table 3.6. Cost of labor for minimum wage in Hungary

Minimum Wage[41]		323
SSC - social security contribution and health insurance	**Employer**	87.21
	Employee	56.53
Income tax (%)		16
Total tax wedge (%)		47.64
Net wage		214.79
Cost of labor		410.21

Scenarios 3.3

- **Single person, no children-**

    If **employed** - net wage of **€ 214.79**

    If **unemployed** - unemployment benefit € 80 + average minimum public work wage[42] € 10 = **€ 90**

- **Family with two children-**

    If **both employed** –2*net wage € 214.79 + family allowance € 47.64= **€ 477.22**

    If **one is employed, the other unemployed** net wage € 214.79 + mimimum income allowance € 80 + average of minimum public work wage € 10 + family allowance € 47.64= **€ 352.43**

    If **both unemployed** - 2* unemployment benefit € 80 + 2* average of minimum public work wage € 10 + family allowance € 47.64=**€ 227.64**

- **Family with five children-**

    If **both employed** – 2*net wage € 214.79 + family allowance € 57.31 + child-raising support € 102.08 = **€ 588.97**

    If **one is employed, the other unemployed -** net wage 214.79 + unemployment benefit 80 + average of minimum public work wage 10 + family allowance 57.31 + child-raising support 102.08 = **€ 464.18**

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[41] According to Eurostat for year 2012. Available online: (10/26/2012)

[42] Here, it is expected that the recipient only works the three days montly he or she needs to work to retain the benefits.

> If **both unemployed -** 2* unemployment benefit 80 + 2* average of minimum public work wage 10 + family allowance 57.31 + child-raising support 102.08 = **€ 339.39**
>
> - **Single parent with two children-**
>
>   If **employed** - net wage 214.79 + family allowance 53.01= **€ 267.8**
>
>   If **unemployed** - unemployment benefit 80 + average of minimum public work wage 10 + family allowance 53.01 = **€ 143.01**

3.1.4 Romania

General Information

Table. 3.7. Basic facts about Romania

Population	21,413.815	**Local Currency**	RON
GDP Per Capita (EUR)	11.400	**Share of Low Educated (%)**	25.1
Unemployment (%)	7.4	**Inflation (%)**	5.8

Data obtained from Eurostat, relevant for 2011 (GDP valid for 2010).

Labor Market Regulations

The minimum guaranteed gross salary is set to RON 700 (around **€154.28**) per month in the year 2012. Compared to the year 2011, minimum gross salary has increased from RON 670 (around **€146.22**). The minimum wage is applied to a full time employment of 169.3 hours per month, representing RON 4.13 per hour (€0.9); part time workers are entitled a pro-rated portion of the minimum wage.

Employees are liable to paying social security contribution amounting 14.5% of gross wage and health insurance of 5.5% of their gross wage (in total 20% of gross wage). Employers are obligated to pay the larger part of social security contribution, namely 22.15% of gross wage social security contribution and 5.2% of gross wage to mandatory health insurance (in total 27.35% of gross wage).

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As far as tax rates are concerned, most types of income are taxed at a flat rate of **16%**. Romanians domiciled in Romania are subject to taxation of their worldwide income, except for salaries received from abroad for activities performed abroad[43]. The minimum net wage in Romania is **€98.74** and the cost of labor in the case of minimum wage employee is €196.68.

Unemployment insurance in Romania is as a part of the Social insurance system currently governed by a law valid from the year 2002. Unemployed persons must have been contributing for at least 12 month in the last 24 month before unemployment to qualify for unemployment benefits. The current social system in Romania excludes from unemployment benefits those persons, who are voluntarily unemployed, not registered at the local labor office and who are not actively looking for a job. The unemployment benefits cover 75% of the reference social index (RON 500; € 109.12) plus 3% to 10% of the average earning of insured and is paid for the period of 6 months (in case that the insured has paid contribution for at least one year), 9 months (in the case of 5 and more years of contribution), or 12 moths (more than 10 years of contribution).[44]

The guaranteed minimum income (Venitul minim garantat) in Romania is set in an amount determined as the difference between the levels established by law as guaranteed minimum income and the net monthly income of the family or single person.[45] The income of the family is taken into consideration in assessing the right to this benefit; the means are tested. In determining the net monthly income of the family all the incomes earned by all members are taken into account, including those from the state social insurance rights, unemployment insurance, legal liabilities for dependent persons, indemnities, allowances and benefits with permanent character, with the exception of income from scholarships and aid received in the program

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[43] According to Pricewaterhouse Cooper report The Romanian Tax Pocket Book, available online http://www.pwc.com/ro/en/publications/assets/assets_2012/tax_pocket_book_eng_2012.pdf (10/20/2012). p. 6.

[44] Social Security Programs Through out the World: Europe, 2012 (2012). U.S. Social Security Administration. Office of Retirement and Disability Policy. Available online http://www.ssa.gov/policy/docs/progdesc/ssptw/2012-2013/europe/romania.html (10/20/2012).

[45] Stroe, Cristina; Militaru, Eva; Avram, Silvia; Cojanu, Silvia: Euromod. Country Report. Romania (2007-2010). June 2012. Available online: https://www.iser.essex.ac.uk/files/euromod/country-reports//year-3/CR_RO_Y3_final.pdf (10/20/2012). p. 19.

Money for school."[46] The guaranteed minimum income in Romania is currently governed by law no. 416/2001 on the minimum wage in May 2012.[47] For year 2012 (last information in May) the guaranteed minimum income per month is set at €27.31 (RON 125) per single person; at €49.16 (RON 225) for a two-person family; at €68.83 (RON 315) for a three-person family; at € 85.22 (RON 390) for a four-person family; at €101.61 (RON 465) for a five-person family; and at €108.38 (RON 496) for a six-person family.[48]

The Romanian social system offers non-contributory benefits for families with children, such as "state allowance for children", which is monthly granted to families with children up to the age of 18 or above that age when attending secondary or vocation education. This allowance is granted as a universal grant to all families with children. Another type of benefits is based on low income of families; with family income tested. The "Complementary family allowance" is a means-tested grant for poor families with children (up to age of 18). The family is defined as including husband, wife and depending children, and the whole family has to live together.[49] Unmarried persons or

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[46] Stroe, Cristina; Militaru, Eva; Avram, Silvia; Cojanu, Silvia: Euromod. Country Report. Romania (2007-2010). June 2012. Available online: https://www.iser.essex.ac.uk/files/euromod/country-reports//year-3/CR_RO_Y3_final.pdf (10/20/2012). p. 20 – 21.

[47] Analiza datel or statistice privind plataajutorului social conform legiinr. 416/2001 privindvenitul minim garantat in lunamai 2012. Analysis of statistical data on social assistance payment under law no.416/2001 on the minimum wage in May 2012. Available online:

http://www.mmuncii.ro/pub/imagemanager/images/file/Domenii/Incluziune%20si%20asistenta%20sociala/raportari/VMG%20_MARTIE%202012%20_p.pdf (10/20/2012).

[48] Analiza datel or statistice privind plataajutorului social conformlegiinr. 416/2001 privindvenitul minim garantat in lunamai 2012. Analysis of statistical data on social assistance payment under law no.416/2001 on the minimum wage in May 2012. Available online:

http://www.mmuncii.ro/pub/imagemanager/images/file/Domenii/Incluziune%20si%20asistenta%20sociala/raportari/VMG%20_MARTIE%202012%20_p.pdf (10/20/2012). P. 2.

[49] If the average per capita family income is less than RON 200 (€ 43.65), RON 30 (€ 6.55) a month is paid for one child; RON 60 (€ 13.09) for two; RON 90 (€ 19.64) for three; or RON 120 (€ 26.19) for four or more children. If average per capita family income is RON 200 (€ 43.65) to 370 (€ 80.75), RON 25 (€ 5.46) a month is paid for one child; RON 50 (€ 10.91) for two; RON 75 (€ 16.37) for three; or RON 100 (€ 21.82) for four or more children." "Single parent allowance" is a means-tested income for families which is paid if average per capita family income is less than RON 200 (€ 43.65), than RON 50 (€ 10.91) a month is paid for one child; RON 100 (€ 21.82) for two; RON 150 (€ 32.74) for three; or RON 200 (€ 43.65) for four or more children. If average per capita family income is RON 200 to 370 (€ 43.65 – 80.75) , RON 45 (€ 9.82) a month is paid for one child; RON 90 (€ 19.64) for two; RON 135 (€ 29.46) for three; or RON 180 (€ 39.28) for four or more children. Stroe, Cristina; Militaru, Eva; Avram, Silvia; Cojanu, Silvia: Euromod. Country Report. Romania (2007-2010). June 2012. Available online: https://www.iser.essex.ac.uk/files/euromod/country-reports//year-3/CR_RO_Y3_final.pdf (10/20/2012). P. 12.

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households with per capita income lower than a fixed amount are entitled to receive cash and in-kind benefits to help paying their heating costs.[50]

Occasionally family has a right to obtain "parental leave" in amount of RON 600 a month or 75% of average earnings of the last 12 months. This allowance is paid to parents who had income from work during the 12 months prior to the birth. Under one year of children's age the maximum subsidy goes up to RON 1,200, and up to RON 3,400 for a child under 2 years.

Income Scenarios

We now summarize some key information about the tax and social security system in Romania (Table 3.8) and income scenarios for a selected sect of household types (Scenarios 3.4).

Table. 3.8. Cost of labor for minimum wage in Romania

Minimum Wage		154.28
SSC - social security contribution and health insurance	Employer	42.20
	Employee	30.86
income tax (16%)		16
total tax wedge (%)		50.12
net wage		98.74
cost of labor		196.68

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[50] Social Security Programs Through out the World: Europe, 2012 (2012). U.S. Social Security Administration. Office of Retirement and Disability Policy. Available online
http://www.ssa.gov/policy/docs/progdesc/ssptw/2012-2013/europe/romania.html (10/21/2012).

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Scenarios 3.4

- **Single person, no children-**

    If **employed** - net wage of **€ 98.74**

    If **unemployed -** monthly minimum income for one person = **€27.31**

- **Family with two children-**

    If **both employed** – 2* net wage €98.74 + 2* family allowance €9.17 + income supplement €10.91 = **€215.82**

    If **one is employed, the other unemployed** – 1 * net wage €98.74 + GMM 0 + 2 family allowance €9.17 = **€117.08**

    If **both unemployed** – GMM €85.22; 2* family allowance €9.17 included = **€85.22**

- **Family with five children-**

    If **both employed** – 2 * net wage € =98.74 + 5* family allowance 9.17 = **€243.33**

    If **one is employed, the other unemployed** - net wage €98.74 + GMM €0 (GMM € 108.38) + 5* family allowance € 9.17 = **€144.59**

    If **both unemployed** – GMM €108.38; 5* family allowance €9.17 included= **€108.38**

- **Single parent with two children-**

    If **employed** - net wage €98.74 + 2* €9.17 (family allowance) + €21.82 Single - parent allowance = **€138.9**

    If **unemployed -** GMM €68.83+ single-parent allowance €21.82; 2* €9.17 (family allowance) included = **€90.65**

GMM – guaranteed monthly minimum

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3.1.5 Slovakia

General Information

Table. 3.9. Basic facts about Slovakia

Population	5,392,446	Local Currency	EUR
GDP Per Capita (EUR)	18,400	Share of Low Educated (%)	8.7
Unemployment (%)	13.6	Inflation (%)	4.1

Note: Data obtained from Eurostat, relevant for 2011.

Labor Market Regulations

Slovakia has a single state-wide set minimum wage set by the government annually. For 2012, the minimum gross wage was set to **€327.20** a month for full-time workers.[51] Part time workers are entitled to a pro-rated share of the amount. Workers are required to contribute a smaller part to social security contributions (9.40% of gross wage) and mandatory health insurance (4% of gross wage), the bigger part being the responsibility of the employer. The government covers health insurance for the unemployed, provided they do not earn more than **€143.40.**

Employees whose earnings in a given year are greater than minimum wage multiplied by six are liable to paying an income tax of **19%** for all earnings above **€3,644.74** (approximately €303.72 per month) after social security and healthcare contributions paid by the employee are deduced.[52] The income tax amount is lowered by an annually set monthly amount for every dependent child. Only one taxpayer is entitled for the deduction for every particular child. From July 2012 the deduction equals **€21.03 per month**. In spite the flat tax rate, the tax system in Slovakia is actually progressive due

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[51] http://www.employment.gov.sk/minimumna_mzda.html (10/02/2012).

[52] http://www.socpoist.sk/vybrane-tabulky-platenia-poistneho/48618s (10/02/2012).

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to the per-head and per-child tax exemptions. Generally a worker with one dependent child can earn up to €470 monthly without being liable to paying any income tax. [53]

Slovak employers are responsible for covering a greater part of social contribution (25.2% of gross wage) and mandatory health insurance (10% of gross wage). Consequentially, employing a worker for minimum wage in fact costs the employer **€42.34**. To ease the burden, the government offers a rebate to employees who can guarantee long term-employment of the workers, who earn less than half of the mean wage or of workers who belong to disadvantaged groups.

The welfare benefits in Slovakia are not tied to employment status, with the exception of a modest bonus to childcare benefits for the unemployed, but rather to combined income of a family unit. A key variable that determines eligibility for welfare is the so called subsistence minimum, which is an amount set annually by the government. Since July 2012 the subsistence minimum in Slovakia amounts the following: €194.58 for one adult person + €135.74 for each other adult person + €88.82 for each child. A family that does not have the combined income of at least 25% higher than the subsistence minimum is entitled to receive monetary payments, the amount is determined by the size of the family as well and ranges from **€60.5** for a single individual up to **€212.3** for a family with four and more children monthly. [54] In addition to that, person entitled to welfare payment is also entitled to a monthly assistance of **€55.8** (**€89.2** for a couple) to help cover the cost of housing. Finally, all parents in Slovakia are entitled to **€22.54** monthly assistance per child (just like in the case of the tax bonus, only one parent is entitled to the childcare benefits). [55] This amount is further increased by **€10.57** per child in the case the parent is unemployed.

In case of unemployment a citizen of Slovakia is alowed to earn maximum of €143.4 to obtain the unemployment benefits.

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[53] http://www.socpoist.sk/vybrane-kalkulacky-na-vypocet-poistneho/48614s (10/02/2012).

[54] http://www.employment.gov.sk/priplatok-k-pridavku-na-dieta.html (10/01/2012).

[55] http://www.employment.gov.sk/pridavok-na-dieta.html (10/01/2012).

Income Scenarios

In this section we review the social and tax systems in Slovakia in Table 3.10 and shed light on the trade-offs selected types of families in connection to their labor market behavior (Scenarios 3.5).

Table. 3.10. Cost of labor for minimum wage in Slovakia

Minimum Wage		327.2
SSC - social security contribution and health insurance	Employer	115.41
	Employee	43.82
income tax		0
total tax wedge (%)		35.89
net wage		283.38
cost of labor		442.34

Scenarios 3.5

- **Single person, no children -**

    If **employed** - net wage of **€283.38**

    If **unemployed** -€60.5 welfare = **€60.5**

- **Family with two children -**

    If **both employed** – 2 * net wage of €283.38 + 2* **€22.54** childcare benefit = **€611.84**

    If **one is employed, the other unemployed** net wage of €283.38 + 2 * €22.54 childcare benefit + 2 * €10.57additional childcare benefit due to unemployment + €157.60 welfare = **€522.16**

    If **both unemployed** – 2 * €22.54 childcare benefit + 2 * €10.57 additional childcare benefit due to unemployment + €157.60 welfare = **€223.82**

- **Family with five children -**

    If **both employed** – 2 * net wage of 283.38+ 5 * € 22.54 childcare benefit + 212.30 welfare = **€ 891.76**

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If one is employed, the other unemployed net wage of €283.38 + 5 * €22.54 childcare benefit + 5 * €10.57 additional childcare benefit due to unemployment + €212.30 welfare = **€661.23**

If **both unemployed -** 5* €22.54 childcare benefit + 5 * €10.57 additional childcare benefit due to unemployment + €212.30 welfare = **€ 377.85**

- **Single parent with two children -**

  If **employed** - net wage of €283.38 + 2 * €22.54 childcare benefit + €115.10 welfare = **€444.28**

  If **unemployed -** 2 * €22.54 childcare benefit + 2 * €10.57additional childcare benefit due to unemployment = **€181.32**

3.2   Conclusions

As seen in summary Tables 3.11a and 3.11b, there is high level of divergence between the five analyzed countries. This is visible in terms of the total amounts – while even educationally disadvantaged families in Spain bring home 426 to 1537,21 EUR, depending on the scenario, Romanian and Bulgarian families working in minimum-wage jobs or being dependent on public social subsidies have to get by with just 24 to 327 EUR per month. Although some of the international differences are due to differing price levels, Table 3.11b shows that even accounting for price differentials leaves significant gaps between countries.

Our key comparative insight is that there are significant cross-country differences manifested in the relative benefits from taking a low paid job vis-à-vis relying on subsidies. We see that in several scenarios the difference in family income when adults are working or not may be rather low, thus possibly hindering employment incentives of low educated workers. This is the case e.g. in Spain or for the second earner in families with 2 children in Slovakia. As evidenced in the Table 3.12, especially for families with children employment of both parents offers very little additional income in comparison to just one parent being employed, in particular in Spain, where the

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social safety net is relatively generous. This may lead to significant disincentives for families in such situations to take up employment in these countries.

Table 3.11.a. Overview of scenarios, total family income in EUR

Scenarios		Bulgaria	Spain	Hungary	Romania	Slovakia
Single	Employed	116.02	707.98	214.79	98.74	283.38
	Unemployed	24.33	426	90	27.31	60.5
family - 2 children	Employed	267.98	1464.46	477.22	215.82	611.84
	emp/unemp	151.94	1182.48	352.43	117.08	522.16
	Unemployed	104	900.5	227.64	85.22	223.82
family - 5 children	Employed	327.2	1537.21	588.97	243.33	891.76
	emp/unemp	205.79	1255.2	464.18	144.59	661.23
	Unemployed	194.42	973.25	339.39	108.38	377.85
single mother	Employed	149.92	756.45	267.8	138.9	444.28
	Unemployed	93.41	474.5	143.01	90.65	181.32

Source: Own calculation

Table 3.11.b. Overview of the scenarios, total family income in EUR, adjusted for comparative price levels in the EU

Scenario		Bulgaria	Spain	Hungary	Romania	Slovakia
Single	Employed	227.49	688.16	335.61	164.57	393.58
	Unemployed	47.71	414.07	140.63	45.52	84.03
family - 2 children	Employed	525.45	1423.46	745.66	359.7	849.78
	emp/unemp	297.92	1149.37	550.67	195.13	725.22
	Unemployed	203.92	875.29	355.69	142.03	310.86
family - 5 children	Employed	641.57	1494.17	920.27	405.55	1238.56
	emp/unemp	403.51	1220.05	725.28	240.98	918.38
	Unemployed	381.22	946.00	530.3	180.63	524.79
single mother	Employed	293.96	735.27	418.44	231.5	617.06
	Unemployed	183.16	461.21	223.45	151.08	251.83

Source: Own calculation based on comparative price levels of final consumption by private households including indirect taxes published by the Eurostat

Table 3.12. Comparison of relative benefits of different scenarios

Scenario		Bulgaria	Spain	Hungary	Romania	Slovakia
single	employed	100.00	100.00	100.00	100.00	100.00
	unemployed	20.97	60.17	41.90	27.66	21.35
family - 2 children	employed	100.00	100.00	100.00	100.00	100.00
	emp/unemp	56.70	80.75	73.85	54.25	85.34
	unemployed	38.81	61.49	47.70	39.49	36.58
family - 5 children	employed	100.00	100.00	100.00	100.00	100.00
	emp/unemp	62.89	81.65	78.81	59.42	74.15
	unemployed	59.42	63.31	57.62	44.54	42.37
single mother	employed	100.00	100.00	100.00	100.00	100.00
	unemployed	62.31	62.73	53.40	65.26	40.81

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Conclusion, recommendations for further research

by Vera Messing

The first part of this report demonstrated differences of how low educational levels affect odds of employment among the countries involved in the analysis. It showed that there are significant variations; while in some countries – more specifically in those, where the low education is relatively rare – educational level makes a huge difference in the employability of the working age population, in others – characteristically in those, where the proportion of low educated people is higher – odds for finding a job is less influenced by educational levels. Other socio-demographic characteristics –such as gender, age, and type of residence and region - especially in intersection with educational level draw the frame of opportunities in labour market participation.

The second chapter drew a map of the present situation of Roma employment in the five countries. Besides registering repeatedly low levels of employment, the analysis of the most recent UNDP survey data drew attention to some important characteristics. One is the extensive presence of informal employment: in all of the countries low employment rates are coupled with Roma people's extensive presence in the informal segment of the economy. This fact reflects their exclusion from the official labour market to non-contracted, casual, day work and/or family businesses, which is characterized by low salaries, instability, insecurity and lack of welfare and health insurance. UNDP/FRA survey data also demonstrates the persistent presence of discrimination in employment: a significant proportion of Roma, especially in Central European countries – experience discrimination in employment, most typically during the process of job application and selection. An interesting contradictions in the comparative analysis of employment rates of Roma calls for further investigation: those countries demonstrate the lowest employment rates among Roma in which their educational levels are the highest comparatively (Hungary, Slovakia). This phenomenon may be explained by various intersecting causes: (1) the relative value of

education (odds of finding a job with low educational level is highest in countries, where low education is relatively rare, and even though on a cross country comparison Roma may have higher educational level in these countries, still their relative chances within the national setting is lower), (2) economic structure characterized with a low presence of sectors that could absorb low educated workforce (3) level of discrimination (UNDP /FRA registered the highest presence of discrimination in these countries). Other explanatory factors may lie in the regulatory framework within which the demand and supply side of the labour market affects vulnerable groups.

In order to explain these contradictions the analysis of labour market regulators and welfare regimes comes to our support. The table bellow summarizes the most important characteristics of the labour market in the individual countries for low educated people providing the incentive for both employers and employees to enter the labour market. We see, that the employment rate of Roma (1) has no interference with the share of employed among the low educated population (7). Therefore we may suggest, that the low employment rates of Roma may not be explained solely by generally low educational level of this population.

Concluding table: Comparative analysis of labour market incentives, educational levels and employment rates of Roma

	1	2	3	4	5	6	7
	Employ ment rate among Roma (%) (UNDP)	Cost of labour (EUR)	Tax wedge (%)	Relative loss for one employe d in a 4 member family (%)	Relative loss of no employe d in a 4 member family (%)	Income loss of a second unemplo yed (5-4)	Employ ment rates of low educated populati on (%)
Slovakia	15	442	35.9	15	63	48	39.7
Spain	19[56]	925	23	19	39	20	48.2
Hungary	23	410	48	26	52	26	25.9
Romania	30	197	50	46	61	15	43
Bulgaria	34	174	23	44	61	17	28.5

Taking the labour supply side into account some important features become evident. In Central and South East European countries households where adults become unemployed suffer significant losses. Also, the analysis demonstrates, that low employment rates of Roma are definitely not due the lack of Roma people willingness to work (see figure 2.6). These data support that Roma are ready to take on a job even for low salaries; over 80 percent of them would prefer a stable job to high salaries. This fact contradicts the image of unemployed (and Roma) not entering into employment because of the generous welfare safety net. There are some differences, however: in Bulgaria and Romania families suffer great losses in household income if any of the adults become unemployed, but the relative loss in income with the second unemployed is not that large. In contrast, in Hungary and Slovakia the opposite is true: families with one unemployed reach the 74-85% of the income of a household in which both adult are employed, while they suffer great losses at the point when both adults become unemployed. In Spain households do not experience great income deficits in

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[56] FRA Survey

either case. This regulatory framework would suggest that the largest incentive for people to enter employment (where unemployed loose the most income) are Romania, Bulgaria in the first row, and Slovakia and Hungary in the second, and Spain in the third. This sequence reflects more or less the sequence of employment rates of Roma in the five countries, although we are aware of the fact, there is rarely such a choice that on the individual level.

Taking into account the demand side of the labour market we see, that there are sizeable differences in terms of burdens imposed on employment (minimum wage, taxes, health insurance, social security contribution), which after all define the cost of labour, especially in the lowest segment of the labour market. Our comparative analysis demonstrated that the differences in employment rates of Roma are not directly related to the various components of the burdens imposed on wages, nor the tax wedge. Tax wedge on its own, that is the share of the total costs of employment which reaches the employee, seems to have little influence: in Bulgaria and Slovakia the burden posed on employment is relatively low, still Bulgaria has the highest, while Slovakia the lowest employment levels among Roma. In Hungary, Spain and Romania tax wedge is high, but employment rates vary a lot across these countries. The cost of labour, however, that is the total sum, that burdens the employer when considering the hiring of a person, seems to be decisive in terms of what proportion of Roma have the opportunity to enter the labour market. Although the sum in Euro might be misleading, as it is not adjusted to the level of development and prices of the individual countries, still, multinational companies, many of which are important employers of low skilled (and Roma) workers consider in their decisions on investments the gross sum of what an employee costs.

Also an important characteristics of the demand side of the labour market is the structure of the economy. We saw, that in countries, where economic sectors which can absorb low skilled workforce (agriculture, tourism, construction industry) are strong, the level of employment among the Roma population is relatively high. And contrarily, in countries where such sectors have a less significant role in the economy the proportion of Roma in employment is lowest (Hungary and Slovakia).

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We may conclude also that the regulatory framework concerning both the supply and the demand side of the labour market may have a function in employment rates of Roma to some extent. A further variable, which seems to have an important role in the differences of employment rates is level of discrimination. Trends in employment rates among Roma seem to be in consonance with frequency of experiences of discrimination.

Some of the unanswered contradictions of this paper – such as that of educational levels' influence on employment rates of Roma – might be understood by a closer look of further factors, such as policy measure and the impact of focused employment programs for Roma in the countries under scrutiny. This will be the task of the next deliverable within workpackage 19.

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Annexes

Annex 1: Sectoral Distribution of Low Educated Labor (in %)

	Bulgaria	Spain	Hungary	Romania	Slovakia
Agriculture, forestry and fishing	26.13	8.86	11.99	71.76	9.69
Mining and quarrying	1.45	0.46	0.29	0.26	1.20
Manufacturing	24.25	15.97	30.37	7.94	20.89
Electricity, gas, steam and air conditioning supply	0.32	0.26	0.24	0.15	0.24
Water supply; sewerage, waste management and remediation activities	1.50	0.90	1.72	0.79	7.89
Construction	15.99	13.00	7.65	5.93	10.05
Wholesale and retail trade; repair of motor vehicles and motorcycles	8.58	18.20	6.84	4.72	6.74
Transportation and storage	3.76	5.56	6.28	1.24	5.00
Accommodation and food service activities	3.54	9.54	3.70	0.79	5.12
Information and communication	0.27	0.46	0.37	0.14	0.30
Financial and insurance activities	0.05	0.50	0.31	0.07	0.00
Real estate activities	0.00	0.19	0.28	0.10	0.12
Professional, scientific and technical activities	0.11	0.76	0.31	0.07	0.18
Administrative and support service activities	2.04	6.70	4.08	1.19	9.33
Public administration and defence; compulsory social security	3.49	5.38	13.27	1.16	11.50
Education	3.33	1.23	5.42	0.96	4.76
Human health and social work activities	3.06	3.72	5.10	1.45	6.02
Arts, entertainment and recreation	0.70	1.25	0.62	0.12	0.60
Other service activities	0.59	2.30	0.98	0.41	0.36
Activities of households as employers	0.86	4.77	0.18	0.72	0.00
Activities of extraterritorial organisations and bodies	0.00	0.00	0.00	0.01	0.00

Source: Own calculation based on the LFS data from 2010, Economically active respondents aged 15-62 only

Annex 2: Share of Low Educated Population by Gender and Age (in %)

	Men									
	15-17	18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57	58-62
BG	48.39	16.53	17.85	18.20	19.19	14.60	15.93	19.10	23.75	29.62
ES	83.97	56.08	41.68	38.20	42.15	44.39	48.83	52.15	57.10	66.14
HU	69.74	23.00	15.81	16.11	17.41	16.00	14.48	15.78	16.74	12.06
RO	63.29	27	20.46	19.51	16.67	14.07	16.26	20.07	26.38	46.49
SK	30	7	5.64	4.46	3.79	5.81	4.32	7.13	9.98	8.17

	Women									
	15-17	18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57	58-62
BG	42.70	13.48	17.19	16.71	15.72	12.32	13.51	16.09	22.98	22.13
ES	70.63	35.43	25.07	24.02	29.98	35.38	43.53	48.63	55.22	65.71
HU	55.73	13.74	9.81	13.04	17.20	18.78	20.67	24.08	27.83	30.48
RO	56.78	22.76	15.67	20.13	16.16	13.85	17.19	27.74	46.86	83.35
SK	32.63	6.95	4.23	3.53	3.39	5.89	8.09	11.61	13.72	N/A[57]

Source: Own calculation based on the LFS data from 2010, Economically active respondents aged 15-62 only

Annex 3: GDP per capita in purchasing power parity and share of low educated individuals per NUTS2 region

Bulgaria		
NUTS2 Region	GDP	Low Edu. %
Severozapaden	6400	13.88
Severentsentralen	6900	20.8
Severoiztochen	8400	22.52
Yugoiztochen	8500	23.35
Yugozapaden	17700	11.25
Yuzhentsentralen	7200	23.02

Hungary		
NUTS2 Region	GDP	Low Edu. %
Közép-Magyarország	25500	12.44
Közép-Dunántúl	12600	19.49
Nyugat-Dunántúl	14200	15.36
Dél-Dunántúl	10500	22.86
Észak-Magyarország	9300	19.62
Észak-Alföld	9900	21.5
Dél-Alföld	10100	17.78

Spain		
NUTS2 Region	GDP	Low Edu. %
Galicia	21800	46.53
Principado de Asturias	22500	35.56
Cantabria	23500	36.2

Romania		
NUTS2 Region	GDP	Low Edu. %
Nord-Vest	10100	21.1
Centru	10700	18.18

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[57]Insufficientnumberofobservations.

País Vasco	31600	25.98
Comunidad Foral de Navarra	30500	33.85
La Rioja	26500	37.28
Aragón	26700	38.45
Comunidad de Madrid	31900	29.77
Castilla y León	23200	42.85
Castilla-la Mancha	19600	49.16
Extremadura	16900	53.13
Cataluña	28200	42.93
Comunidad Valenciana	21400	44.82
Illes Balears	25700	51.02
Andalucía	18600	50.59
Región de Murcia	20300	51.58
C.A. de Ceuta	22000	37.04
C.A. Autónoma de Melilla	20300	54.89
Canarias	20500	47.35

Nord-Est	6900	30.92
Sud-Est	8900	25.78
Sud - Muntenia	9500	23.84
Bucuresti - Ilfov	26100	9.8
Sud-Vest Oltenia	8400	26.52
Vest	12100	17.4

Slovakia		
NUTS2 Region	GDP	Low Edu. %
Bratislavský kraj	41800	4.46
Západné Slovensko	16100	5.53
Stredné Slovensko	13600	7.28
Východné Slovensko	11500	8.81

Source: Own calculation based on the LFS data from 2010, Economically active respondents aged 15-62.

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