WHAT TRIGGERS POVERTY OF YOUNG NATIONALS AND YOUNG MIGRANTS? A COMPARATIVE MACROECONOMIC APPROACH *

Smaranda CIMPOERU^{a*}

^{a)} *The Bucharest University of Economic Studies, Romania*

Abstract

Identifying the macro-economic determinants of poverty is a key concern for developing poverty reduction policies. Since young people and young migrants in particular are more exposed to poverty, establishing the factors that trigger poverty among these social categories has even more relevance. A preliminary analysis shows that significant differences exist between at-risk-of poverty or social exclusion rate of young migrants and young nationals across European countries. For a more thorough study of the reasons behind these differences in poverty rates between young migrants and young nationals, two panel data regression models are estimated on a cross-section of 23 countries over the period 2010 – 2018 (one model for young migrants, the other for young nationals). Results confirm the main theories in the specialty literature: unemployment and inequality (measured by the Gini index) are the main triggers of poverty or social exclusion both for young nationals and young migrants. However, the income is significant for reducing poverty only for young nationals, but not for the young migrants. This result reinforces the necessity of better integration policies for young migrants in richer Member States.

Keywords: Poverty, Social Exclusion, Young migrants, Unemployment, Inequality

JEL Classification: I32, F22, C23.

* Corresponding author, **Smaranda Cimpoeu** – smaranda.cimpoeu@csie.ase.ro

***Acknowledgements:** This article was prepared under the MIMY project (EMpowerment through liquid Integration of Migrant Youth in vulnerable conditions). This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 870700. The content provided in this article reflects the author's views only. Neither the Research Executive Agency (REA) nor the European Commission are responsible for any use that may be made of the information it contains.

1. Introduction

Poverty is a diverse and complex phenomenon, varying from one country to another, from one ethnic group to another or from one segment of population to another (immigrant versus local population). The differences in poverty variation suggest that the underlying causes of this phenomenon may be as well different for the various groups or segments of population. Kazemipur and Halli (2001) argue that the relevant factors to poverty can be classified in three categories: assimilation factors, human capital factors and structural factors.

- (i) The assimilation factors are closely related to the poverty of immigrants, since they refer to immigrants' time of arrival in the host society, the language proficiency, their age, etc. Based on this, immigrants are exposed to an increased poverty risk considering the language barriers they face, the incompatibility of the educational credentials, the problems with the transfer of their jobs skills, unfamiliarity with the demands on the labour market in the new home, lack of access to the informal networks to access a job, etc. (Kazemipur and Halli, 2001).
- (ii) The human capital factors are associated with education, age, work experience, health and migration experience. All of these have a direct impact on the young individuals' economic performance and employability (Nienaber et al., 2020; Roman and Paraschiv, 2019). Some studies argued that immigrants' poverty can be the result of the low level for their human capital stock, especially if immigrants come from developing countries with lower level of education and qualification skills (Borjas, 1994).
- (iii) The structural factors, refer to the segmented labour market that affects immigrants, since immigrants are recruited usually to fill secondary sector positions that are rejected by locals. The reason they accept these jobs is the necessity of having a job as soon as possible as they arrive in the host society (Isajiw, 1999). These secondary sector jobs are typically instable, low paid, with limited benefits and in difficult or dangerous working conditions (Massey et al., 1994).

As a consequence, there are significant differences in the poverty rates of immigrants and natives (Lelkes and Zolyomi, 2011) Moreover, young people face high rates of poverty, being also increasingly exposed to non-standard and less secure forms of employment. The poor quality of jobs held by young people is revealed in precarious working conditions, but also a lack of legal and social protection or limited opportunities for training and career progression. This adds to the increasing risk of social exclusion young people face. (ILO, 2020).

In this context, it becomes very important for policy makers to determine the macroeconomic factors that trigger the poverty of young migrants, but also the differences between macroeconomic determinants of poverty for young migrants compared to young nationals. The present paper undertakes these objectives. The novelty of the paper consists in

using macroeconomic variables for determining poverty on two vulnerable groups: young nationals and young immigrants. Most of the studies on this topic use micro-economic determinants and only a few refer to the young migrants' social category.

To reach the objectives, two macro-econometric panel data regression models are built for a set of European countries. The period considered in the analysis is the last decade (2010 – 2018). Both country and period structure are also in line with the MIMY (Migrant Youth Integration & Empowerment) project, since the article is written within the scope of this project.

The variable of interest considered is at-risk of poverty or social exclusion rate for young immigrants and young nationals. A set of potential macroeconomic factors is included in each model related to labour market, development and education. Main results confirm the specialty literature evidences: inequality and unemployment increase the risk of poverty both for young migrants and young nationals. Moreover, we could not conclude that richer European countries have a lower poverty risk of young migrants. However, for the young nationals, the income is a significant factor for reducing the poverty risk. This comes to acknowledge the integration issues young migrants face in Western European economies. The obtained outcomes could be used for developing policies to reduce young migrants' poverty and social exclusion risk.

2. Literature Review

The relationship between the country level indicators and the risk of poverty is not straightforward, as a great part of income inequality can still exist, even in countries with a very high level of economic development (Branyiczki, 2015).

The labour force participation rate of young people (aged 15–24) is on a decreasing trend in the last 20 years. Although this can reflect the increasing enrolment in education (secondary or tertiary), it is also proof of the increasing number of young people not in employment, education or training. What is more, young people are three times more likely compared to adults (25 years and older) to be unemployed. This can be partially explained by their limited work experience, but there are also structural barriers that prevent young people from entering the labour market. (ILO, 2020; Nienaber et al., 2020). In the mid-1970s the Poverty Commission identified unemployment as a leading cause of poverty (Saunders, 2002). Still, the relationship between unemployment and poverty is not that straightforward, since it is possible to be employed but still in poverty (in-work poverty) or to be unemployed but not poor (if the individual benefits from other forms of income, including from other family members) – Saunders, 2002.

Although poverty and inequality are theoretically distinct concepts (Atkinson, 1987), they are closely linked, since ultimately they synthesize aspects of the same phenomenon: the distribution of income. The main difference is that poverty focuses on the lower part of the

income distribution, whereas inequality deals with the spread of the entire distribution (Karagiannaki, 2017).

Many studies focus on the growth-inequality-poverty triangle, estimating the impact of economic growth and income inequality on poverty (Kakwani & Son). A recent study from Zaman et al. (2020) uses a pooled mean group estimator on panel data and demonstrates that income inequality increases the poverty, while household income decreases the poverty rate. Other macro-economic regression studies have confirmed the pronounced negative relationship between the income level of a country and the poverty extent (Ravaillon, 1995; Lipton, 1998). The evidence is clear – the richer the country is, the higher the absolute income of the poor, thus the lower the poverty rate. Generally, it is argued (Bourguignon, 2004) that that distribution matters for poverty reduction. Moreover, on the medium-term, distributional changes could be responsible for significant changes in poverty.

In the mid-1990s, after the fast progress of East Asian economies (South Korea, Singapore, Taiwan) which was mainly due to their investment in education, the theory that education and human capital are key for economic growth became very important. In the human capital approach, education is seen as a key element for the reduction of poverty (Becker, 1980). A higher level of education increases the knowledge, productivity and skills levels which support higher wages, an improvement in the living standards and thus the fall in poverty. However, poverty could also be a significant obstacle for education attainment considering the lack of learning and financial resources of the poor, the social pressures that affects the mind-set of the poor students and the lower quality of teaching standard in poorer societies or institutions. (Awan et al., 2011).

Although there are studies in the literature addressing the problem of the higher risk of poverty for immigrants (Lelkes, 2007; 2011), only a few of them have tackled a comparative analysis of the poverty differences between migrants and natives in Europe. Among these, Barcena-Martin and Perez-Moreno (2017) study the patterns of variation for the immigrant–native poverty gap at European level. Using a combined perspective with micro-data from the European Union Statistics on Income and Living Conditions and macro-specific factors, they reveal that immigrants are exposed to a higher risk of poverty than locals, with variations of this gap among countries. Interestingly, the country-level variables have a higher explanatory power for the poverty gap than the household-level variables. Results of the study show that, at country level, labour market and social benefits are likewise important for natives and immigrants, while at micro level, employment and being young have a lower effect on immigrants than on natives. Using also micro-data from Denmark and Sweden, Blume et al. (2007), show that the difference in immigrant poverty rates is due to the difference in composition of the country of origin and in the structure of benefits for families with children.

There are a few studies focusing on immigrant child poverty (Galloway et al., 2009; Diris et al., 2014), but the young migrant poverty has been under researched in the literature.

Kazemipur & Halli (2001) use three logistic regression models (entire Canadian population, immigrant and non-immigrant populations) to find the main factors that could explain poverty in each case. They find that the human capital factors are the strongest predictors for poverty, but also that the risk of poverty is higher for younger immigrants, even though they have higher levels of assimilation.

Thus, based on the research from the specialty literature, we have identified that the comparative analysis of the poverty macro-economic determinants for young migrants and young nationals is an under researched topic. The results of this paper will also add to the specialty literature.

3. Methodology

Panel data analysis refers to datasets in which entities are observed across time while allowing the control for a certain type of omitted variables. One of the advantages of panel data (combining time series with cross-sectional observations) is that they offer more informative data, more variability, more degrees of freedom and are more efficient (Baltagi, 2008).

The two type of methods applied in this paper when dealing with panel data are the fixed and the random effect regression models. In the fixed effects regression model, the intercept is allowed to vary across individuals, to account for the special characteristics of each unit. One important assumption is that these characteristics are unique to the cross-section and should not be correlated with the others.

The fixed effects model could be written as:

$$y_{it} = \beta_1 x_{1,it} + \beta_2 x_{2,it} + \dots + \beta_k x_{k,it} + \alpha_i + u_{it} \quad (1)$$

Where $x_{j,it}, j = 1, 2, \dots, k$ – represents the independent variable, for entity i and time period t .

$\beta_j, j = 1, 2, \dots, k$ – represent the coefficients of the independent variables

$\alpha_i, i = 1, 2, \dots, n$ represent the entity specific intercepts.

Stock and Watson (2003) have proposed the following form of the time invariant intercept, α_i :

$$\alpha_i = \lambda + z_i, i = 1, 2, \dots, n. \quad (2)$$

Where z_i is the invariant unobservable variable that varies from one cross-section (e.g.: country) to another. For example, z_i could represent the cultural habits characteristic to the society.

The second method we use to estimate the panel data regression model is the random effects approach. In the random effect method, the unobserved variable characteristic to the individual entity is integrated in the error term. One of the advantages of the random effects models is that some time invariant variables can be included (for instance gender). For the fixed effects model these variables are integrated in the intercept. The random effects model can be written as:

$$y_{it} = \gamma + \sum_{j=1}^k \beta_j x_{j,it} + \varepsilon_i + u_{it} \quad (3)$$

Where ε_i is the individual (entity) specific error and u_{it} a mix of both cross section and time series error.

While in the fixed approach model each entity has its individual intercept value, in the random effects model the intercept (γ) is the same for all cross-sections. The individual intercept is, in this case, expressed as a deviation from this intercept that represents a constant mean value (Gujarati, 2009).

To decide between the fixed effects and the random effects model we apply the Hausman test. The null hypothesis of the test is that the preferred model would be the random effects one, while the alternative states that the preferred is the fixed effects model (Greene, 2008). We also test for the presence of heteroscedasticity in our models. If the models are affected by heteroscedasticity, we use the robust option to estimate the models with heteroskedasticity-robust standard errors. All estimations are done using Stata13.

Regarding the statistical identification of the social categories considered in the estimated models, the definition of migrants we adopted is based on the country of birth (non EU-28 countries or EU-28 countries). Usually, from a statistical point of view, migrants are identified considering two criteria: citizenship or country of birth. We choose this form of identifying the migrant population since the indicator we will use in analysis is reported on these two social categories. This definition based on the country of birth is preferable to the one based on the citizenship. As Lelkes and Zolyomi (2011) also argue, comparing migration data based on citizenship may lead to problems arising from the differences in rules and requirements governing the acquisition of citizenship in each country.

Thus, the analysis is focused on the young age group (15 – 29 years), for two segments of population based on their country or birth: locals or nationals (the country of birth is the reporting country); non-EU28 immigrants (individuals whose country of birth is outside the EU28 countries). We adopted this age definition (15 – 29 years) for the young group since this is the most commonly used in the EU strategy and it is also applied in the Eurostat surveys and reports.

The dependent variable we will use in the analysis is the rate of “People at risk of poverty or social exclusion” in the specific age and country of birth group. The indicator is available for the age group 16 to 29 years. This indicator encompasses three categories of persons: at risk of poverty, severely materially deprived or living in households with very low work intensity. It is thus, an overarching barometer for the social vulnerability. Persons are only counted once even if they are present in several sub-indicators. The first sub dimension is the people who are at risk-of-poverty, those with an equivalised disposable income below the risk-of-poverty threshold, considered at 60 % of the national median equivalised disposable income.

The second sub-dimension refers to the severely materially deprived state, persons whose living conditions are severely constrained by a lack of resources, experiencing at least 4 out of 9 deprivations items.[†] Lastly, the indicator includes also people living in households with very low work intensity, defined as households where the individuals work 20% or less of their total work potential during the past year.[‡]

A set of macro-economic independent variables will be used in the econometric models in order to identify what macro-economic factors trigger the poverty of young nationals and that of young migrants, but also if there are substantial differences between this two sets of factors. There is a complex and usually interrelated set of country level variables affecting the risk of poverty (Branyiczki, 2015). Based on the review of the specialized literature, we include as macroeconomic variables: the youth unemployment rate, the income per capita, the Gini index the Democracy index and the education level.

Table 1 – Description of explanatory variables used in the models

Variable	Description
Youth unemployment	The youth unemployment ratio is the percentage of unemployed young people (aged 15-24) in the total active population of this age group; source: Eurostat
Income	The mean equivalised net, or disposable income, is the mean of total income of all households, that is available for spending or saving, divided by the number of household members converted into equivalised adults; household members are equalised or made equivalent by weighting each according to their age (unit: PPS); the variables was used in logarithmic form; source: Eurostat
Gini	The Gini coefficient is defined as the relationship of cumulative shares of the population arranged according to the level of equivalised disposable income, to the cumulative share of the equivalised total disposable income received by them; source: Eurostat
Democracy	The Economist Intelligence Unit's democracy index is based on five categories: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture; the index is on a scale from 0 to 10; source: https://www.gapminder.org/data/documentation/democracy-index/
Education	Population by educational attainment level presents data on the highest level of education successfully completed by the individuals of a given population (shares in the 15-24 years age group); the medium education level was considered: upper secondary and post-secondary non-tertiary education, corresponding to ISCED 2011 levels 3 and 4; source: Eurostat

Source: Metadata taken from Eurostat, Gapminder websites

Youth unemployment is expected to be positively associated with the risk of poverty or social exclusion, while the income per capita, being a proxy of the living standards and general development level of the country, assumes a negative correlation with the poverty rate.

[†] cannot afford i) to pay rent or utility bills, ii) keep home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone.

[‡] As per Eurostat definitions of the indicators.

Inequalities are strongly related to poverty, thus a positive relation is hypothesised between the Gini index and the share of population at the lower end of the income distribution. Moreover, a State with a low Democracy level, that has less equal income distribution, is expected to have a higher at-risk-of-poverty rate. At individual level, the low level of education is associated with a higher risk of poverty, thus we will investigate if the correlation exists also at macro level. The complete definition of each variable is given in Table 1.

4. Empirical Results and discussion

4.1. Comparative Analysis of the at risk of poverty and social exclusion rates for young migrants and young nationals

In the last decades, Europe has become a region of net immigration, following successive immigration waves determined politically and economically after the World War II. It follows that as of 1 January 2019, the number of non-EU28 born young people residing in EU Member States, UK and Norway -was 7.57 million, representing 8.6% of the total young population in the 29 European countries. In absolute terms, the largest number of young people born outside the EU28 on 1 January 2019 are in: Germany (1.47 million), Spain (1.08 million), UK (1.03 million), France (0.97 million) and Italy (0.91 million). These account for 72% of the total number of young people born outside EU28 residing in the 29 European countries, while the same five countries had a 62% share of the total young population in the 29 EU countries.

In relative terms, in 2019, the countries with the highest share of young individuals born outside EU28 countries in the total young population of the country are: Sweden (17%), Malta (15%), Spain (15%). Shares of over 10% are reported also in Luxembourg, Cyprus, Austria, Norway, Germany, Greece, Italy and Belgium. By contrast, Slovakia reports the lowest share of young people born outside the EU28 (0.5% of the total young population), followed by Poland (1%) and Lithuania with 1.2%, but also Bulgaria (2%), Latvia (2.1%) and Romania (3.2%).

As mentioned in the methodology section, the dependent variables used in the analysis is the at-poverty or social exclusion rate for two social categories: young nationals and young migrants (or non-EU28 born). The levels of the sub-components of the “Risk of poverty or social exclusion” indicator are depicted in Table 2, for 2018, at EU28 aggregate level. There are significant differences recorded between nationals and non-EU28 migrants for each of the three dimensions. The risk-of-poverty rate is almost double for young individuals born outside the EU28 compared to young nationals. The same holds for the severe material deprivation rate, that is also double for non-EU28 born in comparison with that of young nationals. Lastly, for the third sub-dimension (People living in households with very low work intensity), the rate for young non-EU28 born is 1.4 higher than for young nationals. Based on this, we can conclude that there appears to be a significant variation between the two segments of young

population, for each of the three sub-indicators. Thus, analysing the overall indicator “Risk of poverty or social exclusion” will manage to capture the differences between the nationals and non-EU28 born young population in terms of poverty, severe material deprivation or low work intensity.

Table 2 – Level of the three sub-dimensions included in the at-risk-of poverty or social exclusion indicator, at EU28 aggregated level, in 2018

Indicator	Young nationals	Young non-EU28 born
At-risk-of-poverty	19%	37.4%
Severe material deprivation rate	6.1%	12.6%
People living in households with very low work intensity	9.5%	13.6%

Source: Eurostat data

At EU level, during the period 2010 – 2018, the risk of poverty and social exclusion for young people born outside EU peaked at 51.5% in 2011 (Figure 1) and fluctuated around 50% for the next 3 years. From 2014 it followed a decreasing path, with a considerable fall in 2018, reaching a low of 44.2% in 2018. The risk of poverty and social exclusion is almost double for international young migrants compared to young natives (in 2018, the risk was 1.8 times higher for young people born outside EU compared to young natives). There is a steady evolution of the indicator for the young nationals, with a slightly increasing path in the period following the global financial crisis (2009 – 2014), with a maximum of 28.3% in 2014, followed by a decrease up to 24.7% in 2018.

Figure 1 – Comparative evolution of the At-Risk of Poverty or Social Exclusion rate in the period 2010 – 2018 for young nationals and young migrants; source: author’s computation based on Eurostat data

Figure 2 – Distribution of the at Risk of Poverty or social exclusion rate, for young people born outside the EU28, 2018; source: author’s computation based on Eurostat data

Figure 3 – Distribution of the at Risk of Poverty or social exclusion rate, for young locals, 2018; source: author's computation based on Eurostat data

An analysis at country level across the EU member states between young people born outside the EU and young nationals reveals that generally, there is a higher share of foreign young migrants at risk of poverty or social exclusion in 2018 (Figures 2 and 3) in each European country. In 2018, the countries where more than a half of young migrants from outside the EU are exposed to the risk of poverty or social exclusion are: Norway, Sweden, Denmark, Netherlands, but also France, Spain or Greece. On the other side of range, in Croatia, Germany and Ireland are reported the lowest values of the indicator (Figure 2)[§]. By contrast, only in Denmark and Spain the at-risk of poverty or social exclusion rates for EU28 migrants are above 50% in 2018. Regarding the at-risk of poverty or social exclusion rates for young nationals, Norway, Denmark or Greece record higher values (over 30%), but also Romania, Bulgaria or Italy. As opposed to the situation for young migrants, France and Sweden report lower levels of the indicator for young nationals (Figure 3).

In Austria, France and Czechia the chance for young people born outside the EU to be at risk of poverty or social exclusion was 3 times as high compared to young natives and between 2 and 3 times as high in Belgium, Sweden, Netherlands, Slovenia, Cyprus and Luxembourg. Lower gaps can be observed in Italy and Germany.

[§] No available data for young migrants outside the EU28 for: Bulgaria, Hungary, Romania, Slovakia, Poland, Lithuania, Latvia.

The country differences existing between the poverty or social exclusion rates between young nationals and migrants outside EU28 countries constitute the motivation for developing the regression model to study the poverty determinants for each category. This variation among poverty rates, also at country level, but moreover between young nationals and migrants can be due to the macroeconomic and institutional factors and contexts.

4.2 Panel data regression models: results and discussion

Two models are estimated comparatively – one having as dependent variable the poverty or social exclusion rate of young nationals, while in the second one the same dependent variable is considered for young migrants (people born outside the EU28 countries). Since data for the poverty or social exclusion risk of young people born outside the EU is not available for Bulgaria, Hungary, Lithuania, Romania, Poland and Slovakia, these countries are excluded from analysis. To ensure comparability of the models, the countries have been excluded in both models. Thus, in the two models there are 23 cross sections (EU28 countries and Norway, except for the ones mentioned previously). The period considered is 2010 – 2018, thus we have a balanced panel of 207 observations. Each model is estimated with fixed effects and with random effects. Results are given in tables 3 and 4. Hausman test was used to choose between the fixed and random estimation schemes and in each case it yielded the best fit to be the fixed effects model (tables 3, 4). Since in both models there is strong evidence of the presence of heteroscedasticity, the final models are estimated using the robust option and results are presented in Table 5.

Table 3 – Results of models estimation for Fixed and Random effects models (dependent variable: At risk of poverty or social exclusion for the Young nationals)

Variable	Fixed Effects model	Random Effects model
Youth Unemployment	0.2604*** (0.0430)	0.2895*** (0.0430)
Ln (Income)	-7.1423*** (2.1270)	-4.2858** (2.0134)
Gini	0.9892*** (0.1883)	0.7357*** (0.1782)
Democracy	-0.4566*** (0.1189)	-0.0103 (0.1032)
Education	0.2589*** (0.0870)	0.1306 (0.0829)
*** <i>p-value</i> < 0.01; ** <i>p-value</i> < 0.05; * <i>p-value</i> < 0.1. Standard errors reported in parenthesis.		
Hausman (p-value)	39.91 (p-value = 0.0000)	
F test for the presence of fixed effects	34.65 (p-value = 0.0000)	
F	38.52 (p-value = 0.0000)	
R-Squared	Within 0.5183 Between 0.1422 Overall 0.1570	Within 0.4664 Between 0.3079 Overall 0.3185

Source: author's own computation

Table 4 – Results of models estimation for Fixed and Random effects models (dependent variable: At risk of poverty or social exclusion for the Young migrants)

Variable	Fixed Effects model	Random effects model
Youth Unemployment	0.4831*** (0.1264)	0.6531*** (0.1040)
Ln (Income)	-0.5856 (6.2360)	11.4866** (4.5432)
Gini	1.7133*** (0.5519)	0.3018 (0.4083)
Democracy	-0.6936** (0.3519)	0.1299 (0.2237)
Education	0.1275 (0.2548)	-0.0585 (0.1858)
*** <i>p</i> -value < 0.01; ** <i>p</i> -value < 0.05; * <i>p</i> -value < 0.1. Standard errors reported in parenthesis.		
Hausman (p-value)	22.76 (p-value = 0.0004)	
F test for the presence of fixed effects	9.62 (p-value = 0.0000)	
F	9.27 (p-value = 0.0000)	
R-Squared	Within 0.2083 Between 0.0063 Overall 0.0160	Within 0.1362 Between 0.5210 Overall 0.3981

Source: author's own computation

Table 5 – Results of models estimation for Fixed effects models (comparative results for young nationals and young migrants), robust standard errors

Variable	Young nationals	Young migrants
Youth Unemployment	0.2604*** (0.0432)	0.4832*** (0.1720)
Ln (Income)	-7.1423* (3.8738)	-0.5856 (8.4113)
Gini	0.9892*** (0.2836)	1.7133** (0.6259)
Democracy	-0.4566** (0.1982)	-0.6936* (0.3756)
Education	0.2589 (0.1812)	0.1275 (0.2725)
*** <i>p</i> -value < 0.01; ** <i>p</i> -value < 0.05; * <i>p</i> -value < 0.1. Standard errors reported in parenthesis.		

Source: author's own computation

Results of the final models (Table 5) show that there are differences between the significant factors of influence for the at poverty or social exclusion risk of young nationals compared to young migrants. First of all, common factors of influence include: youth unemployment, inequality (measured by the Gini coefficient) and democracy index (although with a lower significance for the young migrants' model). Secondly, the income turns to be a significant influence factor only for the at-poverty or social exclusion risk of young nationals, but not for the young migrants. Lastly, Education level, although significant for the young nationals'

model in the initial fixed effects model becomes insignificant (p-value 0.16) when the robust estimation was used. The variable is also insignificant for the young migrants' model.

Thus, the strongest predictors for the at-poverty or social exclusion risk both for young nationals and for young migrants, are youth unemployment and inequality. Unemployment prevents young people from gaining experience, with consequences on their employability and earning potential, reflecting also in the poverty rates. The rationale of choosing the unemployment as a trigger factor for poverty rather than employment is that the job growth may not necessarily lead to a reduction in the poverty rate. This might happen as the job growth may not always benefit those who are at risk of poverty and also a new job could not raise the household's income enough to escape poverty – a phenomenon known as in-work poverty. (Marx et al, 2013). However, unemployment is a significant factor in both models, confirming it is a major cause of poverty (Saunders, 2002).

The results reveal a positive and statistically significant relationship between levels of inequality, measured by the Gini coefficient, and levels of poverty. The relationship is significant for both models, certifying that income distribution has a significant impact on poverty levels (Bourguignon, 2004). Nonetheless, the income per capita although a significant factor for reducing the poverty in the young nationals' model is not a significant trigger for lowering poverty rates of young migrants. This is strong evidence of the gap existing between poverty levels of young nationals and young migrants. In other words, rich economies in Europe fail to assimilate and have efficient policies of integration of young migrants, having them exposed to vulnerable conditions, poverty and social exclusion.

Not surprisingly, the democracy index has a significant negative association with poverty, for both models, although with a slightly lower significance (p-value 0.078) for the young migrants' model. This is in line with studies that claim that democracies are better than non-democracies for improving the welfare of the poor people. In turn, these are consistent with main political economy models, stating that democracies produce more public goods and are better at income redistribution compared to non-democracies (Ross, 2006).

The education level is not a statistically significant factor in neither of the two models. Although this appears to contradict the human capital theory stating that education is an important instrument in poverty reduction, the result can be explained by the limits of the human capital approach. That is, it assumes a certain behaviour of the individuals, independently on their social, cultural or economic situation. When analysing the poor's education demand, the rational choice and the consumer's instrumental preferences cannot be assumed by default, rather they must be tackled critically. Most policy education models underestimate specific restrictions of some individuals that deal with differences in the educational quality that is available to the poor or the opportunity costs of school attendance for the vulnerable groups (Bonal, 2016). Another possible explanation for the insignificant

coefficient of variable Education could be related to the age category considered (young individuals, up to 29 years).

5. Conclusions

The objectives of this paper are to determine the macroeconomic factors that trigger the poverty of young nationals and of young migrants, but also to identify the differences between macroeconomic determinants of poverty for young migrants compared to young nationals

In order to reach the objectives, two regression models on panel data are estimated, analysing comparatively the fixed and random effects approaches. The dependent variable in both models is the at risk of poverty or social exclusion rate, for young migrants and young nationals. The young age category is considered to be 16 to 29 years. The migrants' social category is defined as those born outside the EU28 countries, whereas the nationals are those born in the reporting country. Models are estimated on a sample of 23 countries (EU28 and Norway, but excluding Bulgaria, Hungary, Lithuania, Romania, Poland and Slovakia due to missing data for young nationals), for the period 2010 – 2018. Hausman test results reveal that the fixed effects model is the best choice for each of the two models. Moreover, due to presence of heteroscedasticity, the final models have been estimated using the robust option.

The independent variables considered in the model are related to labour, development and education. Both youth unemployment and inequality (measured by the Gini coefficient) are significant factors that contribute to the increase in the poverty rate both for young nationals and young migrants. This finding can also be correlated with the tougher immigration policies for migrant youth in recent years that require compliance with bureaucratic procedures. Irregular migration increases the risk of working without a contract and thus not receiving any payment or receiving a lower payment than granted (ILO, 2020)

The democracy index has a significant negative association with poverty risk in both models, but with a slightly lower significance for the young migrants' model. Education level (measured as weight of young category with medium education) has not been associated significantly with the poverty rate for none of the two models. Although this appear to contradict the human capital theory that education is key to poverty reduction, it can be considered a limitation of the macroeconomic type of variables included. Usually, education is a significant factor for poverty when microeconomic variables are employed (Kazemipur, Halli, 2001).

An interesting result is that income (measured as mean equivalised income per capita) is significant for reducing poverty risk only for young nationals, but not for young migrants. Branyiczki (2015) had also found, using macroeconomic factors, that higher household income per head is correlated with a smaller probability of being at risk of poverty in general. This was proof that people living in countries with better living standards on average have lower chances

of being at risk of poverty. However, we have found that the relationship holds only for the model estimated on young nationals, not on the one for young migrants. Thus no significant evidence can be found that countries with a higher development level (richer European economies) have lower poverty or social exclusion rates for young migrants, which confirms the need for better integration policies of young migrants at European level.

References

- Atkinson, A.B. (1987). On the measurement of poverty. *Econometrica: Journal of the Econometric Society*, pp.749-764.
- Awan, M.S., Malik, N., Sarwar, H. and Waqas, M. (2011). Impact of education on poverty reduction.
- Baltagi, B. (2008). *Econometric analysis of panel data*. John Wiley & Sons.
- Bárcena-Martín, E. and Pérez-Moreno, S. (2017). Immigrant–native gap in poverty: a cross-national European perspective. *Review of Economics of the Household*, 15(4), pp.1105-1136.
- Becker, G.S., 1980. *Human capital* (Vol. 3). Chicago: University of Chicago press.
- Blume, K., Gustafsson, B., Pedersen, P.J. and Verner, M. (2007). At the lower end of the table: Determinants of poverty among immigrants to Denmark and Sweden. *Journal of Ethnic and Migration Studies*, 33(3), pp.373-396.
- Branyiczki, R. (2015). Employment, education and other means of reducing poverty, Research note no.4, 2015, European Commission.
- Bonal, X. (2016). Education, poverty, and the “missing link”: The limits of human capital theory as a paradigm for poverty reduction. *The handbook of global education policy*, pp.97-110.
- Borjas, G.J. (1994). The economics of immigration. *Journal of economic literature*, 32(4), pp.1667-1717.
- Bourguignon, F. (2004). *The poverty-growth-inequality triangle* (No. 125). working paper.
- Diris, R., Vandenbroucke, F. and Verbist, G. (2014). Child poverty: what can social spending explain in Europe?
- Galloway, T.A., Gustafsson, B., Pedersen, P.J. and Osterberg, T. (2009). Immigrant child poverty in Scandinavia: A panel data study.
- Greene, William H. (2008). *Econometric Analysis*. 6th ed. Upper Saddle River, NJ: Prentice Hall.
- Gujarati, D.N. (2009). *Basic econometrics*. Tata McGraw-Hill Education.
- International Labour Office. (2020). *Global Employment Trends for Youth 2020: Technology and the future of jobs*. International LABOUR OFFICE.

- Isajiw, W.W. (1999). *Understanding diversity: Ethnicity and race in the Canadian context*. Thompson Educational Pub.
- Kakwani, N. and Son, H.H. (2008). Poverty equivalent growth rate. *Review of Income and Wealth*, 54(4), pp.643-655.
- Karagiannaki, E. (2017). The empirical relationship between income poverty and income inequality in rich and middle income countries.
- Kazemipur, A. and Halli, S.S. (2001). Immigrants and ‘New Poverty’: The Case of Canada. *International migration review*, 35(4), pp.1129-1156.
- Lelkes, O. and Zólyomi, E. (2011). Poverty and social exclusion of migrants in the European Union. *Policy Briefs*, 1, p.17.
- Lelkes, O., 2007. Poverty among migrants in Europe. *Policy Brief April*.
- Lipton, M., Yaqub, S. and Darbellay, E. (1998). *Successes in anti-poverty*. International Labour Organization.
- Marx, I., Horemans, J., Marchal, S., Van Rie, T. and Corluy, V. (2013). Towards a better marriage between job growth and poverty reduction. *GINI Policy Paper 5, September 2013*.
- Massey, D.S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A. and Taylor, J.E. (1994). An evaluation of international migration theory: The North American case. *Population and development Review*, pp.699-751.
- Nienaber, B., Manafi, I., Vysotskaya, V., Roman, M. and Marinescu, D. (2020). Challenging Youth Unemployment Through International Mobility. *Journal of Social and Economic Statistics*, 9(1), pp.5-27.
- Ravallion, M. (1995). Growth and poverty: Evidence for developing countries in the 1980s. *Economics letters*, 48(3-4), pp.411-417.
- Ross, M. (2006). Is democracy good for the poor?. *American Journal of Political Science*, 50(4), pp.860-874.
- Roman, M., Paraschiv, D. M. (2019). The Young Entrepreneurs of Europe and the Role of International Mobility. *Amfiteatru Economic*, 21(13), pp.763-777.
- Saunders, P. (2002). The direct and indirect effects of unemployment on poverty and inequality. *EAST WEST REVIEW OF LABOR LAW AND SOCIAL POLICY*, 7, pp.177-216.
- Stock, J.H., Watson, M.W. (2007). *Introduction to econometrics*. 2nd ed., Boston: Pearson Addison Wesley.
- Zaman, K., Al-Ghazali, B.M., Khan, A., Rosman, A.S.B., Sriyanto, S., Hishan, S.S. and Bakar, Z.A. (2020). Pooled mean group estimation for growth, inequality, and poverty triangle: evidence from 124 countries. *Journal of Poverty*, 24(3), pp.222-240.