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## Article

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# RECOGNIZING THE VULNERABILITY OF GENERATION Z TO ECONOMIC AND SOCIAL RISKS

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## **Abstract**

Generation Z, known also as “Net generation” and “Digital natives”, is of particular interest for researchers do to its specifics originating from the changes caused in the everyday’s live by the new technologies. This cohort is known to be highly vulnerable to several economic and social risks, depending on the characteristics of the society where they live. In this paper the socio-economic situation of youth in some small countries with different level of development is studied. Particular importance is paid to the criminality as a risk factor for Generation Z. The case of Macedonia has been studied in details, using the relevant data for the period from 2007 to 2016. Based on the use of a multivariate linear regression model it has been found that the criminality is strongly related to the size of NEET (part of the cohort that is Not in Education, Employment or Training).

**Keywords:** youth, NEET, poverty, labour market transitions.

*Jel Classification:* C22; C52; E24; I24; J29

## **INTRODUCTION**

A lot of different attempts were made in the literature to define Generation Z (Pal 2013). According to some approaches, members of Generation Z were born after 1995 (Grail Research 2011) and 1996. Oblinger and Oblinger (2005) call this group post-millennarians, but it is also called “Facebook Generation” (Prensky 2001), zappers which means switchers, “Instant online” group, “dotcom” kids, net generation, iGeneration. (Torocsik, Szucs, and Kehl 2014). Within the next five years, generation Z well-known as “Net generation” and “Digital natives” will constitute a fifth of the global workforce. It is known that the Generation Z's, born after 2000, character and mindsets are different according to previous generations (Ozkan and Solmaz 2015).

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In EU 28, according to Eurostat, in 2016 live a total of 510.3 million inhabitants. The digital natives i.e. Generation Z (0-18) represents 19.8% of its population. The personal circumstances of this generation in the EU are often very different, with education and employment patterns varying considerably between Member States, by age group and by sex.

Unemployment among generation Z (less than 19 years old) is very high, standing for 22.8% in 2016, increasing by 2.7 pp compared with 2007 (when the unemployment rate reached 20.1%).

Experts predict that by 2020, millennials, now aged between 21 and 35, will make up 35% of the global workforce while ‘Generation Z’, aged 20 and younger, will make up 24%. So in three short years, more than half of the entire workforce population around the world will be made up by younger workers. The participation with 19.8% of Gen Z in the EU28 is a huge human resource for society.

**Table 1.** GDP and population, 2007 and 2016

GEO/TIME	GDP at market prices, current prices, million euro		Population (in millions)					
			0-18		15-19		Rest of the population (18+ and unknown)	
	2007	2016	2007	2016	2007	2016	2007	2016
EU (28)	12 997.5	14 908.8	103.5	101.1	30.4	27.2	394.8	409.2
Macedonia	6.095	9.723	0.515	0.446	0.162	0.129	1.527	1.625
Croatia	43.926	46.382	0.878	0.796	0.257	0.236	3.436	3.394
Slovenia	35.153	40.418	0.375	0.381	0.120	0.095	1.636	1.682

Source: Eurostat database

In order to describe the best the socio-economic situation of this cohort, it is indispensable to identify its peculiarities and differences compared with all other cohorts.

The Internet is a powerful force of generations Y and Z in communication and collaboration. However, some negative effects, such as prevention of physical contacts and of physical activities, as well as reduction of thinking, concentrating and memory skills have been identified (Tomayess and Isaias 2016). Although the names “Net generation” and “Digital natives” are usually applied to the whole Generation Z, relevant studies involving students at England’s universities have found that the considered cohort is not homogenous from the point of view of the use and appreciation of new technologies (Jones et al. 2010).

The issue of social inclusion of young people was always present on the political agendas but only in the last two decades has seen a particular emphasis. Thus, since 1988, several specific programmes were put in place for young people which concerns policies relating young people in Europe in terms of education, employment, social inclusion, civic participation, entrepreneurship, etc. Due to the fact that the relationship between economic growth and the number of young people without a job, there is inversely proportional, inversely in periods of recession when young people are particularly vulnerable (Balan 2014).

Young people who are identified as NEET are with very high risk of becoming vulnerable group for poverty and social exclusion. (Backman and Nilsson, 2016). It is to be noted that the NEET as a policy construct was originally used collectively to refer to the 16 to 19 year aged group (although it is acknowledged that NEET status in this group is influenced by experiences of education below the age of 16) who, during the critical

period of the late teens, spent or were likely to spend a substantial amount of time outside any form of education, employment or training (Finlay et al. 2010). The status of these people is more and more important across Europe and their inclusion in the society is a crucial policy goal at European level. (Novkovska 2017). Social exclusion is often expressed in terms of multiple deprivations affecting particular localities. However, the spatialities of exclusion are also to be found at a deeper level, and social space is powerfully shaped by the nature of post-industrial development in Western capitalist societies (Thomson, Hall, and Jones 2010). Other risk factors identified as leading young people to NEET include deprivation, financial exclusion, weak family and other support networks (such as peers), stigma and attitudes of others, and debt adversity. Of all these themes, young people who are disaffected with schooling in the form of exclusion, truancy or bullying are identified by the literature to be at an increased risk of becoming 'NEET' (Maguire and Rennison 2005).

The concept of NEET refers and focuses on the 'youth at risk' who lack access to learning opportunities and are jobless and/or inactive (Balan 2015). The emergence of the NEET concept is linked to the growing complexity of youth transitions, the weakening of full-time routes through education and training, the growth of part-time and mixed patterns of work types, and changes in labour markets and the availability of jobs (Bardak, Maseda, and Rosso 2015). The NEET category provides a valuable focus on the risk factors and consequences of non-participation; being outside education and employment at an early age is often both a consequence of poverty and educational disadvantage, and a predictor of future experiences of social exclusion (Thompson, Russell, and Simmons 2011). In (Goldman-Mellor et al. 2016) it has been reported that NEET youths even if highly committed to searching for jobs, have fewer soft skills and feel less optimistic than their non-NEET peers. Besides, they are more exposed to mental health and substance-abuse problems. Although the 'NEET' literature acknowledges that there is no such thing as a 'one size fits all' attitude towards the issue of risk factors for NEETness, disadvantage, educational disaffection and low educational achievement are identified to be the most prevalent causes (Yates and Payne 2006).

In describing wider sociological processes involving Generation Z, the issue of various transitions on the labour market is of particular importance, since knowledge on new patterns of youth transition contribute largely to the understanding of the social class in the contemporary context (MacDonald 2011). The particular issue of the impact of the Great Recession on transitions of young people (youth unemployed, NEETs and prime-age unemployed) to the employment have been studied in the work (Kelly and McGuinness 2015). In that work it has been found that the rate of transition to employment decreased rapidly during the period 2006–2011.

The focus of our study is on Generation Z, as this generation is said to be unique in many ways but also since these young people are the most vulnerable to economic and social risk in Europe. This paper will study, compare and analyze Gen Z at the EU-28 level, Macedonia, Croatia and Slovenia in order to identify the similarities and differences in the perspectives of this generation. Namely, these young people will enter the European Union labour market in astonishing numbers and will influence and shape the new workforce.

## 1. ECONOMIC AND SOCIAL ENVIRONMENT FOR YOUTH

### 1.1. Characteristics of labour market in EU28, Macedonia, Croatia and Slovenia

Following the 2008 global financial crisis, youth unemployment dramatically rose in many countries in the world. Youth unemployment rate is still on the rise at 13.8% globally (World Bank 2016). The crisis further increases their risk of long-term inactivity and exclusion. Many authors find that a “scarring” effect of unemployment on youth depends on overall labour market conditions (Bell and Blanchflower 2011).

During and after a severe recession, the young people find increasingly difficult to both acquire a job as a new entrant in the labour market, especially as a consequence of hiring freezes, and to remain employed, since they are more likely to be laid off than workers with more seniority (Verick 2009).

The observed increase in unemployment rate for EU 28 countries in 2016 compared to the year 2007 is a result of the increase of the number of member countries having higher unemployment rates (Bulgaria, Romania and Croatia) (Novkovska 2017). Even though in 2013 Croatia joined the European Union as its 28th member state, the unemployment rate remained relatively high 13.3% in 2016, higher for 5.2 pp than Slovenia at the same period.

The unemployment in Macedonia clearly declines to 24.0% in 2016 with increased GDP to 4,694 euros per capita. Even though the data (Table 2) indicates that the unemployment rate is constantly high and among the highest in Europe, the poverty rate is declining to 21.9% in 2016, compared to 27% in 2007.

**Table 2.** Socio-economic status of the population (%), 2007–2016

GEO/TIME	Employment Rate		Unemployment Rate		At risk of poverty rate	
	2007	2016	2007	2016	2007	2016
EU28 Countries						
Total	65.2	66.6	7.2	8.7	16.5	17.3
Youth*	19.0	15.6	20.1	22.8	20.9	21.0
Macedonia						
Total	40.7	49.1	35.2	24.0	27.0	21.9
Youth*	6.7	4.6	62.6	58.9	32.1	28.6
Croatia						
Total	59.0	56.9	10.1	13.3	20.6	19.5
Youth*	7.9	7.6	44.9	52.3	19.6	20.4
Slovenia						
Total	67.8	65.8	5.0	8.1	12.7	13.9
Youth*	17.2	8.6	9.8	12.9	12.6	11.9

Source: Eurostat database

Note: \*Total population for employment and unemployment rate is aged from 15 to 64, while youth population is aged from 15 to 19. Youth population for at risk of poverty rate is less than 18

Today, it is difficult to determine whether the European economy will achieve desired growth or if its character will lead to a decrease or an increase in unemployment. It is evident, however, that the insufficient use of labour resources is one of the most serious and important socio-economic problems which should be addressed as promptly as possible (Nagel 2015).

In Table 2 a comparison of employment rate, unemployment rate and at risk of poverty rate, between EU-28, Macedonia, Croatia and Slovenia is given. It can be noticed

that in general many things are common for the above mentioned countries, especially the unemployment rate among the Generation Z that is significantly higher than the average unemployment rate of each country. The general poverty rate shows small changes (about 1pp) except for Macedonia where a significant decrease of 5.1 pp is observed. For the age group 15–19, the most vulnerable ones, small changes are found except for Macedonia, were a decrease of 2.5 pp, substantially lower than for the total population is recorded. In Republic of Macedonia, as elsewhere, the unemployed are most at risk of poverty. During the period of transition Macedonia saw a dramatic worsening of the socio-economic circumstances of a large number of its inhabitants, and the poverty rate, although reduced in the past several years, remains high.

In Macedonia, the transition period from one to another social system started practically throughout the entire period of its implementation (Harvey 2005). Macedonia during the period of transition was facing with very high unemployment rates. The Macedonian young generations have been witnesses of several dramatic and remarkable events in their recent past. Unemployment among the young is a major national concern in Republic of Macedonia since it represents a great cost to the country in many terms: economic, political and social. The high level of unemployment among young people can be a source of social instability (Elder, Novkovska, and Krsteva 2013).

Millennials in large number still live together with their parents, mostly because of the financial dependence. So the parents' influence is still present in their work and general life related decisions and as well as the feeling that their parents are always here to support and protect them if they fail, which prolongs their adolescence and delays sense of self-responsibility (Latkovikj, Popovska, and Popovski 2016).

The State Statistical Office, based on data from Labour Force Survey determined that in 2016 in the Republic of Macedonia lived 2,072,490 citizens, and 444,132 (229,493 male and 214,639 female) from the total population are young people at age 0 to 18 i.e. 21.4%. Macedonian generation (Gen Z) is the first one raised in the era of the "smart" world. Many of these young people do not remember the time before the Internet. The parents of this generation (Millennials and Generation X) still play equally powerful role in shaping their future.

A positive trend of GDP growth in Republic of Macedonia started after the global economic and financial crisis in 2008. Taking into consideration the fact that the GDP continued its growth to 4.694 euros per capita in 2016, the poverty rate of Generation Z is still on a very high level (28.6%).

## **1.2. Risk for Generation Z to enter into criminal activities**

Particular attention in this work is paid to the risk for the youth belonging to the Generation Z to enter into criminal activities. The case of Macedonia is studied using data for criminality and the supposed factors influencing the extent of the considered phenomenon. Different variables are used for description of the criminality of Generation Z: reported number of children involved in criminal activities, accused children number and convicted children number (Table 3). Factors considered in this work are: size of the NEET (relative to the Generation Z cohort size) and employment rate (% of the workforce), which are also shown in Table 3. Detailed analysis of the data shown in Table 3 is presented in the next section.

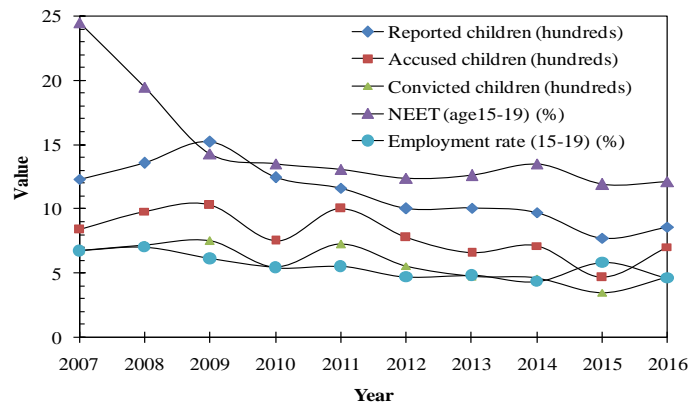
**Table 3.** Gen Z- Employment rate (age 15-19), NEET (age15-19) and Crime for MK, 2007–2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<i>Crime data MK (age 14-17)</i>										
Reported children	1229	1355	1519	1244	1163	1001	1005	972	772	857
Accused children	839	981	1030	750	1002	778	657	712	465	702
Convicted children	676	715	748	547	722	556	473	461	348	468
<i>NEET data MK (age15-19)</i>	24.5	19.5	14.3	13.5	13.1	12.4	12.6	13.5	11.9	12.1
<i>Employment rates MK (age15-19)</i>	6.7	7.0	6.1	5.4	5.5	4.7	4.8	4.3	5.8	4.6

Source: State Statistical Office of Macedonia, MAKStat database

## 2. ANALYSIS AND DISCUSSION

In Figure 1 temporal variation of criminality levels for children (Reported, Accused, Convicted), NEET and Employment rate for young persons aged 15 to 19, for Macedonia for the period 2007–2016 are shown. Similar oscillations of all variables in the considered period are visible, except for NEET in the first two years (2007 and 2008). Such a discrepancy can be explained by the effect of introduction of compulsory secondary education in year 2008 (Cabuleva, Miteva-Kacarski, and Radosavljevik-Bojceva 2013). In order to exclude the effect of this rapid change, in the analysis below, for the size of NEET we consider only the period from 2009 to 2016.



**Figure 1.** Temporal variation of criminality levels (Reported, Accused and Convicted), NEET and Employment rate for young persons aged 15 to 19, for MK for the period 2007–2016

Source: Eurostat database

First, the correlation matrix between variables displayed in Table 3 is shown in Table 4. As is expected, reported number of children involved in criminality (Reported children), number of accused children (Accused children) and number of convicted children (Convicted children) are in close connection, having high mutual correlation coefficients. Therefore, it is correct to select one of these three variables as representative of the children’s criminality. For this purpose, the variable “Reported\_children” is used in the calculations described below.

**Table 4.** Correlation matrix between criminality levels (Reported, Accused, Convicted), NEET and Employment rate for young persons aged 15 to 19), for MK for the period 2009–2016

R	Reported children	Accused children	Convicted children	NEET	Employment rate
Reported children	1.000	0.856	0.887	0.894	0.627
Accused children		1.000	0.972	0.718	0.462
Convicted children			1.000	0.700	0.611
NEETs				1.000	0.316

Source: Results from this work

Relatively high values for correlation coefficients relative to “Reported\_children” are obtained for NEET (0.894) and Employment\_rate (0.627). It is than reasonable to consider a multivariate linear regression model of the following type:

$$\text{Reported\_children} = a_1 + a_2 \cdot \text{NEET} + a_3 \cdot \text{Employment\_rate} \quad (1)$$

Expected sign for  $a_2$  is positive ( $a_2 > 0$ ), since the NEET group is expected to be highly vulnerable to various factors, while for  $a_3$  (employment rate) there are competitive effects to be taken into account. Thus, on one hand, increase of the employment rate leads to a decrease of the size of population that is at risk to enter in criminal activities (Caraballo-Cueto 2015). On the other hand, increase of employment can frustrate further those who are unemployed and have difficulty to find a job, which by itself causes frustration from unsuccessful search (Flek and Mysikova 2015). In the case of Macedonia, where the difficulty to find a job is rather high, it is expected the second effect to dominate and the sign of the constant to be positive ( $a_3 > 0$ ).

**Table 5.** Multivariate regression parameters for the model described with equation (1)

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
$a_1$	-2480	618	-4.01	0.010	-4071	-889
$a_2$	233.7	49.4	4.73	0.00518	106.8	360.7
$a_3$	102.1	63.3	1.614	0.167	-60.5	264.7

Source: Results from this work

Results of the multivariate regression analysis for the case of Macedonia are shown in Table 5. It is seen that the sign of the coefficient  $a_2$  is positive at the 95 % confidence level. Thus, the hypothesis that NEETness creates a risk to enter into criminal is confirmed. The corresponding coefficient is rather high; while increasing the size of NEET for only 1 percent point, the criminality increases for almost 30 %.

At this point it is worth to discuss the issue of sudden decrease of NEETness from 2007 to 2009. As is seen from Figure 1, instead of leading to immense decrease of the youth criminality, an increase has been observed. The above finding indicates that the applied measure (mandatory enrolment in secondary education) has not been well targeted to the groups at risk of entering into crime.



## CONCLUSION

Generation Z in Macedonia and similar small countries faces in the social and economic life enormous difficulties, that are particularly manifested with a rather high unemployment and poverty rate. Young people are exposed to risks of various kinds. Dominant origin of various risks is the unemployment rate of Generation Z, which is markedly higher than that of the total population, for Macedonia and similar small countries, as well for the EU-28 countries.

Despite numerous actions, risk for Generation Z of entering into criminal activities still remains at high level. As is demonstrated in this work for the case of Macedonia, this risk is strongly connected to the NEETness (size of the NEET) of the young population. Appropriate policy measures aimed at reducing NEET size are to be established. However, as it was observed in the case of the introduction of the mandatory secondary schooling, if the measures are not well targeted they remain ineffective. Therefore, detailed analysis of the structure of Generation Z and identification of the vulnerable groups exposed to the particular risk are required in order to establish efficient policy measures.

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