

The impact of recent economic crisis on the subjective well-being of unemployed workers in Macedonia: The role of alternative adjustment mechanisms

Dimitar Nikoloski, PhD

*University "St. Kliment Ohridski"-Bitola
Faculty of Economics-Prilep*

Ljupcho Pechijareski, PhD

*University "St. Kliment Ohridski"-Bitola
Faculty of Economics-Prilep*

Abstract

Depressed labour market conditions in Macedonia manifested by high and persistent unemployment rate, strong segmentation and prevailing long-term unemployment is considered as a heritage of two decades long period of transition. The sustainability of unemployment among certain categories of workers has significantly contributed to an erosion of their skills and motivation, making them less employable over time. In addition, the recent economic crisis has undoubtedly affected the labour market performance by causing stagnant growth and reduced employment. The negative macroeconomic shocks in Macedonia have been mitigated due to the strengthened role of alternative labour market adjustment mechanisms such as: employment in the informal sector, emigration and inactivity. These mechanisms cushion the social implications of unemployment by absorbing a part of unemployed workforce and providing additional incomes for their households. However, their impact on the subjective well-being of unemployed workers assessed through the levels of stress, living standard and perception of future labour market prospects is less clear-cut. Thus, examining the relationship between the alternative labour market adjustment mechanisms, from one side and the subjective well-being of unemployed workers during the recent economic downturn represents a challenging research task. For this purpose we use results from a survey carried out on a representative sample of unemployed workers in Macedonia. In this context, we estimate econometric models that help to identify the profile of unemployed workers whose subjective well-being has been most affected by the economic crisis with particular reference to the role of alternative labour market adjustment mechanisms. Finally, we formulate guidelines for decision makers in designing and applying appropriate policy measures that target the most disadvantaged segments of unemployed population in order to improve their future labour market prospects.

Keywords: Labour market, unemployment, well-being.

1. Introduction

The past two decades Macedonia has gone through the process of transition which is still shaping the social, political and economic ambience in the country. As a part of South-Eastern Europe, the Macedonian economic growth is constrained by the general regional predispositions, which amongst other things are determined by the political instability of the region. Hence, the economic performance of the South-Eastern European countries (SEECs) has not been strong enough compared to Central-Eastern Europe countries (CEECs), which already take part of the European Union. In this sense, Macedonia and other SEECs, are known as ‘lagging reformers’ with regard to completion of the reforms in all spheres of the society.

The initial transitional recession has *inter alia* manifested salient effects on the labour market performance (Pechijareski and Rocheska, 1998). Generally, the transitional reforms initially had negative effects on labour markets, which were manifested in declining participation rates and in persistent high unemployment. The processes of ownership restructuring and sectoral reallocation assumed a large-scale transformation of state owned firms into privatised ones and, a reallocation of a substantial part of the labour force from the manufacturing and agricultural sectors towards the expanding service sector (Blanchard, 1997). The experience in almost all transition countries, including Macedonia shows that the creation of new jobs in the emerging private sector was not initially strong enough to absorb the mass of workers laid-off from the restructured state-owned firms. At the same time, the mismatch between the skill requirements of newly created jobs and effective skills owned by the workers has become a substantial problem (Svejnar, 2002). Consequently, the labour markets in early transition became less dynamic with a relatively stagnant unemployment pool leading to increases in unemployment and especially long-term unemployment (Cazes and Nesporova, 2003). The initial ‘transitional unemployment’ differed in several aspects from other types of unemployment in that it was characterised by pronounced labour market segmentation, long average duration of unemployment and a low probability of exiting unemployment into employment (Nikoloski, 2009).

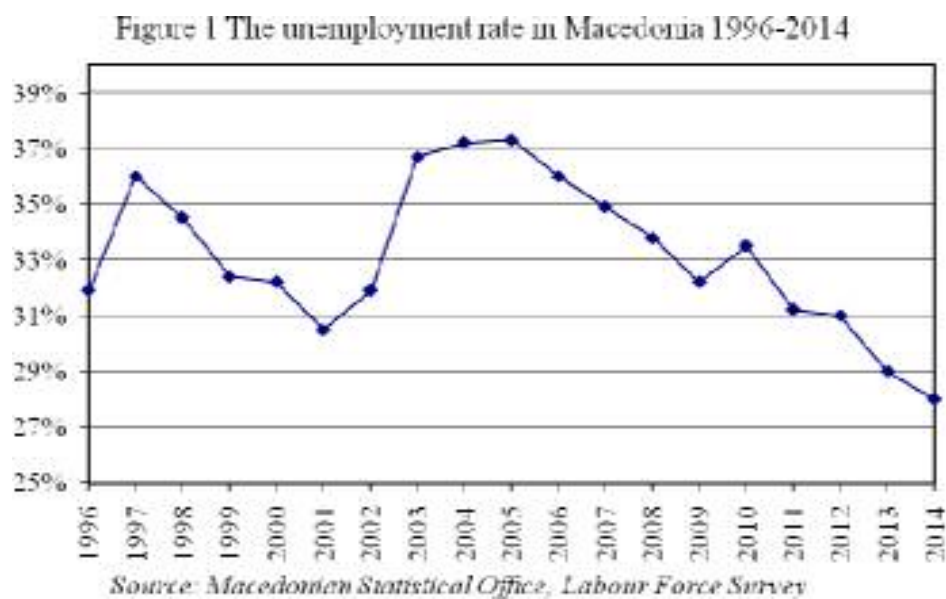
The recent economic crisis has undoubtedly affected the labour market performance by causing stagnant growth and reduced employment. The negative macroeconomic shocks in Macedonia have been mitigated due to the strengthened role of alternative labour market adjustment mechanisms such as: employment in the informal sector, emigration and inactivity. These mechanisms cushion the social implications of unemployment by absorbing a part of unemployed workforce and providing additional incomes for their households. However, their impact on the subjective well-being of unemployed workers assessed through the levels of stress, living standard and perception of future labour market prospects is less clear-cut. Thus, examining the relationship between the alternative labour market adjustment mechanisms, from one side and the subjective well-being of unemployed workers during the recent economic downturn represents a challenging research task.

The aim of this paper is to assess the impact of recent economic crisis on the subjective well-being of unemployed workers by paying particular attention to the role of alternative forms of labour market adjustment in Macedonia. For this purpose we use the empirical results from a survey of registered unemployed workers. To our knowledge this is the first study addressing this issue in Macedonia that will shed light on the subjective well-being of unemployed and its

relationship with the alternative labour market adjustment mechanisms. In this context, in section 2 we first review the general labour market trends in Macedonia. Next, in section 3 we present the theoretical background, whereas the empirical assessment of the relationship between the subjective well-being of unemployed and the alternative labour market adjustment mechanisms in Macedonia is subject in section 4. Finally, in section 5 we conclude and formulate recommendations for the labour market policies that target the unemployed population in order to improve their future labour market prospects.

2. Macedonian labour market performance

In order to investigate the features of the Macedonian labour market during transition, it is appropriate to divide the transitional period into two sub-periods. The first period encompasses the transformational recession from 1990 to 1995, with the second period starting immediately thereafter and lasting until the present. The changes of the unemployment rate in relative terms during the business cycle are rather small, which reflects the depressed characteristics of the Macedonian labour market (Nikoloski, 2009). The dynamics of the unemployment rate in Macedonia during the period 1996-2014 is shown on Figure 1.



The first Labour Force Survey (LFS) in Macedonia was conducted in 1996, and since then we have detailed data concerning labour market trends. During the period 1996-2003, the Macedonian LFS was conducted on a yearly basis, whereas since 2004 it is conducted as a continuous survey throughout the year with quarterly processing of data. For the period prior to 1996 we can explore labour market trends based on the number of registered unemployed workers. According to both sources of data we can generally distinguish several features of Macedonian labour market presented as follows.

During the initial phase of transition, the labour force participation and employment rates fell for most of this period, while the unemployment rate steadily increased. These trends are in line with the normal labour market patterns found in other transition countries *i.e.* declining

employment under the initial shock of recession and subsequent persistence of sluggish demand for labour. Although, the mature phase of transition is characterised by broad stability in all three rates, we can observe recessions in 2001 primarily caused by the political instability and in 2009 due to the global economic crisis. Namely, Macedonia has not remained apart from the negative global macroeconomic tendencies engendered by the recent economic crisis. Although recession has started one year later, after three consecutive quarters of negative GDP growth the macroeconomic performance by the end of 2009 has already demonstrated some signs of recovery and since then the unemployment rate has manifested continuous declining trend.

The sectoral reallocation of labour has been characterised by a significant increase of subsistence agriculture and other non-standard forms of employment at the expense of rapid shrink of employment in industry (European Training Foundation, 2007). These trends in employment by sectors indicate that in Macedonia new jobs are not predominantly created in the more productive industries and service sector, but rather in agriculture and low productivity services (Micevska, 2008). The increase in the share of employment in agriculture suggests that this sector has become a buffer for some people who have lost their jobs in the state-owned industrial enterprises (Nikoloski, 2009). However, the recent changes show that service sector gradually becomes to play increasingly important role by absorbing more than half of the employed workforce, whereas the agricultural sector starts to shrink. Given the rigidities in the standard adjustment through employment and wages, less traditional labour market adjustment mechanisms may play a more significant role. Among the alternative labour market adjustment mechanisms we particularly distinguish the non-participation, emigration and employment in the informal sector.

The Macedonian labour market is affected by strong segmentation, meaning that certain social groups such as youths, less skilled workers, and women, face a higher risk of unemployment and inactivity than the rest of the labour force. As a consequence, the high Macedonian unemployment rate has enormous social implications such as rising poverty, income inequality and social exclusion of deprived social segments (Nikoloski, 2012). When considering the marginalised categories, we assume that the same labour market segments are the most inclined toward informal employment arrangements or temporary emigration where jobs are characterised with low security and lower wages compared to jobs in the formal sector. Furthermore, the marginalised segments are affected by the fluctuations in the business cycles more than the rest of the labour force which is evident from the last economic downturn.

In addition, the Macedonian labour market is characterised by a relatively stagnant unemployment pool that has been translated into increasing long-term unemployment. For instance, long-term unemployment accounts for more than 80 percent of total unemployment which represents high relative share compared to international standards. Long-term unemployment has significantly contributed to an erosion of skills and motivation of unemployed workers, making them less employable over time. The deterioration of skills further reduces the attractiveness of the labour force and contributes to a blurring of the difference between the states of unemployment and non-participation. The long-term unemployed are not viewed by employers as attractive fillers of vacancies, meaning that their employability is relatively weak.

After remaining unemployed for a long period of time, a considerable part of unemployed workers stops looking for jobs and quits the labour force. This is known as the phenomenon of 'discouraged workers', a characteristic for depressed labour markets where labour demand is

insufficient and unemployed workers face poor employment prospects. Discouraged workers do not fulfil the requirements of job search as a precondition to be counted as unemployed. On the other hand, they can easily re-enter the labour force if, conditions on the demand side of the labour market improve (Kingdon and Knight, 2006). For instance, the estimated number of discouraged workers according to the LFS in 2012 was 30322 which represent more than 10 percent of the total number of unemployed.

The size of the employment in the informal sector in Macedonia is relatively large compared with the more advanced transition countries. For instance, according to the LFS data in 2012 the share of employed in the informal sector was estimated about 22.5 percents. However, having in mind the nature of the informal sector, any assessment based on self-reporting as in the case of LFS, will potentially underestimate its true size. The Macedonian informal sector predominantly consists of small-scale agricultural production carried out by workers with low levels of education who are either employees without stable contracts or unpaid contributing family workers. Thus, workers in the informal sector are usually low skilled or unskilled and they are less competitive in the labour market (Nikoloski et al., 2012). In addition, a majority of these workers experience the so-called 'informal employment trap' *i.e.* they face a low probability of exiting the informal employment (Bernabe, 2002). At the micro level, there is increased human capital erosion experienced by workers who work in the informal sector due to the labour-intensive characteristics of the informal employment and absence of vocational training.

3. Literature review

In this section we review the evidence on the relationship between unemployment and subjective well-being by paying particular attention to the case of transition countries. The most inclusive and encompassing definition relates the well-being to good mental states, including all of the various evaluations, positive and negative, that people make of their lives and affective reactions of people to their experiences (OECD, 2013). Hence, as stated by Diener (2006) "the subjective well-being is an umbrella term for the different valuations people make regarding their lives, the events happening to them, their bodies and minds, and the circumstances in which they live".

Employment status is widely acknowledged to have a large influence on subjective well-being, with unemployment in particular associated with a strong negative impact on measures of life satisfaction (Winkelmann and Winkelmann, 1998). In this context, the empirical findings show that unemployed have among the lowest level of subjective well-being of all people (Degutis and Urbonavicius, 2013; Meer, 2014). The assumption that unemployment is associated with lower level of well-being stems from the fact that unemployed have lower incomes, decreased human and social capital which consequently implies diminished life satisfaction and happiness.

Although unemployment is generally considered as an economic problem, the psychological consequences of the unemployment go beyond the pure economic considerations (Winefield, 2002). Namely, unemployment status imposes to individuals and their families additional burden as non-pecuniary costs since employment is not only a source of income, but also provides social relationships, identity in the society and individual self-esteem (Winkelmann and Winkelmann, 1998). The empirical literature shows that unemployed persons manifest

significant symptoms of deteriorated health conditions such as higher incidence of stress, anxiety and depression (Bordea and Pellegrini, 2014). Furthermore, higher social capital and communication skills do not appear as significant factors in reducing the harmful effect of unemployment on subjective well-being (Winkelmann, 2009; Pelzer et al., 2014).

The duration of unemployed also affects the individual subjective well-being. According to the adaptation hypothesis, by the course of time individuals can adapt to unemployment which implied that longer-duration unemployment has a smaller effect on subjective well-being than does shorter-duration unemployment. Alternative theoretical view is that unemployed do not adapt to unemployment status. In this case, it is assumed that long-term unemployed are more likely to experience the phenomenon of 'discouraged worker' which would subsequently lead to lower level of well-being. This category of workers is considered as marginally attached and is viewed as distinct labour market state lying between the non-attached and the unemployed (Jones and Riddell, 1998). The empirical findings show that non-searching unemployed are significantly worse-off with respect to subjective well-being compared to those who are not economically active (Lloyd and Leibbrandt, 2014).

Apart from considering unemployment at the individual level, alternatively we can consider the unemployment rate as a macroeconomic indicator which might affect the subjective well-being (Tay and Kuykendall, 2014). In this context, two competing theories are used to explain the effect of the overall unemployment on the subjective well-being of unemployed people. First, having more unemployed individuals will result in lower subjective well-being at aggregate level which, in turn, may exert negative spill-over effects on other members in the society. On the other hand, the prevailing high unemployment rate may become norm for more individuals to be unemployed which subsequently attenuates detrimental effects of personal unemployment on subjective well-being (Clark, 2003; Oesch and Lipps, 2013).

The experience in transition countries shows that socio-political changes had a strong negative impact on subjective well-being. Some studies show that even after 20 years of transition, most transition countries have not regained the level of well-being they enjoyed at the outset of transition (Gruen and Klasen, 2012). According to the empirical evidence, it seems that vulnerable individuals such as adults affected by labour market reform may represent specific affected group (Orosa, 2013). For instance, Blanchflower (2001) finds out that most of unemployed in transition countries are unhappy and are dissatisfied with the direction of reform, presumably because it has excluded them. However, the impact of the alternative labour market adjustment mechanisms on some aspects of subjective well-being in transition countries has so far received little attention. Thus, in what follows we will attempt to empirically assess the role of these mechanisms in attenuating the individual perception of unemployment problem during the recent economic crisis.

4. Empirical analysis

As stated above, the Macedonian labour market manifested increased rigidity during recession that can be *inter alia* attributed to factors that we denote as alternative labour market adjustment mechanisms. While the conventional forms of labour market adjustment through wages and/or working hours are mostly characteristic for the employed workers, the non-standard forms are mainly alternatives for the unemployed workers. According to our hypothesis, the alternative labour market adjustment mechanisms such as employment in the informal sector,

emigration and inactivity may play more emphasised role during times of recession compared with times of expansion. This is reasonable since, these forms of adjustment are more characteristic for disadvantaged labour market segments that are hit more seriously by the recession than the remaining part of the labour force.

To our knowledge, in Macedonia there is a lack of consistent cross-section data about these issues. In order to estimate to what extent the unemployed workers are prone toward the non-standard forms of adjustment we have designed and carried out a survey based on a sample of registered unemployed workers. The survey was conducted during a reference period from mid October to mid November 2011, whereas the sample consisted of 2300 unemployed workers selected randomly in each of 30 branch offices of the Employment Service Agency (ESA) all over the country. Due to the lack of exhaustive lists of registered unemployed that are confidential, the interviewers had freedom to choose eligible respondents randomly. The survey was traditionally conducted in a pen and paper format by using self-administered questionnaires. Having in mind the special topic of the survey, its weakness is viewed in the fact that it cannot be used to monitor changes over time. The structure of the sample according to the basic demographic characteristics is given in Table 1.

In order to assess the alternative labour market adjustment mechanisms, we have designed a questionnaire which consists of 53 questions. Most of the questions are close-ended questions with multiple choices, i.e. they are accompanied by a range of answers from which the respondent is asked to indicate which answer best applies to him. Only two questions are open ended in order to get personal opinion from the respondent about the feeling of being unemployed and his intentions in order to get employed. Alongside the questions about the various economic activities or sources of income we attempted to assess the adjustment mechanisms indirectly by using the time allocation to various activities as well as personal values and perceptions. The entire questionnaire is presented in Appendix 1.

Table 1. The structure of the sample according to various demographic characteristics

Gender		Place of living		Age	
Male	50.30%	Urban	77.89%	15-20	4.09%
Female	49.70%	Rural	22.11%	21-25	23.27%
				26-30	19.23%
				31-35	11.70%
Education		Ethnicity		36-40	10.61%
Primary or less	15.11%	Macedonian	81.80%	41-45	10.61%
Secondary	50.35%	Albanian	10.21%	46-50	8.96%
Higher	34.54%	Turk	2.26%	51-55	6.92%
		Roma	2.26%	56-60	3.61%
Marital status		Serbian	1.95%	61-65	0.87%
Single	40.43%	Vlahos	1.00%	65 and more	0.13%
Married	53.66%	Bosnian	0.35%		
Divorced	3.74%	Other	0.17%		
Widowed	2.18%				

Source: Authors' calculations

4.1 The assessment of alternative labour market adjustment mechanisms

Among the alternative adjustment mechanisms we pay particular attention to the role of employment in the informal sector, emigration and social transfers. As informal economic activities will be considered only those who are legal in nature but not officially registered such as subsistence farming. The emigration as a coping strategy will include temporary work abroad as well as reliance on remittances from the relatives who are permanent emigrants. Finally, the inactivity will mainly encompass reliance on social transfers including both direct and inter household transfers.

In our empirical analysis 38.3% of the surveyed unemployed workers declared that they earn income from various types of additional activities that are informal by nature, while half of them declared that other household members also perform such types of activities. With respect to this, we argue that in depressed labour markets which lack job creation in the formal sector, informal employment helps people to enter the workforce by offering an alternative to unemployment or inactivity and, prevents a further decline in living standards.

The majority of the unemployed workers who stated that are informally employed are engaged in subsistence activities such as agriculture, farming and seasonal work in the country that together represent about 60%. On the other hand, the entrepreneurial activities such as running own business, artisanship or own production and trade are represented to lesser extent. Therefore, we can conclude that most of the unemployed workers that operate in the informal sector are usually low skilled or unskilled and perform labour-intensive operations. The above argument is in line with the sectoral reallocation in Macedonia during transition, according to which the share of employment in subsistence agriculture demonstrated a significant rise. Nevertheless, this should not be a general conclusion for the productivity in the informal sector, since in this case we do not include the informal activities performed as a second job by those who are otherwise formally employed.

The income gained from informal activities on average is 34.2% of the total household incomes, which represents significant financial contribution. However, expressed in absolute terms the average monthly income from informal activities is moderate since one third of the respondents declared to earn less than 100 Euros and another third declared an amount between 100 and 200 Euros. As a consequence, we can argue that unemployed workers are primarily involved in informal businesses that usually operate on a small-scale basis either in the form of self-employment or as micro or small enterprises.

Furthermore, in our empirical analysis we found that 27.7% of the surveyed unemployed workers would emigrate permanently if they had the possibility, whereas 33.9% have intentions to work abroad temporarily. However, about 46% of those who declared having intentions to emigrate undertake concrete activities to find work abroad, while the remaining 54% do not undertake such activities. On the other hand, 11.7% of the respondents stated they have close relatives who are currently emigrated from the country two thirds of who receive financial aid for covering their costs of living. The share of remittances for this category of households in their total income is about 28.2%, which represents a considerable proportion.

We consider the inactivity as mechanism for labour market adjustment since it provides additional income for the households through various types of social transfers. Moreover, we assume that in Macedonian society dominates the traditional system of values that promote egalitarianism, distributional justice and solidarity. In this context, the inter-household transfers might play important role in maintaining the wellbeing of the households. Namely, in deprived

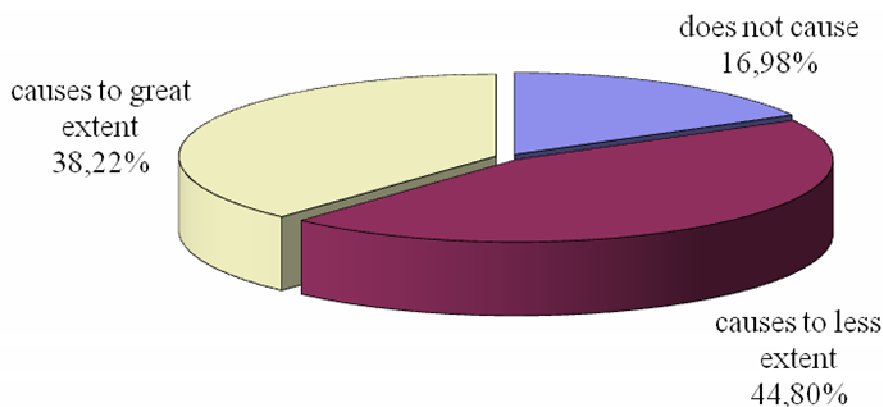
households with one or more unemployed members the income from various sources can be distributed to all members of the household in order to satisfy their basic needs. With respect to this, in our empirical analysis we particularly pay attention to the pensions and social assistance.

Regarding the use of pensions, we revealed that 28.5% of the surveyed unemployed have retired close relatives in their household. Moreover, 79% of the respondents confirmed that their retired close relatives participate in covering the costs of living in the household. The average amount of pensions in the sample is about 120 Euros which represents 25% of the total income for this category of households. On the other hand, we found that only 8.65% of the respondents or another member of their households receive social assistance from the government. The average amount of the social assistance is about 45 Euros, which represents 12.7% of the total income for this category of households.

4.2 The impact on the subjective well-being of unemployed

Having in mind that this survey does not directly address the issue of subjective well-being of unemployed workers, in what follows we attempt to indirectly assess the impact of recent economic crisis on unemployed with respect to the stress incidence, perception of future labour market prospects and impact on the living standard. In this context, our analysis shows that the unemployment represents an embarrassing situation for the majority of unemployed workers. For instance, 38.2% of the respondents declared that unemployment represents for them stressing situation and/or causes other health problems to great extent, while these effects prevail to lesser extent among 44.8% of the interviewed unemployed. The distribution of respondents' opinions with respect to this question is presented in Figure 2.

Figure 2 Unemployment as a cause for stress and/or other health problems



In order to assess the impact of unemployment as a stressor and/or reason for other health problems among unemployed workers in Macedonia, furthermore we estimate a Logit model, where the dependent variable takes value one if the person declares that unemployment causes stress and/or other health problems. In the opposite case, the dependent variable takes value zero. We divide the possible determinants in three groups: Personal traits, household characteristics

and policy treatment variables. The results from the estimated Logit model are presented in Table 2.

From Table 2 we can draw several conclusions with respect to the profile of unemployed workers who are the most psychologically affected by the unemployment problem. Regarding the personal traits, age appears to be statistically significant determinant causing increased probability for stress and other health problems by 4.8% each additional year in unemployment status. Those who have higher education experience 54.9% higher probability of being stressed or to have other health problems caused by unemployment. Furthermore, the long-term unemployed are 94.3% more affected by stress than short-term unemployed, while those who manifest intention to emigrate have 60.2% higher probability of being stressed or to have other health problems caused by the unemployment.

Among the household characteristics, having an additional unemployed member in the household will increase the probability of being stressed or having other health problems by 38.1%. In contrast, having emigrated member(s) of the household diminish the probability of having such psychological and health problems by 31.3%. With respect to the policy treatment variables, only the coefficient of participation in active labour market programmes has negative sign, but none of these variables appears to be statistically significant.

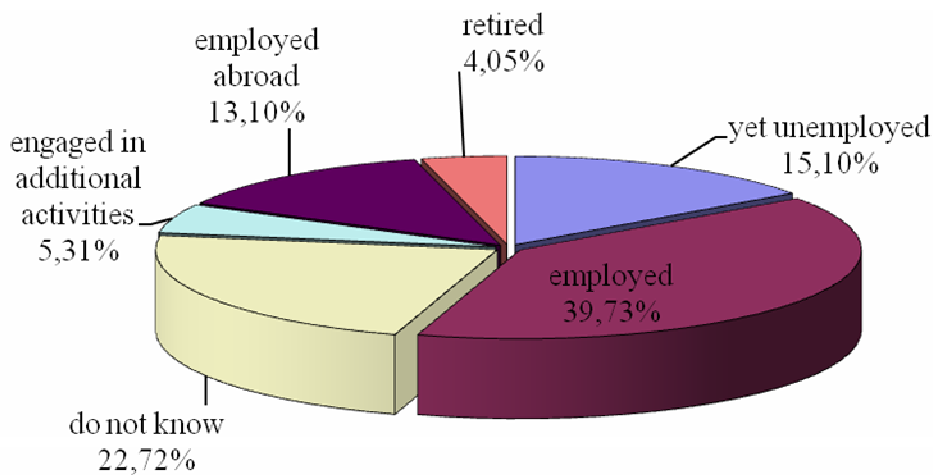
Table 2 Estimated Logit model for unemployment as a cause of stress and/or other health problems

Variable	Coefficient	Standard error	t-value	Diff. in odd ratio
Intercept	-1.6669	0.4169	-3.9985	
Personal traits				
Male	0.0773	0.1274	0.6072	
Age	0.0471	0.0078	5.9907***	4.8%
Married	0.2357	0.1571	1.5005	
Urban	0.0267	0.1510	0.1767	
Higher education	0.4373	0.1339	3.2664***	54.9%
Long-term unemployed	0.6643	0.1406	4.7240***	94.3%
Actively search for job	0.6733	0.1509	4.4616***	96.1%
Has intention to emigrate	0.4717	0.1290	3.6563***	60.3%
Engaged in informal employment	0.0509	0.1320	0.3854	
Household characteristics				
Household size	-0.0153	0.0600	-0.2560	
Number of employed members	-0.0749	0.0817	-0.9171	
Has another unemployed member(s)	0.3225	0.1339	2.4085**	38.1%
Has retired member(s)	0.2311	0.1462	1.5803	
Has emigrated member(s)	-0.3747	0.1818	-2.0607**	-31.3%
Policy treatment				
Social assistance beneficiary	0.0668	0.2742	0.2435	
Health insurance beneficiary	0.1247	0.1248	0.9995	
Unemployment benefit recipient	0.3509	0.2761	1.2708	
Participation in active programmes	-0.2604	0.1979	-1.3155	

Note: *, ** and *** represent statistical significance at the 10%, 5% and 1% levels respectively.

Next, we attempt to assess the perception of the future labour market prospects of the unemployed workers. This is an important aspect of the subjective well-being since it reflects the potential discouragement and workers' opportunities to find job in the near future. For this purpose we asked how the unemployed workers see themselves within a time horizon of five years. The results show that about 15.1% think they will remain unemployed, whereas 22.7% do not have opinion. In contrast, about 39.7% of the respondents hope they will find formal job, while the remaining 22.5% would search for alternative opportunities such as employment in the informal sector (5.3%), emigration (13.1%) or retirement (4%). This finding reflects relatively mixed perceptions among unemployed workers regarding their future prospects on the labour market. The distribution of respondents' opinions with respect to the future labour market prospects is presented in Figure 3.

Figure 3 Perception of the labour market status after 5 years



In order to assess the factors that influence the discouragement of unemployed workers in Macedonia we further estimate a Logit model, where the dependent variable takes value one if the person perceives himself as unemployed after 5 years. In the opposite case, the dependent variable takes value zero. Similarly, as in the case of estimating the impact of unemployment as a stressor, we divide the possible determinants in three groups: Personal traits, household characteristics and policy treatment. The results from the estimated Logit model are presented in Table 3.

From Table 3 we can notice that among personal traits there are several statistically significant characteristics that make the profile of 'discouraged worker'. For instance, being male will decrease the probability that person perceives himself as unemployed after 5 years for 33.2%, while living in urban area will decrease this probability for 26.5%. In addition, having higher education will decrease the probability that unemployed worker perceives himself yet as unemployed after 5 years for 54.8%, while actively searching for job will decrease this probability by 57.9%. In contrast, being long term unemployed will increase this probability for almost 1.5 times compared to those who are short-term unemployed, while an additional year in unemployment status will increase this probability by 5%.

With respect to household characteristics, an additional employed member in the household will decrease the probability of the respondent to perceive himself yet as unemployed after 5 years by 24.9%. In contrast, having another unemployed member in the household will increase the probability for such perception by 48.8%. Finally, being social assistance beneficiary will increase the probability for perceiving as still unemployed within the 5 years time horizon by 54.7%. Having in mind that this category of unemployed is the most deprived it is somewhat expected that they face the poorest labour market prospects.

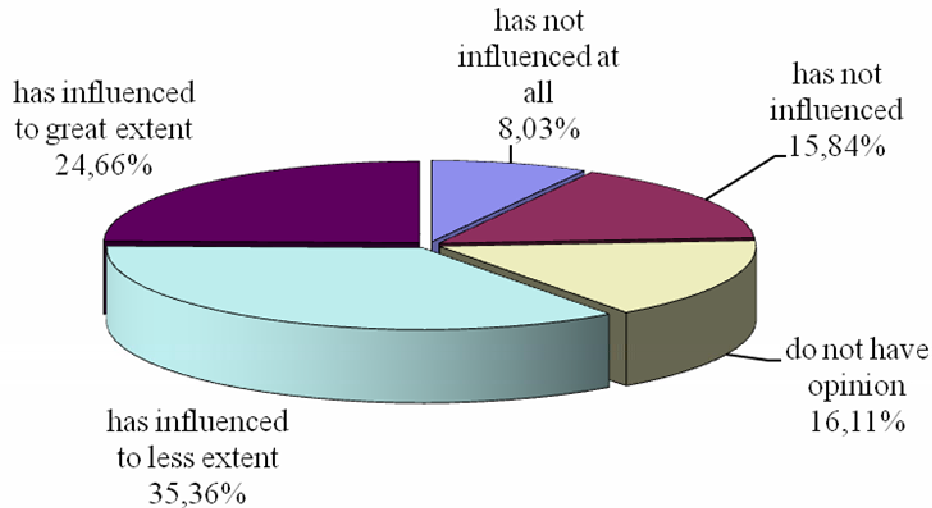
Table 3 Estimated Logit model for perceiving as unemployed after 5 years

Variable	Coefficient	Standard error	t-value	Diff. in odd ratio
Intercept	-3.0259	0.4670	-6.4787	
Personal traits				
Male	-0.4029	0.1410	-2.8570***	-33.2%
Age	0.0490	0.0069	7.0114***	5.0%
Married	0.1974	0.1681	1.1743	
Urban	-0.3085	0.1556	-1.9825**	-26.5%
Higher education	-0.7936	0.1715	-4.6269***	-54.8%
Long-term unemployed	0.8949	0.2396	3.7342***	144.7%
Actively search for job	-0.8644	0.1474	-5.8639***	-57.9%
Has intention to emigrate	-0.1640	0.1402	-1.1696	
Engaged in informal employment	0.0769	0.1392	0.5530	
Household characteristics				
Household size	0.0446	0.0623	0.7172	
Number of employed members	-0.2868	0.0932	-3.0752***	-24.9%
Has another unemployed member(s)	0.3973	0.1427	2.7838***	48.8%
Has retired member(s)	-0.1036	0.1562	-0.6634	
Has emigrated member(s)	-0.1643	0.2068	-0.7945	
Policy treatment				
Social assistance beneficiary	0.4361	0.2155	2.0232**	54.7%
Health insurance beneficiary	-0.1899	0.1418	-1.3392	
Unemployment benefit recipient	-0.2162	0.2357	-0.9174	
Participation in active programmes	-0.1166	0.2395	-0.4869	

Note: *, ** and *** represent statistical significance at the 10%, 5% and 1% levels respectively.

Regarding the impact of recent economic crisis on the living standard, the majority of respondents declared that the global economic downturn negatively influenced their household living standard either to greater or lesser extent (24.66% and 35.36% respectively). A smaller share of surveyed unemployed stated that global economic crisis either has not influenced or has not influenced at all their living standards (15.84% and 8.03% respectively), whereas sizeable percentage of 16.11% do not have opinion. The distribution of respondents' opinions with respect to this question is presented in Figure 4.

Figure 4. Individual perception of the impact of economic crisis on the household living standard



In order to assess the impact of global economic crisis on the living standard of unemployed workers in Macedonia we estimate a Logit model, where the dependent variable takes value one in the case where the person declared that the global economic crisis has influenced his/her living standard. In the opposite case, the dependent variable takes value zero. Similarly, as in the previous cases, we divide the possible determinants in three groups: Personal traits, household characteristics and policy treatment. The results from the estimated Logit model are presented in Table 4.

From Table 4 we can notice that among personal traits an additional year in unemployment will increase the probability that global economic crisis affect the workers living standard by 1.8%, while living in urban area will decrease this probability by 23%. In addition, the living standard has been particularly affected by the crisis among the long-term unemployed, those who actively search for job and those who manifest intention to emigrate. Namely, these categories of workers have 21.4%, 57.9% and 21.3% respectively higher probabilities of perceiving the negative impact of the crisis on the living standard of their households.

Among the household characteristics only having an additional unemployed member in the household significantly increase the probability of perceiving the negative consequences of crisis on the living standard by 57.7%. Hence, the most deprived households who have more than one unemployed workers have been the most affected by the crisis. Finally, with respect to policy variables, only being health insurance beneficiary significantly diminish the probability of considering the negative impact of crisis on the living standard by 18.6%.

Table 4 Estimated Logit model for the impact of the global economic crisis on the living standard of unemployed

Variable	Coefficient	Standard error	t-value	Diff. in odd ratio
Intercept	-0.7901	0.3154	-2.5051	
Personal traits				
Male	-0.0734	0.0949	-0.7729	
Age	0.0176	0.0054	3.2732***	1.8%
Married	0.0646	0.1152	0.5614	
Urban	-0.2613	0.1157	-2.2580**	-23.0%
Higher education	0.1089	0.0993	1.0967	
Long-term unemployed	0.1938	0.1167	1.6604*	21.4%
Actively search for job	0.4566	0.1189	3.8403***	57.9%
Has intention to emigrate	0.1930	0.0976	1.9775**	21.3%
Engaged in informal employment	0.0731	0.0971	0.7531	
Household characteristics				
Household size	-0.0212	0.0450	-0.4719	
Number of employed members	0.0414	0.0621	0.6666	
Has another unemployed member(s)	0.4555	0.0985	4.6211***	57.7%
Has retired member(s)	0.0837	0.1070	0.7825	
Has emigrated member(s)	0.2183	0.1464	1.4907	
Policy treatment				
Social assistance beneficiary	-0.0408	0.1843	-0.2213	
Health insurance beneficiary	-0.2057	0.0958	-2.1465**	-18.6%
Unemployment benefit recipient	0.1552	0.1782	0.8708	
Participation in active programmes	-0.0255	0.1537	-0.1661	

Note: *, ** and *** represent statistical significance at the 10%, 5% and 1% levels respectively.

5. Conclusions and policy implications

In this paper we have analysed the changes in the Macedonian labour market due to the recent recession and the role of the alternative labour market adjustment mechanisms. The increase in the unemployment rate has been rather modest, which is consistent with our hypothesis that depressed labour markets have generally avoided an additional negative recessionary shock. However, the small increment of total unemployment has mainly originated from an increase of unemployment among specific segments in the labour market such as less educated, young and male workers primarily employed in agriculture, mining, tourism and transportation. Hence, the policy measures that should be undertaken in order to mitigate the impact of recession have to be directed to those labour market segments.

The later start of recession and the particular role of the alternative labour market adjustment mechanisms in Macedonia might have generated relatively insignificant transmission of the negative growth rate to the labour market outcomes. This recent experience confirms the important role of the alternative mechanisms such as employment in the informal sector, emigration and non-participation in cushioning the social and economic consequences of the high and persistent unemployment rate. In this context, we have carried out a survey in order to empirically assess the extent to which these adjustment mechanisms absorb a part of the unemployed workforce and/or contribute to their household income, which indirectly affects their subjective well-being.

Considering the employment in the informal sector we found that considerable number of unemployed workers is engaged in various forms of informal employment. Furthermore, we revealed that income earned from additional informal activities represents more than one third of the total household income. Hence, employment in the informal sector alongside other forms of labour market adjustment significantly contributes to the well-being of the unemployed workers. However, most of the informal arrangements of the unemployed workers are low-productivity and small-scale predominantly in the agricultural and farming sector.

With respect to emigration we found that more than half of unemployed workers if they have the possibility will emigrate either permanently or temporarily. This intention is particularly emphasised among those who perceive unemployment as stressing situation and those whose living standard was the mostly affected by the recent economic crisis. Moreover, we revealed that only small proportion of unemployed have emigrated close relatives, but they heavily rely on the remittances that receive from them. Therefore, remittances alongside other forms of labour market adjustment significantly contribute to the well-being of the unemployed workers.

The recent economic crisis has disproportionately affected the well-being of unemployed workers in Macedonia. In this context, the most affected have been long-term unemployed with lower levels of education and predominately living in rural areas. In addition, our analysis points out that particularly concerned are households with more than one unemployed members. Finally, it is worth mentioning that existing policy measures do not appear to have substantial alleviation effects on the well-being of unemployed workers which creates a wide room for designing and implementing more effective policy reforms.

From this latest episode of the economic development, we have learned several lessons that will guide decision makers in designing and applying appropriate policy measures in order to increase the employability and improve the well-being of unemployed workers. First, the labour market issues should be tackled on both demand and supply side which means that increased number of created jobs must be accompanied with wise investments on the side of the quality of the labour force. Second, passive labour market policies have to be redesigned in order to cover mostly the identified vulnerable segments in the Macedonian labour market. In this context, the labour market segmentation might have serious negative implications on the labour market functioning that have to be set off by using appropriate policy measures. Third, a greater accent should be given to the active labour market policies and their complementarities with passive labour market policies. Fourth, the process of formalisation of jobs in the informal part of the economy has to be done prudently with accent to the sustainability of the formalised jobs. Fifth, the role of social transfers to non-participants should be reassessed and adequately redesigned in the light of the planned economic development.

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Appendix 1

Interviewer(name and surname): _____

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Address: _____

Telephone number: _____ e-mail: _____

The aim of this survey is to assess the unemployment conditions in Macedonia and to offer possible solutions for alleviation of the consequences of unemployment.

The subjects of interviewing are unemployed persons who register at the Employment State Agency (ESA). The survey is anonymous and data will not be used for activities that would compromise the interviewees.

1. Gender

- a) male
- b) female

2. Age _____ (years)

3. Marital status

- a) single
- b) married
- c) divorced
- d) widowed

4. Place of living

- a) town
- b) village

5. Ethnicity

- a) Macedonian
- b) Albanian
- c) Turk
- d) Roma
- e) Serbian
- f) Vlahos
- g) Bosnian
- h) Other

6. Education

- a) unqualified
- b) semi-qualified or uncompleted secondary education
- c) qualified
- d) highly-qualified
- e) secondary vocational education
- f) higher education (two years)
- g) higher education (four years and more)
- h) master
- i) PhD

7. Duration of unemployment

- a) less than 1 month
- b) from 1 to 5 months
- c) from 6 to 11 months
- d) from 12 to 17 months
- e) from 18 to 23 months
- f) from 2 to 3 years
- g) from 3 to 4 years
- h) from 4 to 5 years
- i) from 5 to 7 years
- j) 8 years and more

8. What is the feeling of being unemployed? (only key words or one sentence)

9. Does the unemployment for you cause stressing situations or other health problems?

- a) does not cause
- b) causes to less extent
- c) causes to great extent

10. According to you, who is the most responsible for the high unemployment rate in Macedonia? (possible multiple choice)

- a) the Macedonian Government
- b) the local government
- c) Employment state agency
- d) business community
- e) trade unions
- f) international community

11. According to you, who is the most important factor for solving the unemployment problem in Macedonia? (possible multiple choice)

- a) the Macedonian Government
- b) the local government
- c) the Employment state agency
- d) business community
- e) trade unions
- f) international community
- g) myself

12. According to you, does the membership in political parties influences the employment process in Macedonia?

- a) does not influence at all
- b) does not influence
- c) do not have opinion
- d) influence to less extent
- e) influence to great extent

13. What do you intend to undertake in future in order to get employed (only key words or one sentence)

14. How do you see yourself after five years?

- a) yet unemployed
- b) employed
- c) do not know
- d) engaged in additional activities
- e) employed abroad
- f) retired

15. If you have possibility, would you work abroad?

- a) no (go to question 17)
- b) yes, temporarily
- c) yes, permanently

16. Do you undertake concrete activities to find work abroad?

- a) yes
- b) no

17. Do you think that Macedonia is going to right direction?

- a) does not go to right direction
- b) do not have opinion
- c) goes to right direction

18. According to you, has the global economic crisis negatively influenced the living standard of your household?

- a) has not influenced at all
- b) has not influenced
- c) do not have opinion
- d) has influenced to less extent
- e) has influenced to great extent

19. Has the global economic crisis induced you to search for additional sources of income for your household?

- a) has not induced at all
- b) has not induced
- c) do not have opinion
- d) has induced to less extent
- e) has induced to great extent

20. Do you think that such kind of research may help in alleviation of the unemployment problem?

- a) may not help at all
- b) may not help
- c) do not have opinion
- d) may help to less extent
- e) may help to great extent

- 21. Do you have health insurance from the Public Employment Agency?**
- a) yes
 - b) no
- 22. Do you receive unemployment benefit from the Public Employment Agency?**
- a) yes
 - b) no (go to question25)
- 23. On what basis you receive unemployment benefit?**
- a) Liquidation
 - b) Seasonal workers
 - c) Redundancy from work
 - d) Redundancy – state insolvent companies
 - e) Redundancy from state and public administration
- 24. What is the amount of your unemployment benefit?**
- a) up to 1.000 denars
 - b) from 1.000 to 2.000 denars
 - c) from 2.000 to 3.000 denars
 - d) from 3.000 to 4.000 denars
 - e) from 4.000 to 5.000 denars
 - f) from 5.000 to 6.000 denars
 - g) from 6.000 to 7.000 denars
 - h) more than 7.000 denars
- 25. Have you been participated in some of the active programs/measures of the Public Employment Agency?**
- a) yes
 - b) no (go to question28)
- 26. In which of the following active programs/measures you have been participated?**
- a) Employment clubs
 - b) Apprenticeship program
 - c) Program for self-employment
 - d) Employment subsidy
 - e) Employment of disabled persons
 - f) Free training for IT skills
 - g) Program for supporting formalization of the existing businesses
 - h) Support for additional employment in companies
 - i) Pilot program – mobility of the workforce
 - j) Program for employment preparation through training
 - k) Survey of vacancies
 - l) Program for supporting Roma minority
 - m) Economic support for women– victims of the family violence
- 27. Has the attended program helped you to find a job(in the formal sector)?**
- a) yes
 - b) no
- 28. What is the total number of members in your household? _____**

- 29. How many members of your household are at working age? (15-79) _____**
- 30. How many members of your household are employed ? _____**
- 31. How much is the total income from salaries in your household?**
- a) up to 5.000 denars
 - b) from 5.000 to 10.000 denars
 - c) from 10.000 to 15.000 denars
 - d) from 15.000 to 20.000 denars
 - e) from 20.000 to 30.000 denars
 - f) from 30.000 to 40.000 denars
 - g) from 40.000 to 50.000 denars
 - h) more than 50.000 denars
- 32. Do you personally earn income from additional activities?**
- a) yes
 - b) no (go to question 36)
- 33. From what kind of activities you earn additional income? (possible multiple choice)**
- a) agriculture/farming
 - b) trade
 - c) artisanship
 - d) own production
 - e) small business
 - f) seasonal work in the country
 - g) seasonal work abroad
 - h) rents
- 34. How much do you earn monthly from these additional activities?**
- a) up to 5.000 denars
 - b) from 5.000 to 10.000 denars
 - c) from 10.000 to 15.000 denars
 - d) from 15.000 to 20.000 denars
 - e) from 20.000 to 30.000 denars
 - f) from 30.000 to 40.000 denars
 - g) from 40.000 to 50.000 denars
 - h) more than 50.000 denars
- 35. Does another unemployed member of your household perform some of the above mentioned activities?**
- a) yes
 - b) no
- 36. Is there another member of your household who is registered with the Public Employment Agency?**
- a) yes
 - b) no (go to question 40)
- 37. Indicate the number of persons _____**

- 38. Dose someone of them receive unemployment benefit?**
- a) yes
 - b) no (go to question39)
- 39. What is the amount of his unemployment benefit?**
- a) up to1.000 denars
 - b) from1.000 to2.000 denars
 - c) from2.000 to3.000 denars
 - d) from3.000 to4.000 denars
 - e) from4.000 to5.000 denars
 - f) from5.000 to6.000 denars
 - g) from6.000 to7.000 denars
 - h) more than7.000 denars
- 40. Are there retired person(s) in your household?**
- a) yes
 - b) no (go to question44)
- 41. Indicate the number of retired persons _____**
- 42. Do they participate (partly or fully) in covering your costs of living?**
- a) yes
 - b) no
- 43. What is the total monthly amount of their pensions? _____ (denars)**
- 44. Do you or another member of your household receive social assistance?**
- a) yes
 - b) no (go to question46)
- 45. What is the monthly amount of the social assistance? _____ (denars)**
- 46. Is there any member (or several members) of your household (father, mother, brother, sister, son, daughter) who are currently emigrated from the country?**
- a) yes
 - b) no (go to question50)
- 47. Indicate the number of emigrated persons _____**
- 48. Do they participate (partly or fully) in covering your costs of living?**
- a) yes
 - b) no
- 49. What is the average monthly amountyour emigrated relatives send to your household?**
- a) up to 5.000 denars
 - b) from 5.000 to 10.000 denars
 - c) from 10.000 to15.000 denars
 - d) from15.000 to20.000 denars
 - e) from20.000 to30.000 denars
 - f) from30.000 to40.000 denars
 - g) from40.000 to50.000 denars
 - h) more than 50.000 denars

50. Do you actively search for job?

- a) do not believe there are available jobs
- b) do not search at all
- c) search from time to time
- d) actively search

51. How much of the time during a day you perform activities for providing additional income?

- a) less than 4 hours
- b) from 4 to 8 hours
- c) more than 8 hours

52. How much is your free time during a day?

- a) do not have free time
- b) have little free time
- c) have enough free time
- d) have plenty free time

53. How do you spent your free time? (possible multiple choice)

- a) watching TV
- b) attending cultural manifestation
- c) visiting relatives and friends
- d) sport and recreation
- e) hobby
- f) additional economic activity