

## RETURN MIGRATION AND REMITTANCES: RECENT EMPIRICAL EVIDENCE FOR BULGARIA<sup>3</sup>

*The article presents a review of recent empirical evidence on a range of issues related to the transfers of funds from Bulgarian migrants, known as migrant remittances. Data for the official indicators as compensation of employees and workers' remittances is utilized from the Bulgarian National Bank, providing these items in the Balance of Payments financial statistics. Furthermore, on the basis of information from a questionnaire survey carried out in 2017, the socio-demographic profile of return migrants supporting their relatives staying in the home country is explored. Possible answers are provided to the question on what drives the active remittance behaviour of returnees during their stay abroad. An outline is suggested regarding the purposes for which remittances are utilized and the main types of businesses they support. Using the method of binary logistic regression, several main determinants of the inclination of the migrant to support those left in the home country are identified and discussed.*

*JEL: F22; F24; O15*

### 1. Introduction

The workers' remittances of emigrants are implicitly incidental to the modern global economy. There are a total of over 272 million migrants worldwide and in 2019 they have transferred a total of 706 billion USD, 78% of which have been channelled into lower-income economies (WBG, 2019). The financial transfers are performed in "corridors" among the main "sender" and "recipient" countries. According to World Bank data for 2018, the top 5 sender countries are respectively the USA (with over 68 billion USD of transfers and compensation of employees remitted on average per year), the United Arab Emirates, Saudi Arabia, Switzerland, and Germany. The top 5 positions for the recipient countries are occupied by India (with about 80 billion USD in transfers from abroad), China, Mexico, the Philippines, and Egypt. From Eastern Europe, among the top 10 sender countries is Russia

<sup>1</sup> Economic Research Institute at BAS and International Business School – Botevgrad, e-mail: v.mintchev@abv.bg.

<sup>2</sup> University of National and World Economy – Sofia, e-mail: venelinb@unwe.bg.

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(with slightly over 20 billion USD), and among the recipients – Ukraine (with 14.4 billion USD) (WBG, 2019).

Europe is diverse in terms of “dependence” on workers’ remittances by migrants. The states of Western Europe are not dependent on them. Those countries have a positive migration balance. The situation in Eastern Europe and in the Balkans is different. Dependence on the remittances by migrants is great and the risk of the so-called “Dutch disease” in this connection – quite real. The migration balance in most of those countries remains negative.

This article focuses on selected issues of return migration related to the remittance behaviour of Bulgarian migrants in the years after the EU integration of the country. It suggests a short macroeconomic evaluation of the importance of the financial inflows originating from the compensation of the Bulgarian employees abroad, as well as the Bulgarian workers’ remittances. More comprehensively, the analysis is further based on data obtained during a questionnaire survey conducted among return migrants at the end of 2017, executed in the framework of the project “*Returning Migrants: Segmentation and Stratification of Economic Mobility*”. In particular, issues concerning the transfers of monetary resources and their usage for the development of businesses in Bulgaria – as a home country of the migrants – are explored in light of detailed survey data. The analysis reflects a variety of evidences and postulates, which have been suggested in a theoretical and/or empirical aspect during the last two decades by various authors (e.g. Bakalova, Misheva, 2018; Boshnakov, 2019; Boshnakov et al., 2016; Christova-Balkanska, Mintchev, 2012; Ivanova, 2012; Mintchev, Boshnakov, 2006, 2018; Mintchev, 2009; Mintchev et al., 2016a, 2016b; Nonchev, Hristova, 2018; Zareva, 2018a, 2018b, 2019; 2021; etc.).

## **2. Macroeconomic Assessments of the Migrants’ Remittances**

The economic impact of the financial transfers from abroad can be traced in two ways. At macro-level – using data from the balance of payments of the respective country (primary and secondary income), and at micro-level – using data from sample surveys. The international institutions and national statistics provide information regarding the transfers received from abroad regarding to two items – “compensation of employees” and “workers’ remittances of emigrants”. This approach reflects the universally accepted methodology of the International Monetary Fund (IMF, 2013), according to which the first item includes funds remitted by individuals residing in the host country for less than 1 year to households residents in the country of origin. The second item captures the transfers from individuals staying abroad for more than 1 year.

In 2018 Bulgaria has received about 2.4 billion USD, which places it on 8<sup>th</sup> position in terms of the volume of funds received from abroad among the countries of Eastern Europe and the post-Soviet area. In comparison, the remittances from migration received by Romania have amounted to 5.2 billion USD, and by Serbia – to 4.3 billion USD (WBG, 2019). At the same time, more than 220 million USD have been transferred out of Bulgaria. The funds transferred out of Romania and Serbia have reached respectively 435 million USD and 297 million USD (WBG, 2019). In itself, this shows that for many households – not just in Bulgaria but also

in the Balkans as a whole – the transfers from abroad are of primary importance, not just for maintaining an acceptable way of life by the local standards, but for their very survival.

As for the sample studies, they have been conducted mainly with the purpose to make an assessment of how and where specifically the remittances from abroad are used in Bulgaria (Mintchev, et al., 2016). They also allow to assess the amount of the remittances received from abroad (Mintchev, Boshnakov, 2006; Mintchev, 2009; Mihailov, et al., 2007; Mintchev, et al., 2012), based on an assessment of the number of the so-called “current” and “returning” migrants on average per household and the share of costs, and, respectively, of the workers’ remittances and the savings in the income received by Bulgarian citizens staying abroad. Based on this methodology, the amount of savings and the workers’ remittances by Bulgarian migrants from abroad are estimated at about 800 million EUR in 2007 (the year of Bulgaria’s accession to the EU), at 1.3 billion EUE in 2011, and at about 1.7 billion EUR in 2013.

Table 1

Estimated amounts of remittances by Bulgarian emigrants from abroad

	2007	2011	2013
Average monthly income (EUR)	810.3	896.6	1606.1
Average duration of the stay abroad (months)	13.8	18.2	14.8
Relative share of the current expenses abroad (%)	45.4	42.4	–
Relative share of the money remittances (%)	44.3	31.2	37.2
Average annual amount of the savings abroad (total) (EUR)	157 825 386	586 620 923	–
Average annual amount of the remittances from abroad (total) (EUR)	657 791 954	694 102 266	–
Savings and transfers by current and returning migrants (total) (EUR)	815 617 340	1 280 723 189	1 741 796 358

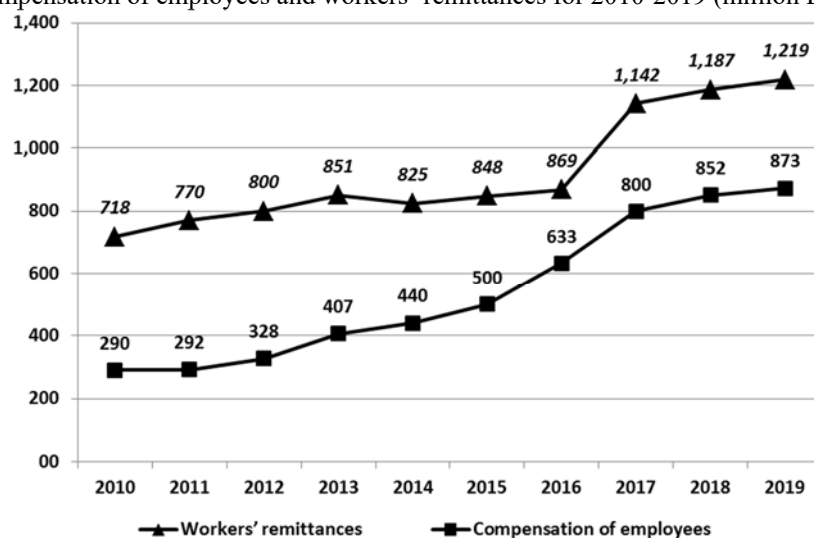
*Source: Authors’ calculations using data from Mihailov et al., 2007; Mintchev, 2009; Mintchev, et al., 2016.*

As to the geographic distribution of the remittances among the groups of regions based on the development level<sup>4</sup>, according to assessments from 2013, nearly 1/2 of the remittances (48%) are made to the regions of group III. Those are the regions at risk of relegation into the depression-prone group IV. They include, for example, Blagoevgrad region, Dobrich, Shumen, etc., i.e. regions, which in terms of their development level are situated, tentatively speaking, between Veliko Tarnovo and Pleven, on the one hand, and Razgrad and Montana – on the other hand. They lag behind the leaders Sofia, Varna, Stara Zagora, and Plovdiv (group I). The group of well-developed regions attracts 31% of the remittances, while the group of the so-called depression-prone regions has the lowest share of remittances from abroad (7%) (Mintchev, et al., 2016).

<sup>4</sup> The development levels of the regions are assessed using the so-called “Helvig method”, also known as the “Wroclaw taxonomic method”. Zdzislaw Helvig, the author of the method, devised it for the purposes of international comparisons. The method is also suitable for measurement of the intra-territorial differences in individual countries (Boshnakov, et al., 2017, p. 94).

Workers' remittances by Bulgarian emigrants and the compensation of employees are accounted for in the balance of payments of the country after 1996. Despite the potential issues, which the methodology for measuring the workers' remittances and the compensation of employees applied by BNB (BNB, 2015) could raise in itself, the stable growth in both items is worth noting. Workers' remittances of emigrants have increased from about 718 million EUR in 2010 to about 1.2 billion EUR in 2019, and the compensation of employees (the so-called short-term emigrants) – from 290 million EUR to more than 870 million EUR (Figure 1).

Figure 1  
Compensation of employees and workers' remittances for 2010-2019 (million EUR)

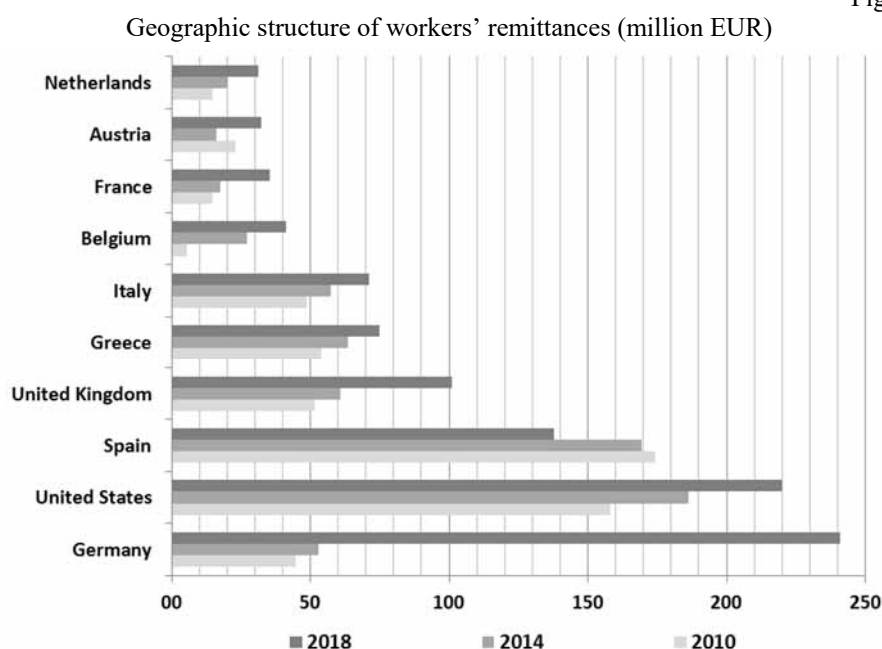


Source: Bulgarian National Bank ([www.bnb.bg](http://www.bnb.bg)), retrieved on 20/11/2020.

The monetary remittances, received from the top 10 countries from where transfers to Bulgaria are being made, amount to 82-83% of the monetary funds received in the country from emigrants (Figure 2). Based on BNB data, in 2018 about 20% of the workers' remittances are wired from Germany, 18.6% – from the USA, nearly 12% – from Spain, and 8.6% – from Great Britain. The data show that the remittances from Spain have declined dramatically after 2010, and those from Germany have increased a few fold.

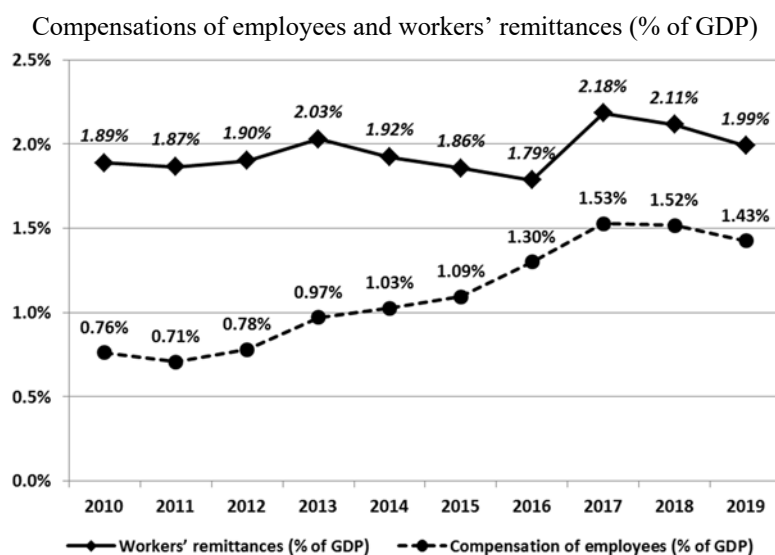
As a share in GDP, the total relative weight of both items of the balance of payments is within the range of 2.6% and 3.7% (Figure 3). This is higher than in countries like Greece (0.9%) and Romania (1.9%) but significantly lower than in Kosovo (15.1%), Bosnia and Herzegovina (10.5%), or even Croatia (4.6%). Despite their serious amounts and importance for many households, both items have no serious weight as a relative share in Bulgaria's GDP and exports. Nevertheless, it can be noted that according to BNB estimates in 2002-2006 (i.e. immediately prior to Bulgaria's accession to the EU), only the compensations of employees have reached about 5% of GDP and 10% of exports. At the same time, over the last decade, both items in total remain within the range of 4-6% of the national exports (Figure 4).

Figure 2



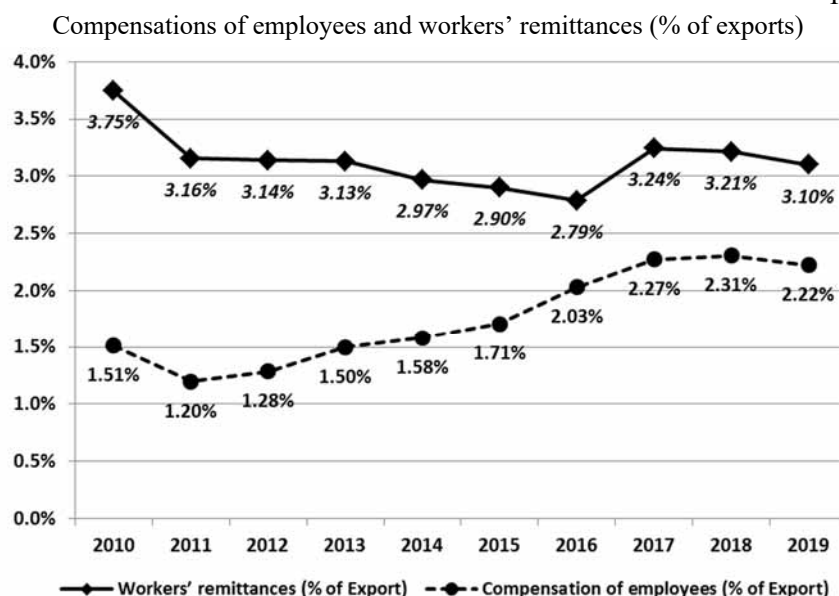
Source: Bulgarian National Bank ([www.bnb.bg](http://www.bnb.bg)), retrieved on 20/02/2020.

Figure 3



Source: Bulgarian National Bank ([www.bnb.bg](http://www.bnb.bg)), National Statistical Institute ([www.nsi.bg](http://www.nsi.bg)), retrieved on 20/11/2020.

Figure 4

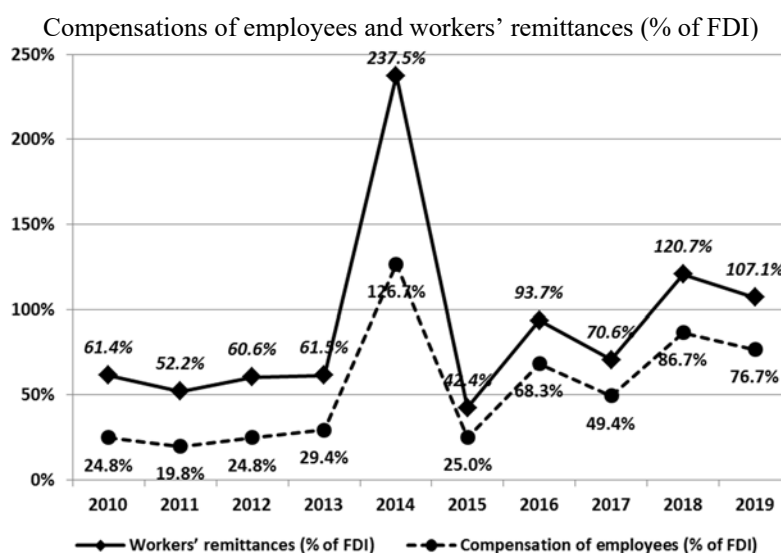


Source: Bulgarian National Bank ([www.bnb.bg](http://www.bnb.bg)), National Statistical Institute ([www.nsi.bg](http://www.nsi.bg)), retrieved on 20/11/2020.

The increase of the compensations of employees abroad coincides with the growth of foreign direct investments in Bulgaria prior to 2009-2010. Thus, in the 2002-2006 period, they are at levels of up to about 10% of foreign direct investments (FDI) on an annual basis. After 2009 the compensations of employees exceed 20% of FDI, and the remittances of emigrants reach 60% of FDI (Christova-Balkanska, Mintchev, 2012). The decline in the inflow of FDI during the world financial crisis and after it has resulted in a paradoxical situation – in 2014 the compensation of employees and the workers' remittances by migrants as a total have exceeded over twice the foreign direct investments in Bulgaria. It may be expected that the workers' remittances will gradually start to play an essential role for the development of business initiatives in various regions of this country (Figure 5).

On the other hand, the compensation of employees and the workers' remittances are an expression not only of the selflessness and solidarity of the emigrants with their relatives, who have remained in Bulgaria. They are an indicator of sorts of the social connections between the diaspora and the home country. The workers' remittances from abroad have a broad scope of impact. They bring financial and other benefits to households, having "current" or "returning" migrants. As time goes on, they become a serious factor for the modernization of the home country (various contacts, "first-hand" information, and new social and political experience) (Xenogiani, 2006). At the same time, as for example, a number of World Bank analyses show, the compensations and the workers' remittances from abroad also have some undesirable effects. "The overseas support" very often de-motivates the search for jobs or the starting up a business (Mansoor, Quillin, 2006; Quillin, et al., 2007).

Figure 5



Source: Bulgarian National Bank ([www.bnb.bg](http://www.bnb.bg)), retrieved on 20/11/2020.

### 3. Investment and Entrepreneurial Activity of the Return Migrants

The economic activity of the return migrants can be assessed using the information, obtained from sample surveys. Based on information from the project “*Returning Migrants: Segmentation and Stratification of Economic Mobility*”, an evaluation can be made to what extent the returning migrants support their relatives, who have remained in the home country; what part of them support their relatives by sending them money; and what are the economic activities the re-migrants choose to develop their own business (Nonchev and Hristova, 2018; Mintchev and Boshnakov, 2018; Zareva, 2018a, 2018b).

Two main topics are reviewed in this section: (a) support for relatives who have stayed in Bulgaria, including money transferred by Bulgarian re-migrants (during their stay abroad); (b) entrepreneurial and investment activity of the returning migrants.

#### 3.1. Support for relatives, who have remained in Bulgaria

Economic motives predominate among those which incentivize Bulgarians to emigrate. The support for relatives who have remained in the home country via workers' remittances or otherwise is considered as a positive effect of the migration. The remittances from abroad are of substantial importance for many households in Bulgaria that potentially could bring in a “Dutch disease” effect (Bourdet, Falk, 2006), e.g. a loss of competitiveness of the domestic economy due to loss of interest for part of the local workforce on the labour market in the country of origin.

The data on Table 2 and Table 3 indicate that more than 1/2 of the respondents state that they have supported their relatives who have remained in the home country by providing money or otherwise – irrespective of whether this concerns the first or the last migration destination. Among those who have supported their relatives in Bulgaria, over 88% of the cases indicate that they have done so by remitting money, while between 5% and 9% of the cases declare support to their relatives by sending them goods or seeking employment for them. Support for the relatives does not vary substantially by the sequence of the destination – be it first or last country of migration.

Table 2  
Support for relatives, who have remained in Bulgaria – first and last destination

	Did you support members of your family during your first migration?		Did you support members of your family during your last migration	
	number	%	number	%
Yes	321	53.1	50	53.8
No	278	46.0	40	43.0
Did not know/answer	5	0.8	3	3.2
Total	604	100	93	100
Failed to respond			511	

Table 3  
Ways of support for relatives in Bulgaria – first and last destination

	First country of migration			Last country of migration		
	responses		% of cases	responses		% of cases
	number	%		number	%	
Sent them money	283	82.0	88.2	42	73.7	84.0
Sent them goods for sale	17	4.9	5.3	4	7.0	8.0
Searched for job opportunities	16	4.6	5.0	5	8.8	10.0
Other	17	4.9	5.3	2	3.5	4.0
Failed to respond	12	3.5	3.7	4	7.0	8.0
	345	100.0	107.5	57	100.0	114.0

The attitudes in favour of supporting relatives who have remained in the home country are similar among returning migrants, no matter men or women. Yet, men account for about 59% among the returning migrants who support in some form their relatives residing in Bulgaria, and women account respectively for 41%. While the share of men who only support their relatives exceeds 57%, the share of women who remit money, goods or otherwise support their relatives, is about 10% lower (48%).

The data on Table 4 make evident that the younger the respondents, the weaker the attitudes in favour of supporting their relatives in Bulgaria, and vice versa – with the advancement of age the commitment of the migrants to their families who have stayed in Bulgaria increases. The share of individuals under the age of 30, or from 30 to 40 years old, among those who support their relatives, is in the range between 12% and 19%, while among the older ones (40-50 years old) – above 25%. And vice versa – among those who do not actively support their relatives, the relative share of younger generations is significantly higher.



Table 4

Support by re-migrants to those who have stayed in Bulgaria, by demographic characteristics (%)

	Does not provide support	Provides support	Total
<i>Gender</i>			
Male	42.7	57.3	100.0
Female	51.8	48.2	100.0
Total	46.9	53.1	100.0
<i>Age</i>			
Up to 30 years old	64.9	35.1	100.0
31-40 years old	52.9	47.1	100.0
41-50 years old	36.4	63.6	100.0
51-60 years old	36.0	64.0	100.0
Over 60 years old	43.2	56.8	100.0
Total	46.9	53.1	100.0
<i>Family status (in the first country)</i>			
Single	66.5	33.5	100.0
Married/Has Partner	36.1	63.9	100.0
Divorced	45.3	54.7	100.0
Widowed	38.1	61.9	100.0
Total	46.9	53.1	100.0
<i>Number of children in the household</i>			
0	50.6	49.4	100.0
1	38.1	61.9	100.0
2	37.0	63.0	100.0
3	60.0	40.0	100.0
Total	46.9	53.1	100.0
<i>Ethnicity</i>			
Bulgarian	48.3	51.7	100.0
Turkish	49.0	51.0	100.0
Roma (Gypsy)	30.8	69.2	100.0
Other	50.0	50.0	100.0
Total	46.9	53.1	100.0

Interesting information is also derived from the analysis of the monetary remittances by age groups of re-migrants, made on the basis of data from a questionnaire survey of the Bulgarian diaspora and the return migrants conducted in 2011.<sup>5</sup> In this survey, the majority (61.2%) of re-migrants under 30 years old state that they have not made remittances. The individuals from 31 to 45 years old have transfer money most often (42.6% of them have remitted funds regularly, and 20.4% – irregularly). Among those over 45 years old, nearly 1/2 (45.5%) transfer regularly workers' remittances (Christova-Balkanska, Mintchev, 2012, p. 236).

<sup>5</sup> These results are obtained in the framework of research project "The Bulgarian Diaspora in Western Europe: Transboundary Mobility, National Identity and Development" implemented under contract № DID 02/21 of 17.12.2009 by the Economic Research Institute at BAS and partners, with the financial support of the National Scientific Research Fund, "Ideas" Programme.

The singles and respectively the married individuals differ substantially in terms of their attitudes in favour of supporting their families in Bulgaria (Table 4). More than 63% of the married individuals support their relatives, while almost as many (66%) of the singles are unwilling to do so. Respectively, while the share of married individuals among the returning migrants supporting their relatives in Bulgaria exceeds 65%, the same share for the singles is just 20%. It should also be underlined that the Roma are the most dependent on the support from abroad – more than 70% of the Roma returning from abroad have supported their relatives in the home country. Among Bulgarians, among the Turkish community, and among the so-called “others”, the share of migrants supporting their relatives at the home amount to about 50-51% (Table 4).

The situation regarding the returnees with various education degrees looks quite interesting (Table 5). The highest share of respondents supporting their relatives is observed among individuals of lower education, and the lowest such share – among higher education graduates. These data confirm the findings in a previous study of the transfer behaviour of the Bulgarian diaspora and the return migrants (Christova-Balkanska, Mintchev, 2012, pp. 234-235). A similar pattern is observed among return migrants grouped by income intervals – the higher the income, the lower the support for relatives who have remained in the home country. On the other hand, the shares of individuals in the lower-income groups are higher in comparison to the shares of those who earn higher incomes, among the returning migrants who support their families.

The individuals who have provided support to their families and relatives remaining in Bulgaria are most numerous among the re-migrants who have stayed abroad for longer periods of time (68%), while this share among the people who have stayed abroad for less than 1 year is much lower (43%). This is not in conflict with the widespread opinion that the support for the relatives staying in the country of origin declines as time goes on. Those opinions are typically valid for the permanent migration, while the opposite case is clearly the one of circular/seasonal mobility, which has become a permanent source of income for many households in the country.

At the same time, it should be pointed out that more than 56% of the interviewed respondents in 2017 declare that they have been able to save during their stay abroad. According to the reported data, the re-migrants have succeeded to save about 12 000 BGN (on average, per individual returned). The most commonly indicated saved amounts have been between 10 000 and 20 000 BGN (33% of the respondents). Those who have saved less (up to 5000 BGN, and from 5000 to 10 000 BGN) account for 26-28%. An insignificant share is found regarding those who have saved most (between 20 000 and 50 000 BGN, as well as over 50 000 BGN) – respectively, between 2% and 6% (Table 6).

The effect of the remittances as such is more clearly visible from the comparison of the annual monetary income per household with a re-migrant, compared to the income per household in the country of origin – a substantial difference in the income distributions is found in this respect (Table 7). The first three income deciles (30%) of the households in Bulgaria have income up to 7300 BGN in 2017, while the incomes of a similar share (27.2%) of the households with a re-migrant are up to just 9600 BGN. Besides, if the lowest 1/2 of the households (first 5 deciles) in the country have an income of up to 10 166 BGN, approximately the same share (53.4%) of the households with a return migrant have incomes

of up to 14 400 BGN. The difference is not negligible – it is evident that the employment abroad provides incomes, and living standard respectively, which are not feasible by the usual employment on the local labour market.

Table 5

Support by emigrants for relatives who have remained in Bulgaria, by the level of education, income, and length of stay abroad (%)

	Does not provide support	Provides support	Total
<i>Level of education (prior to the first migration)</i>			
Primary and lower	37.0	63.0	100.0
Secondary general school	48.4	51.6	100.0
Secondary vocational school	43.6	56.4	100.0
Higher education	61.7	38.3	100.0
Total	46.9	53.1	100.0
<i>Level of income</i>			
Under 800 BGN	47.1	52.9	100.0
From 800 to 1200 BGN	32.5	67.5	100.0
From 1200 to 2000 BGN	45.9	54.1	100.0
Over 2000 BGN	54.3	45.7	100.0
Failed to respond	57.9	42.1	100.0
Total	46.9	53.1	100.0
<i>Length of stay abroad</i>			
Up to 1 year	57.0	43.0	100.0
From 1 to 3 years	42.0	58.0	100.0
More than 3 years	32.1	67.9	100.0
Total	46.9	53.1	100.0

Table 6

Distribution of respondents by savings from employment abroad

	number	%
Up to 5000 BGN	25	26.0
From 5000 to 10 000 BGN	27	28.1
From 10 000 to 20 000 BGN	32	33.3
From 20 000 to 50 000 BGN	6	6.3
From 50 000 to 100 000 BGN	2	2.1
Over 100 000 BGN	4	4.2
Total respondents	96	100.0
Refused to respond / NA	508	
Total polled	604	

Table 7

Cumulative distribution of households in Bulgaria by monetary income for 2017  
(households with a returning migrant, and total household population)

	Monetary income per household with a returning migrant*			Monetary income per household in the country**	
	BGN	Cumulative %		BGN	Cumulative %
up to	2400	2.2	up to	5392	10
up to	4800	8.0	up to	6713	20
up to	7200	17.2	up to	7370	30
up to	9600	27.2	up to	8783	40
up to	14400	53.4	up to	10166	50
up to	19200	73.7	up to	11469	60
up to	24000	83.6	up to	13167	70
up to	28800	87.1	up to	15329	80
up to	33600	93.5	up to	17604	90

Notes: Calculations based on: \*Survey data (2017); \*\*Data from Bulgarian NSI (Household Budget Survey, Monetary Income by Source and Decile Groups, 2017).

### 3.2. Economic (business) activity of the returning migrants

One of the most important issues in the research literature is that of the utilization of monetary funds received from abroad. Typically, the information on the usage of the migrant remittances is derived from sample questionnaire surveys (Mihailov, et al., 2007; Mintchev, Boshnakov, 2006; Mintchev, et al., 2016; Boshnakov, et al., 2016). Such information has been obtained from the study conducted at the end of 2017, when over 600 returnees have been interviewed in Bulgaria.

In almost 1/2 of the cases (48.5%) the respondents indicate that they have used the funds received from return migrants for some home improvement. In 38.6% of the cases, the remitted funds have provided financial support to their relatives who have remained at home. "Purchase of a place to live" comes third (13%). One in ten persons prefers to secure the savings. The option of "starting my own business" is quoted in nearly 7% of the cases (Figure 6). While it is not among the most popular options for utilizing funds remitted by the remigrants, "own business" is a sufficiently visible option for the returning individuals and their relatives.

Among those who have launched their "own business", the development of trading outlets (35.7%) was not the only option – other alternatives were also indicated, like opening an apparel store, cafeteria, cosmetics store, etc., but also production establishments in manufacturing (23.8%), e.g. manufacturing of furniture, doors and windows. Investments in various types of services (21.4%) and transportation (11.9%) are also frequent (Figure 7).

In the majority of cases (52.4%), those developing own business, have no hired employees; their business is based on "self-employment" (especially widespread in the cases of transportation and hairdressers' services, for example). "Up to 3 hired employees" is quoted by 1/4 of the respondents, and "from 3 to 9 employees" – by 19%. Only 1 respondent has stated that he has employed more than 10 people in business (Figure 8). It seems obvious that

this is not a case of mass development of sustainable businesses and of attracting investments into the country of origin, but of mere survival of the households whose members are engaged predominantly in circular or seasonal migration.

Figure 6

Usage of the remittances transferred by the re-migrants during their stay abroad

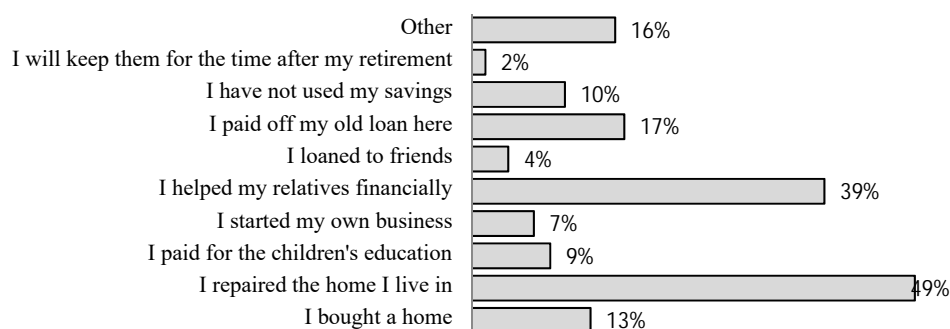


Figure 7

Areas of the business initiatives of remigrants after their return to this country

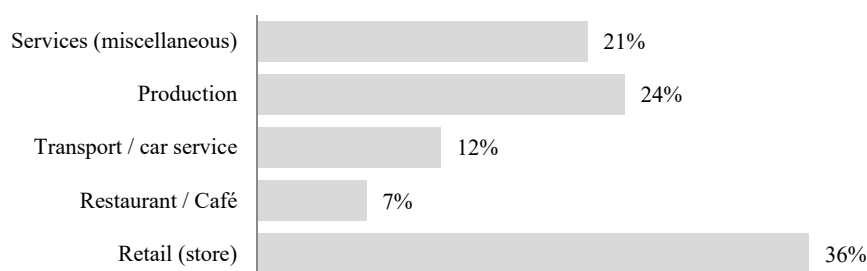
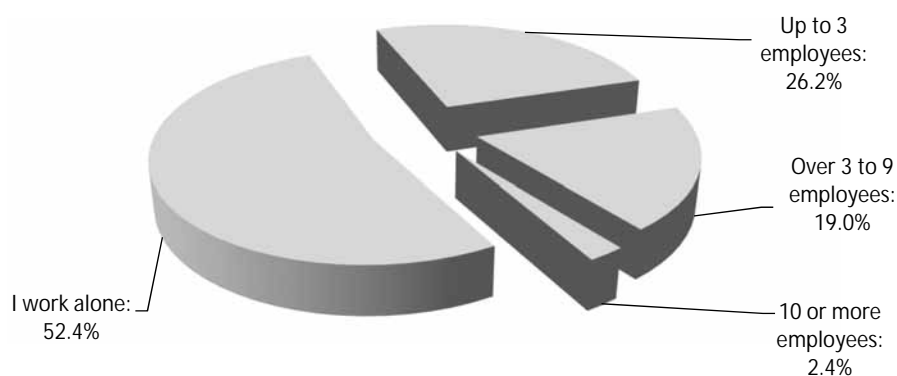


Figure 8

Numbers of employees in enterprises, established by re-migrants



#### 4. Determinants of the Inclination of Migrants to Provide Support at Home

In addition to the descriptive analysis of the interactions among the attributes of the socio-demographic profile of returned migrants and the actual provision of support to their relatives, this study aims to identify which of those characteristics reveal statistically significant effects on the probability for any Bulgarian migrant to have rendered such support while working abroad. For this purpose, a model of binary logistic regression is built and estimated using the sample data. This approach is feasible here because a binary result is recorded when responding to the question “Did you provide support to members of your family/relatives/friends, who live in Bulgaria?” (1 – “yes”; 0 – “no”). The binary logistic regression model has the following general form:

$$\ln\left(\frac{\pi[Y = 1]}{\pi[Y = 0]}\right) = \ln\left(\frac{\pi[Y = 1]}{1 - \pi[Y = 1]}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon$$

The empirical results from the estimated model provide indications about those variables, which have a statistically significant effect on the probability  $\pi[Y=1]$  for a given respondent to be classified into group “1” (i.e. who have provided support to relatives), unlike  $\pi[Y=0]$  for being classified into group “0” (have not provided support). Generally, the parameters of such a model can be estimated by the maximum likelihood method using random sample data (Green, 2003).

In order to estimate the logistic regression model, it is necessary to define a range of independent variables which are expected to have a significant impact on the actual support of relatives in Bulgaria during their stay abroad. Each potential determinant is presented by one or more binary “dummy” variables (each of them encoded as 0 or 1). For the purposes of interpretation of the results, a “reference group” of respondents is defined in order to serve as a basis for comparison of the result obtained for any other group of respondents indicated by the target dummy variable. Table 8 provides information on each socio-demographic characteristic of the respondents and their migration experience, together with the range of independent binary (dummy) variables, specifically created for inclusion of the respective determinant into the binary logistic regression model.

Of special interest for the analysis of the determinants is the migration experience captured in the framework of the survey instrument by several characteristics. It is expected that the differences among the respondents in regard to these variables would have a significant influence on the attitude (and/or the possibility) for the migrants to provide support to their relatives in Bulgaria during their stay abroad. The characteristics selected for input into the model are:

- Duration of the stay abroad (total sum of all periods of stay abroad) – differentiation is adopted between respondents who have stayed for a short time (up to 12 months) from those who have stayed for: (a) over 1 up to 3 years; (b) over 3 years.
- Presence of relatives or other kin abroad (reflects the potential involvement of the respondent in migrants’ networks).

- Work under official labour contract (reflects the occupation of a legal job).
- Successs in saving a portion of the earnings (expected to reflect the intentional behaviour towards generation of remittances).

Table 8

Determinants of the probability for support of relatives/family in Bulgaria during the stay abroad

Determinants	Variables in the model
<b><i>Socio-demographic profile</i></b>	
Gender	female (1 – female; 0 – male) Reference category: <u>males</u>
Age	age30 (1 – age up to 30 years old; 0 – other) age3140 (1 – age 31-40 years old; 0 – other) age4150 (1 – age 41-50 years old; 0 – other) age5160 (1 – age 51-60 years old; 0 – other) Reference category: respondents <u>over 60 years old</u>
Education level	basic (1 – primary or lower; 0 – other) secgen (1 – secondary general; 0 – other) secvoc (1 – secondary vocational; 0 – other) Reference category: <u>tertiary educated</u> respondents
Family status	married (1 – married; 0 – other) Reference category: respondents <u>who never married</u> , divorced or widowed
Children living in the household	children (1 – yes; 0 – no) Reference category: respondents from <u>households without children</u>
Ethnicity	Turkish (1 – Turkish; 0 – other) Roma (1 – Roma; 0 – other) Reference category: <u>Bulgarian</u> or other
<b><i>Migration experience</i></b>	
Presence of relatives/ friends abroad	famfriends_ab (1 – yes; 0 – no) Reference category: respondents, who <u>have no kin (relatives, friends) abroad</u>
Duration of the stay abroad	Length 3.2 (1 – duration from 1 to 3 years; 0 – other) Length 3.3 (1 – duration over 3 years.; 0 – other) Reference category: respondents with a total duration of the stay abroad <u>of up to 1 year</u>
Work based on labour contract (during the stay abroad)	labcontr (1 – yes; 0 – no) Reference category: respondents, who worked abroad but <u>having no official labour contract</u>
Saving of portion of the earnings	saving (1 – yes; 0 – no) Reference category: respondents, who declare that they were <u>unable to save money</u> during the period of working abroad

The results of the estimated model are presented on Table 9.

Table 9

Results from the binary logistic regression model

Dependent variable: Provision of support to relatives / family in Bulgaria during the stay abroad (1 – yes; 0 – no)

Variables	B	Exp[B]
Gender (females)	-0.223	0.800
Age (up to 30 years old)	-1.207 ***	0.299
Age (31-40 years old)	-0.960 ***	0.383
Age (41-50 years old)	-0.103	0.902
Age (51-60 years old)	0.147	1.159
Education completed (primary or lower)	0.889 ***	2.433
Education completed (secondary general)	0.771 ***	2.162
Education completed (secondary vocational)	0.690 ***	1.995
Family status (married)	0.059	1.060
Children living in the household (yes)	0.632 ***	1.882
Ethnicity (Turkish)	-0.484	0.617
Ethnicity (Roma)	0.476	1.610
Presence of relatives abroad	-0.297	0.743
Duration of the stay (1-3 years)	0.521 **	1.683
Duration of the stay (over 3 years)	0.749 ***	2.114
Work under labour contract (yes)	0.508 **	1.661
Saving of portion of the earnings	0.427 **	1.533
Intercept (beta-0)	-0.812 **	0.444
№ of observations	604	
Nagelkerke R square	0.213	

Note: The critical level of significance of the Wald test: \* 0.10; \*\* 0.05; \*\*\* 0.01. Exp[B] measures the odds ratio: the likelihood of classification into group 1 (provided support) compared to that for group 0 (did not provide support).

Source: Authors' calculations.

#### 4.1. Socio-demographic profile

In regard to half (three) of the variables included to take into account the potential influence of the socio-demographic profile, no statistically significant effect is established on the probability of “supporting relatives at home“.

- Under equal other conditions, gender has no connection to the declared support of relatives/family in Bulgaria by the migrants during their stays abroad (the empirical level of significance of the parameter estimate for the respective variable exceeds the maximum threshold of 0.10). A conclusion can be drawn that the (lack of) support to relatives/family in Bulgaria during the stay abroad does not differ substantially for women compared to men.
- No statistically significant effect on the support to relatives in Bulgaria is identified for neither family status nor ethnicity: (a) married migrants do not differ from the single ones; (b) there are no significant differences between representatives of Turkish or Roma communities, compared to the reference group (Bulgarian).



Significant dependencies are found in regard to the other three characteristics.

- Significant differences are registered between the young and the oldest of migrants (reference category: 60+ years old), particularly for the respondents in the age intervals of “up to 30” and “31-40” years old. The negative signs indicate a much lower odds ratio of those classified into group 1 (i.e. supporting their relatives in Bulgaria), compared to those classified into group 0 (i.e. not supporting) among persons up to 40 years old, compared to the oldest ones. Furthermore, the  $\text{Exp}[B]$  value for the age group of “up to 30” years old is about 0.3, which indicates an odds ratio for the youngest returnees much lower than the ratio for the oldest ones (that value for the age group “31-40” years old is 0.38). On average, less frequent practices of supporting the relatives in Bulgaria are identified among migrants of younger age, compared to those of older age. The coefficients for the age intervals of “41-50” and “51-60” years old are statistically insignificant, i.e. the individuals of and above middle age do not differ substantially from the oldest ones in terms of the practices for supporting their acquaintances at home (more frequently, compared to those among young migrants).
- Concerning the “children living in the migrant’s household” variable, a clear-cut result is obtained – a positive and very significant coefficient. Its transformed value (1.88) shows that the odds ratio for persons in households with children is in a proportion of about 65:35 compared to that for persons with no children. This result clearly shows (under equal other conditions) that the practices of supporting relatives in Bulgaria during a migrant’s stay abroad among persons from households with children are much more frequent than the practices among those with no children, which conforms to the initial expectations.
- Statistically significant effects are obtained in regard to the impact of three education variables – primary, secondary general, secondary vocational. This indicates that persons having no higher education differ substantially from those in the reference category (with higher education) in terms of the practices for supporting relatives in Bulgaria. The positive sign indicates a higher odds ratio among persons of lower education compared to the better-educated ones. The figure of over 2 for the value of  $\text{Exp}[B]$  indicates that for lower-educated migrants, the ratio between the probabilities of indicating “support” and “lack of support” is more than double the same ratio assessed for persons with higher education.

#### 4.2. Migration experience

The expected effect on the probability of providing support to relatives in Bulgaria is not found only for one of the four variables (“presence of relatives or close friends abroad”) included into the model for taking into account the migration experience of the respondents. Therefore, under equal other conditions, no significant difference is estimated between the odds ratios for returnees having personal contacts abroad, compared to those with no such contacts. The three remaining characteristics of the migration experience demonstrate the expected effects on the practices of support to relatives/kin in Bulgaria.

- A significant net interaction, under equal other conditions, is found between the practices for supporting those left in Bulgaria and for saving money during the stay abroad. The estimated positive and very significant parameter estimate (with the transformed value of  $\text{Exp}[B]=1.53$ ) shows that the odds ratio for persons who succeed to save a portion of their earnings abroad is over 50% higher than the ratio among persons without any savings abroad. Clear empirical evidence is found in support of the statement that the re-migrants who have been saving while abroad, are much more frequently responding “supported relatives/family in Bulgaria” than those who have been unable to save while abroad.
- Even stronger result is estimated in respect of the duration of stay – when comparing migrants who have resided abroad for a total duration of the stays from 1 to 3 years with those in the reference group (short-term stays of up to 1 year), the estimated odds ratio is 1.68 higher than the one among individuals staying for a short period (up to 1 year). The odds ratio is even higher (above 2.1) among individuals staying abroad for longer periods of time (over 3 years) in comparison to those staying for short periods, i.e. the persons having short migration experience. For migrants with extensive migration experience, the ratio of the probability of supporting their relatives in Bulgaria during their stay abroad, compared with the probability of not doing so, is about double the similar ratio of probabilities among the migrants with short migration experience.
- The third factor originating from the migration experience is the work under an official labour contract abroad. The estimated positive and strongly significant coefficient (with a transformed value of  $\text{Exp}[B]=1.66$ ) indicates that the odds ratio for persons who have worked under a labour contract abroad, is about 2/3 higher than that among persons who have worked without such a contract. The model provides clear empirical evidence that the returned migrants with legal jobs abroad much more often responded that “support relatives/family in Bulgaria” compared to those with no official labour contract.

## 5. Conclusion

The effects of the workers’ remittances of emigrants are multi-faceted. They can be assessed at macro-level using data from the balance of payments of the countries under review, as well as on micro-level using information from sample surveys. Bulgaria is among the top 10 countries of Eastern Europe and the post-Soviet area by amounts of compensation of employees abroad and workers’ remittances transferred by the emigrants. However, the relative share of the workers’ remittances in the GDP of the country is up to 3.5% – significantly lower than the shares of remittances in countries like Albania and Bosnia and Herzegovina (9-10%), but higher than in Greece and Romania (1-2%). It should be underlined that over the last decade, the remittances received from emigrants significantly exceed the foreign direct investments in the country.

The profile of the returning migrants who have supported their relatives (and have sent most frequently remittances during their stay abroad) is a specific one. Those are mainly individuals who have stayed abroad for lengthy periods of time (between 1 and 3 and for more than 3 years), with rather modest incomes and lower education. They are typically older, married, and have children. While the re-migrants who have less often supported their

relatives in Bulgaria are their “exact opposite”. They tend to be younger (up to 40 years old), with a superior education degree (secondary vocational or higher education) and relatively higher incomes. They are typically single and stay abroad for periods of less than 1 year.

The businesses, which returning migrants and their families are oriented to, most often imply “self-employment” (e.g. small retail outlets, taxi services, cafeterias/restaurants, hairdresser shops, etc.). Gradually, small and medium-sized enterprises for manufacturing of clothes, furniture, etc., proliferate. The profile of the re-migrants who more actively support their relatives, as well as the types of business which they aim to develop, indicate that these are cases of predominantly circular/seasonal migration, due to which many households in the country generate funds just to maintain an acceptable living standard.

## References

- Bakalova, M., Misheva, M. (2018). Explanations of economic rationality challenged: Contemporary return migration to Bulgaria. – *Ikonomicheski Izsledvania*, Vol. 27, N 2, pp. 80-101.
- BNB. (2015). Methodological notes on the construction of the Balance of Payments of Bulgaria (According to the 6<sup>th</sup> edition of the IMF "BoP and IIP Manual"). Sofia: Bulgarian National Bank. [БНБ. (2015). Методологически бележки по съставяне на платежния баланс на България (съгласно шестото издание на Ръководството по платежен баланс и международната инвестиционна позиция)]. Българска народна банка, София].
- Boshnakov, V. (2019). Future plans of Bulgarian circular migrants: Empirical evidence from bus travellers. – *Ikonomicheski Izsledvania*, Vol. 28, N 1, pp. 80-94.
- Boshnakov, V., Mintchev, V., Shopov, G., Kaltchev, I. (2016). Migration of Bulgarian population – characteristics and relations to the regional socio-economic disparities. – *Ikonomicheski Izsledvania*, Vol. 25, N 5, pp. 45-78.
- Bourdet, Y., Falck, H. (2006). Emigrants' remittances and Dutch Disease in Cape Verde. – *International Economic Journal*, Vol. 20, N 3, pp. 267-284.
- Christova-Balkanska, I., Mintchev, V. (2012). Monetary remittances and income (empirical evidence from return migrants and Bulgarians residing in Spain). – In: Mintchev, V. et al. *Bulgarian Emigration: Theories, Policies, Empirical Studies*. Sofia: “Ikopis”, pp. 221-246. [Христова-Балканска, И., Минчев, В. (2012). Парични трансфери и доходи (емпирични свидетелства на примера на завърналите се емигранти и на българите в Испания). – В: Минчев, В., и др., *Българската емиграция: Теории, политики, емпирични изследвания*. София: Изд. „Икопис“, с. 221-246].
- De Haas, H., Fokkema, T., Fihri, M. F. (2015). Return migration as failure or success? The determinants of return migration intentions among Moroccan migrants in Europe. – *Journal of International Migration and Integration*, Vol. 16, N 2, pp. 415-429.
- Gittins, T., Fink, M. (2015). Return migration, informal learning, human capital development and SME internationalization in the CEE region: A systematic literature review. – *Journal of East European Management Studies*, Vol. 20, N 3, pp. 279-303.
- Greene, W. H. (2003). *Econometric Analysis*. Upper Saddle River, NJ: Pearson Education Inc. (Ch.21.3 “Models for binary choice”, pp.665-668).
- IMF. (2013). *Balance of Payments and International Investment Position Manual*. 6<sup>th</sup> edition. Washington DC: International Monetary Fund.
- Ivanova, V. (2012). Return migration: Existing policies and practices in Bulgaria. – In: *Welcome Home? Challenges and Chances of Return Migration*. Transatlantic Forum on Migration and Integration. Sofia: “Maria Arabadjieva” Printing House, pp. 8-18.

- Mansoor, A., Quillin, B. (eds.). (2006). *Migration and Remittances: Eastern Europe and the Former Soviet Union*. Washington, DC: The World Bank.
- Mihailov, D., Mintchev, V., Boshnakov, V., Nikolova, K. (2007). *Family Models and Migration*. Sofia: UNDP and Centre for Comparative Studies. [Михайлов, Д., Минчев, В., Бошнаков, В., Николова, Кр. (2007). Семейни модели и миграция. Фонд на ООН за население и Център за сравнителни изследвания, София.].
- Mintchev, V. (2009). International migration and remittances in the Balkans: The case of Bulgaria. – In: Nowotny E., Mooslechner, P., Ritzberger-Grunwald, D. (eds.). *The Integration of European Labour Markets*. Edward Elgar, p.177-205.
- Mintchev, V., Boshnakov, V. (2006). The Economics of Bulgarian Emigration – Empirical Assessment. – *Economic Thought*, Vol. 51, N 7, pp. 134-161.
- Mintchev, V., Boshnakov, V. (2018). The Choice of Bulgarian Migrants – Stay or Leave Again?. – *Ikonomicheski Izsledvania*, Vol. 27, N 2, pp. 45-64.
- Mintchev, V., Boshnakov, V., Richter, M., Ruspini, P. (2016b). Determinants of migration and types of migration and mobility. – In: Nollert, M. et al. (eds.). *Migration and Transnationalism Between Switzerland and Bulgaria*, Springer International Publishing, pp. 25-60.
- Mintchev, V., Markova, E., Misheva, M., Zareva, I., Christova-Balkanska, I., Kaltchev, I., Boshnakov, V. (2012). *Bulgarian Emigration: Theories, Policies, Empirical Studies*. Sofia: “Ikopis”. [Минчев, В., Маркова, Е., Мишева, М., Зарева, И., Балканска, И., Бошнаков, В., Калчев, Й. (2012). Българската емиграция: Теории, политики, емпирични изследвания. София: Изд. „Икопис“].
- Mintchev, V., Shopov, G., Kaltchev, I., Boshnakov, V. (2016a). Migration of Bulgarian Population – Characteristics and Relations to Regional Socio-Economic Disparities. – *Ikonomicheski Izsledvania*, Vol. 25, N 5, pp. 45-79.
- Nonchev, A. (2019). The remigration: Causes and sustainability (the Bulgarian case). – *Ikonomicheski Izsledvania*, Vol. 28, N 1, pp. 72-79.
- Nonchev, A., Hristova, M. (2018). Segmentation of Returning Migrants. – *Ikonomicheski Izsledvania*, Vol. 27, N 2, pp. 3-24.
- Quillin, B., Segni, C., Sirtaine, S., Skamnoslos, I. (2007). Remittances in the CIS countries: A Study of Selected Corridors. – WB Chief Economist’s Working Paper Series, Europe and Central Asia Finance and Private Sector Development Department, Vol. 2, N 2.
- WBG. (2019). *Migration and Remittances, April 2019: Recent Developments and Outlook*. Migration and Development Brief No. 31. Washington, DC: The World Bank Group and Knomad.
- Xenogiani, T. (2006). *Migration Policy and its Interactions with Aid, Trade, and Foreign Direct Investment Policies: A Background Paper*. – OECD Development Centre Working Papers 249, OECD Publishing.
- Zareva, I. (2018a). Policies for encouraging the return of Bulgarian migrants to Bulgaria. – *Ikonomicheski Izsledvania*, Vol. 27, N 2, pp. 65-79.
- Zareva, I. (2018b). Returning migrants – Effects on the labour market in Bulgaria. – *Ikonomicheski Izsledvania*, Vol. 27, N 2, pp. 102-114.
- Zareva, I. (2019). Participation of returning migrants in the labour market in Bulgaria. – *Ikonomicheski Izsledvania*, Vol. 28, N 1, pp. 95-104.
- Zareva, I. (2021). (Re) Integration of Returning Migrants into the Economic Life in Bulgaria. – *Ikonomicheski Izsledvania*, Vol. 30, N 1, pp. 19-34.