



## Simulation of a voucher policy for improving the social conditions of individual remittance receivers in Macedonia

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In 2012, with support of the UK Department for international Development (DfID or UK Aid) and the International Development Research Centre (IDRC) of Canada, PEP launched a new program to support and build capacities in “Policy Analyses on Growth and Employment” (PAGE) in developing countries.

This brief summarizes the main features and outcomes of one of the projects supported under the 2<sup>nd</sup> round of the PAGE initiative (2014-2015).

### Local researchers aim to assess the potential use of remittances as a source of social protection in Macedonia

#### Poverty and remittances in Macedonia

With unemployment and poverty rates at 29% and 27%, respectively, in 2014, the Macedonian economy currently faces critical challenges in terms of socioeconomic development, sustainability and welfare. Only 9% of the country’s households receive formal social assistance from the government, which contributes to reduce poverty incidence by only 3%. A recent study (Mojsoska et al., 2013) even suggests that such assistance may trigger inactivity amidst recipient households.

On the other hand, Macedonia receives at least USD 400 million in the form of cash remittances, annually, representing about 4% of GDP, which is comparable to the inflow of foreign direct investments (FDIs). However, while FDIs have largely fluctuated over the years – with the top years being driven by the privatization of large-scale public utilities – the inflow of remittances has remained mostly stable. The average amount received per capita, annually, is USD 1,200, making remittances an important input to the living standards of the country’s poor (largely those in the first two quintiles of the income



distribution), who use over 90% of the remitted money to finance their personal consumption.

Unfortunately, remittances are not taken into account in the standard national surveys and policies. Indeed, at least half of them are usually sent through unofficial and/or unregistered channels (Petreski and Jovnanovic, 2013).

Considering the uncharted potential of their contribution to the support of living conditions, a question emerges regarding **the extent to which remittances may serve as informal social protection for left-behind households.**

Hence, the two objectives of this study are:

1. to investigate if and to what extent remittances improve individual social indicators; and
2. to devise and ex-ante simulate the effects of a specific policy instrument, the Remittances’ Voucher policy, for converting remittances into a formal mechanism for social protection.

**Table 1: Shares of remittances by income group**

Quintiles of population	Average remittance received per capita/month (MKD)	Average share (%) of remittances spent in personal consumption
Lowest 20%	2,237	90.9
Low-mid 20%	4,670	96.8
Mid 20%	4,419	70.2
Up-mid 20%	7,277	71.7
Upper 20%	4,804	17.5

Source: Authors’ calculations based on DotM Survey

## Data and methodology

The researchers use data from the DotM 2008 Remittance Survey, collected from a sample of 1,211 households (total of 4,173 individuals) in Macedonia, fully representative in terms of the country's regions, as well as gender and ethnicities. The Survey in fact comprises information about the demographic and social characteristics of the household and its members, as well as social indicators such as income, health status, housing and living conditions, and material deprivation.

A set of two estimation methods is applied to the data. First, a six-stage system of equations is estimated through a conditional mixed-process estimator. Through this system, the migration rate per region is used to instrument remittances. Then, remittances are allowed to determine consumption, which in turn determine the health

condition of a person. The researchers use the same system of six equations to simulate the effects of the Remittances' Voucher (RV) policy, as described below.

In a second step, the Remittances' Voucher policy was devised as follow: each individual who is unemployed (i.e. has no labour income), and who receives remittances through official channels, obtains a voucher from the government in the value of the average consumption on health and medicines, on the condition that he/she puts 6% of the remitted money in a pension savings account. The researchers then use an ex-ante simulation method to assess the effects of the RV system, by imposing shocks onto remittances and consumption; the six-stage equation system is then applied to estimate the effects on the series of social condition indicators.

## Key findings

Results of the analysis indeed confirm the initial assumption that **remittances serve as an informal source of social protection in Macedonia**.

- For each additional denar (country currency) received in remittances, individual health consumption is increased by 0.2 denar (20%), while general consumption (excluding health) is increased by 0.6 denar (60%).
- Also, an additional denar spent in health consumption reduces the probability of "bad health" status by 0.17%.

However small they may seem, these coefficients imply that, if remittances increase of 2,000 denars (see table 1, page 1), then the receiver's overall consumption increase of 1,176 denars, and his/her health consumption of 370 denars, which in turn reduces the probability of bad health by a sizeable 63%.

Results also show that **the RV Policy has social effects on the remittance receivers**:

- On the one hand, the entitlement to health protection (voucher only) contributes to improving their health status, as the share of bad health drops by 0.5%, and consumption, which contributes to reducing poverty by 1.4%.

**Table 2: Social effects of RV policy**

Simulation	Poverty	Bad health
- with voucher only	(1.4)	(0.5)
- with saving only	0.5	6.7
- with voucher policy	0.0	(0.2)

Source: Authors' calculations.

Note: A negative value means that the respective indicator declines, which is a positive movement, and vice versa

- On the other hand, the obligation to set aside a share of the remitted money for pension insurance (saving only) reduces current consumption, which has a fairly large detrimental effect as poverty increases by 0.5%.

The overall effect of the full RV policy (combining voucher and saving) is estimated to improve health conditions by 0.2%, but keeping poverty intact (with the effects of the voucher and saving components offsetting one another).

The effect has been found even stronger for the most vulnerable groups, including female, rural, young remittance receivers in Macedonia (see table 3, below).

Finally, according to the research results, remittances do not channel into any significant effect for the housing conditions and material deprivation.

**Table 3: Effect of the RV policy on the social indicators of receivers, by population groups**

	Gender		Geography		Age		Ethnicity	
	Males	Females	Urban	Rural	Young	Non-young	Macedonian	Albanian
<b>Poverty</b>								
<b>RV policy effect</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Health condition</b>								
<b>RV policy effect</b>	(0.1)	(0.8)	(0.4)	(0.7)	(1.7)	(0.6)	(0.7)	(0.3)
Observations	62	91	104	49	25	132	115	38

Source: Authors' calculations

Note: A negative value means that the respective indicator declines, which is a positive movement, and vice versa.

## Implications and recommendations for policy

The main recommendation ensued from this study's findings is for the government to introduce the Remittances' Voucher (RV) policy, as a means to framing remittances into a formal source or mechanism of social protection. Indeed, the potential benefits of such a policy instrument are manifold:

For the remittance receivers:

- It can provide formal social protection - including both health and pension protection, which may in turn increase receivers' eligibility for other public or private forms of financing, and thus support indirectly their social inclusion;
- It may also contribute to supporting receivers' financial literacy, as the voucher allocation is conditional to receiving the remitted funds through, and interacting with, a financial institution;
- In the long run, and overall, it may contribute to a more productive and healthier population, and even to extending life expectancy.

For the government:

- It reduces the incidence of social vulnerability and exclusion;
- It may reduce the amount spent on social assistance, given that some social assistance beneficiaries may also be remittance receiver;
- Despite some costs, it does not require cash payments and can help improve targeting of vulnerable groups, which may contribute to reducing the pressure on some social items of the national budget.

For the overall economy:

- It provides better information on the amounts of remittances entering the economy, by encouraging the use of financial institutions and thus minimizing the share sent through informal channels;
- The use of financial institutions and pension fund may steer and thus further increase savings;
- Finally, both larger savings and better social inclusion may contribute to increasing investments, such as in entrepreneurial activities, and hence securing their self-sufficiency in the mid-long run.

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**To find out more about the research methods and findings, read the [full paper](#) (forthcoming)**