

## Forecasting the size and effects of emigration and remittances

### Analysis of results for Albania

#### 1. Analysis of expert opinions

For the purpose of this analysis, we gathered the opinions of 10 experts on macroeconomics, development economics, and banking in Albania. The group, in particular, was made of: three university professors, four representatives of research institutes, one representative from local government and two representatives of the commercial banks.

In Table 1, we show the results from the survey run among experts in two rounds. Overall, Albanian experts expressed a strong consensus of 70%. Looking across answers, experts' consensus reached the highest value regarding the amount of remittances (82%) and the lowest on the size of emigration (47%). The average consensus slightly improved in the second round, by 1.18%, but with strong variations as regards the quantitative variables, namely, the experts' consensus increased on the size of emigration but decreased on the amount of remittances.

**Table 1 – Consensus among experts**

	Amount of remittances	Size of emigration	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market	Average consensus
<b>I round</b>	82.08%	47.29%	79.30%	74.18%	68.38%	68.38%	<b>69.93%</b>
<b>II round</b>	76.31%	52.21%	79.30%	74.18%	74.18%	68.38%	<b>70.76%</b>
<b>Consensus improvement</b>	<b>-7.03%</b>	<b>10.40%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>8.49%</b>	<b>0.00%</b>	<b>1.18%</b>

*Source: Authors' calculations.*  
*Note: The consensus is based on the coefficient of variation.*

Given the already high consensus in the first round and despite its slight improvement in the second round, we decided to terminate the Delphi survey after the second round (i.e. conduct only a third cross-samples round, as we discuss in Section 3). Based on this decision, in Table 2 we present the expert-based forecast results obtained through the Delphi survey:

**Table 2 – Results of the forecasting exercise – experts**

	Amount of remittances (million EURO)	Size of emigration (number of people)	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market
<b>I round</b>	428	48,600	70%	60%	50%	50%
<b>Forecasted answer after round I</b>	34.9% decrease in remittances inflow in 5 years	33.4% reduction of emigration in 5 years	Negative, because more educated depart, impairing the medium-term economic prospects	The effect of remittances for poverty reduction will become weaker	Remittances will be further mainly used for current consumption, i.e. for food, bills and clothes	Remittances may be stable, but one must use it for establishing own business, until they flow in
<b>II round</b>	510	50,800	70%	60%	60%	50%
<b>Forecasted answer after round II</b>	22.4% decrease in remittances inflow in 5 years	30.4% reduction of emigration in 5 years	Negative, because more educated depart, impairing the medium-term economic prospects	The effect of remittances for poverty reduction will become weaker	Remittances will be further mainly used for current consumption, i.e. for food, bills and clothes	Remittances may be stable, but one must use it for establishing own business, until they flow in

*Source: Authors' calculations.*

Table 2 indicates that between the two rounds, experts forecasted lower amounts of remittances compared to the suggested value of 657 million EURO (about 35% decrease or 428 million EURO in the first round) and revised their forecast in the second round by increasing them to 510 million EURO. A similar trend emerged from the forecast of the size of emigration: experts agreed that the size of emigration will decrease by 33% (from the current annual value of 73,000) by 2021 (48,600 emigrants), and then revised their forecast to the level of 50,800 emigrants in the second round.

The next four questions were categorical ones, so that we present the answer which got the largest share of responses. The share of respondents forecasting that the effect of emigration for the society will be negative because more educated depart, impairing the medium-term economic prospects, remained large and invariable, at 70% in both rounds. When forecasting the effect of remittances on poverty, the highest share of responses (60%) fell on “a weaker effect”; again this share remained unchanged in the second round. When asked on the remittances usage, while 50% of the experts agreed that remittances will be further spent on every-day consumption, in the second round the consensus on this response reached 60%. The last question brought similar case as the fourth question. Some uncertainty shed experts in the first round, where narrow majority of 50% agreed that remittances may be stable, but need to be used for establishing new businesses. Again, this uncertainty remained constant in the second round.

So, results of the forecasting exercise show slight changes in consensus but stable answers across the categorical questions.

Table 3 presents some tests of stability of the responses between the two rounds. According to the t-test and the Wilcoxon test, means and proportions have not changed between rounds in a statistically

meaningful manner, supporting results' stability. An exception is the stability of the answer related to remittances' among, whereby stability was not maintained.

**Table 3 – Tests of results' stability – experts**

	Amount of remittances (million USD)	Size of emigration (number of people)	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market
<b>T-test of paired samples</b> (H0: Sample means are the same / Sample proportions are the same)	0.09	0.85	0.26	0.72	0.79	0.59
<b>Wilcoxon signed-rank test / Two-tailed test</b> (H0: The two samples follow the same distribution)	0.08	0.72				
<b>Share of individual responses maintained between rounds</b>	60%	80%	70%	50%	60%	80%

*Source: Authors' calculations*

*Note: The share of individual responses between the rounds is calculated as follows: i) for the continuous variable, by considering a maintained result to be if it falls within +/- one standard deviation of the mean in the previous round; ii) for the categorical variables, if the respondent answered the same option.*

Overall, experts forecast that by 2021, both remittances and the emigration size will decrease. They forecast that emigration will exert negative influence onto society and economy as more educated departs and their alleviating effect on poverty will be weaker. Experts forecast that remittances will be further used for current consumption – food, clothes, bills –but they need to be used also for establishing own business.

## 2. Analysis of remittance-receivers' opinion

We further gathered the opinions of 20 remittance receivers coming from the Elbasan area, mainly from urban area (65 %) and male (65%).

Table 4 presents the results of the survey run among remittance receivers across two rounds: it indicates a satisfactory consensus reached in both rounds. So, the average consensus slightly changed from 73.4% in the first round to 75%. Also, differently from the experts' opinions, the consensus was achieved and remained almost invariable for all the answers.

**Table 4 – Consensus among remittance-receivers**

	Amount of remittances	Size of emigration	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market	Average consensus
<b>I round</b>	56.0%	68.7%	72.6%	83.6%	81.7%	77.6%	73.4%
<b>II round</b>	56.5%	72.3%	77.6%	85.4%	79.8%	77.6%	74.9%
<b>Consensus improvement</b>	0.99%	5.31%	6.92%	2.12%	-2.41%	0.00%	2.05%
<i>Source: Authors' calculations.</i>							
<i>Note: The consensus is based on the coefficient of variation.</i>							

Table 5 gives the forecasts of the remittance receivers. During the first round, receivers forecasted 19.5% decrease in remittances for the forthcoming five years, which was slightly changed downward in the second round corresponding to a final value of 517 million EURO. Receivers forecasted a slight decrease in the emigration size ranging from 3% (1<sup>st</sup> round) to 6% (2<sup>nd</sup> round), figures very distant from what was predicted by the experts (– 32%).

When asked on the effects of migration and remittances on poverty, remittance receivers increased their consensus on the negative effects of migration because of the high skilled migration and the weakening effect of remittances for poverty reduction. On the other hand, a slight decrease in consensus was reached on the use of remittances for consumption goods.

Nevertheless, remittance-receivers share the same majority opinions with the experts on all the categorical answers save for the last question related to remittances effects on the labor market. In fact, if the latter largely agreed that remittances may foster self-employment, the former think that employment may rise, because remittances may reduce or cease one day, so one must continue searching for a job.

Hence, three differences emerge from the comparison of experts and receivers forecast:

- i) receivers are more stable across rounds than experts in predicting remittances decreasing flows;
- ii) receivers forecast a bigger emigration decline compared to experts; and finally
- iii) receivers think that remittances' effects on labor market might be positive for local employment while experts predict positive effect on self-employment.

**Table 5 - Results of the forecasting exercise – receivers**

	Amount of remittances (million USD)	Size of emigration (number of people)	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market
<b>I round</b>	529	70,650	40%	65%	60%	50%
<b>Forecasted answer after round I</b>	19.5 % decrease in remittances inflow in 5 years	3.2 % decrease of emigration in 5 years	Negative, because more educated depart, impairing the medium-term economic prospects	The effect of remittances for poverty reduction will become weaker	Remittances will be further mainly used for current consumption, i.e. for food, bills and clothes	Employment may rise, because remittances may reduce or cease one day, so one must continue searching for a job
<b>II round</b>	517	68,600	50%	70%	55%	50%
<b>Forecasted answer after round II</b>	21.3% decrease in remittances inflow in 5 years	6% decrease of emigration in 5 years	Negative, because more educated depart, impairing the medium-term economic prospects	The effect of remittances for poverty reduction will become weaker	Remittances will be further mainly used for current consumption, i.e. for food, bills and clothes	Employment may rise, because remittances may reduce or cease one day, so one must continue searching for a job
<i>Source: Authors' calculations.</i>						

Table 6, which presents the stability tests for the receivers group, indicates that the stability can be statistically supported in all the questions. However, differently from the experts, they are more likely to persist in their opinions.

**Table 6 – Tests of results’ stability – remittance receivers**

	Amount of remittances (million USD)	Size of emigration (number of people)	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market
<b>T-test of paired samples</b> (H0: Sample means are the same / Sample proportions are the same)	0.87	0.76	0.58	0.82	0.92	1
<b>Wilcoxon signed-rank test / Two-tailed test</b> (H0: The two samples follow the same distribution)	0.14	0.49				
<b>Share of individual responses maintained between rounds</b>	85%	80%	75%	70%	80%	85%
<i>Source: Authors' calculations</i>						
<i>Note: The share of individual responses between the rounds is calculated as follows: i) for the continuous variable, by considering a maintained result to be if it falls within +/- one standard deviation of the mean in the previous round; ii) for the categorical variables, if the respondent answered the same option.</i>						

Overall, receivers think that remittances will decrease in the next five years and therefore their role in reducing poverty will be less important. Also, they believe that while the emigration will keep the same pace, it will bring negative effects to the Albanian society because the best and the brightest will leave the country. Finally, differently from the experts, they predict employment to rise in the future, because remittances may reduce or cease one day, so one must continue searching for a job.

Confronting experts with receivers, we may say that:

- a) in forecasting remittances, experts and remittance-receivers are in agreement on their decreasing trend;
- b) as regards emigration size, experts forecast a considerable reduction, while receivers predict it constant;
- c) both groups agree that the effect of emigration will be negative due to departure of skilled labor;
- d) both groups agree that the role of remittances for poverty reduction will weaken but they will continue to be primarily used for everyday consumption,
- e) finally, experts forecast remittances will support self-employment, while receivers forecast they will trigger labor efforts and employment.

It is possible to bring the forecasts of these groups further close? If yes, how? In the following section, we describe what happened when the opinions experts and remittances receivers were crossed.

### 3. Cross-analysis of changing patterns between the two samples of respondents

In the third final round, uncustomary to the most Delphi studies, we crossed the samples. We offered the second-round forecasts of each group to the other group, and asked them to revise if they want. We present results below.

Table 7 presents the results of the expert opinion in the third round when they were given the remittance-receivers consensual results of the second round. Results suggest that experts agreed with receivers' opinion on all questions except the last one related to the nexus remittances- labor market. So, experts continue to forecast considerable decrease in the future remittances flows but revised their forecast as regards emigration flows reporting lower reduction in emigration size. When asked about the qualitative variables, experts kept reporting the same answers except the last one. In effect, they deem that diminishing flows of future remittances may bring positive effect on both, self-employment and labor efforts.

Therefore, we may say that experts were affected by receivers' answers only as regards emigration size and the labor market consequences coming from the reduction of remittances.

Table 7 – Experts' opinion on receivers' consensual responses						
	Amount of remittances (million USD)	Size of emigration (number of people)	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market
<b>Round II, receivers</b>	56.52%	72.31%	77.64%	85.36%	79.77%	77.64%
<b>Round II, experts</b>	76.31%	52.21%	79.30%	74.18%	74.18%	68.38%
<b>Round III, experts</b>	81.24%	79.53%	79.30%	79.30%	74.18%	61.27%
<b>Does consensus increase?</b>	YES	YES	Constant	YES	Constant	NO
Results						
<b>Round II, receivers</b>	-21.31%	-6.03%	Negative, educated depart	Will become weaker	Mainly used for current consumption	Increasing labor efforts
<b>Round II, experts</b>	-22.37%	-30.41%	Negative, educated depart	Will become weaker	Mainly used for current consumption	Establishing own business
<b>Round III, experts</b>	-28.16%	-17.66%	Negative, educated depart	Will become weaker	Mainly used for current consumption	Establishing own business/Increasing labor efforts
<i>Source: Authors' calculations.</i>						

Table 8 presents the results of the receivers' opinion in the third round when they were given the experts consensual results of the second round. What this table shows is that receivers were affected by the experts' opinions especially on the issue of emigration size and labor market consequences of

remittances. As such, they revised and aligned their forecast on emigration flows to experts' opinion by forecasting a decrease of 26% rather than 6%. Likewise remittance-receivers came closer to experts' opinions on the labor market consequence and opted for the experts' option of self-employment.

**Table 8 – Receivers' opinion on receivers' consensual responses**

	Amount of remittances (million USD)	Size of emigration (number of people)	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market
<b>Round II, experts</b>	76.31%	52.21%	79.30%	74.18%	74.18%	68.38%
<b>Round II, receivers</b>	56.52%	72.31%	77.64%	85.36%	79.77%	77.64%
<b>Round III, receivers</b>	80.92%	67.45%	75.28%	79.77%	77.64%	75.28%
<b>Does consensus increase?</b>	YES	NO	NO	NO	NO	NO
<b>Results</b>						
<b>Round II, experts</b>	-22.37%	-30.41%	Negative, educated depart	Will become weaker	Mainly used for current consumption	Establishing own business
<b>Round II, receivers</b>	-21.31%	-6.03%	Negative, educated depart	Will become weaker	Mainly used for current consumption	Increasing labor efforts
<b>Round III, receivers</b>	-20.85%	-25.99%	Negative, educated depart	Will become weaker	Mainly used for current consumption	Establishing own business/Increasing labor efforts
<i>Source: Authors' calculations.</i>						

Overall, the forecasts suggest that in five-year time, remittances flowing in Albania will likely decline in the amount of 20.9% to 28.2% compared to the current value. Similarly, emigration size will subside by 17.7% to 26% compared to the current value. Despite variations, experts and receivers ultimately reconciled around these forecasts. Both groups maintained their consensual forecasts that the effect of emigration for the society will be negative due to skilled-labor emigration; the effect of remittances for poverty will become weaker; and they will be further used for consumption only. The divergent forecast for remittances' effect on the labor market has been also reconciled so that both groups agreed remittances will support activation through both employment and self-employment.