

Forecasting the size and effects of emigration and remittances

Analysis of results for Kosovo

1. Analysis of experts' opinions

The findings brought by this research project are based on the opinions of 10 economic experts coming from different sectors of the economy. The group of experts consisted of three university professors, two central bankers, two government officials, and three researchers from think tanks.

The experts' opinions show a satisfactory rate of consensus on all issues even in the first round of the survey, except the question on the size of future migration which has the lowest consensus coefficient. The average consensus rate in the first round is 61.5% and increases further to 72% in the second round mostly to the improvement of the consensus rate for the second question (Table 1). The consensus of the experts on the size of future migration increased from 6.1% in the first round to 41.1% in the second round, but still remains the question with the lowest consensus among the experts.

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
I round	70.1%	6.1%	68.4%	79.3%	84.2%	61.3%	61.5%
II round	86.0%	41.1%	68.4%	84.2%	84.2%	68.4%	72.0%
Consensus improvement	22.6%	6 times	0.0%	6.2%	0.0%	11.6%	17.1%

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

The experts expect that remittances, which represent a very important source of financing for the Kosovo's economy, will start to decline in the following years. In the first round, experts forecasted that the amount of remittances in 2021 will be 663 million euro, which would be for 5.3% lower compared to the current level (Table 2). In the second round, they revised their opinion further downward to suggest a decline of 7.1%. Regarding the expected size of migration after 5 years, there was a significant shift on the consensus rate between the two rounds, while the number of expected emigrants did not change much. In the first round of the survey, experts forecasted that the number of Kosovo migrants in 2021 would be 23,000 which is an increase 15% compared to the current level. In the second round, this figure was slightly revised downwards to suggest an increase of 11.5%. The experts' opinions were consistent between the two rounds in suggesting that the expected impact of emigration on Kosovo's economy will be positive in the next five years because the migrants are expected to send remittances. The effect of remittances on poverty is expected to remain as it is, with the number of experts sharing this opinion increasing to 80% in the second round from 70% in the first round. The majority of experts (80% of them) expect that remittances will continue to be used mainly

for current consumption, i.e. for food, bills and clothes. A higher heterogeneity is observed in the experts' opinions regarding the effect of remittances on the labor market. In the first round, 40% of experts shared the opinion that employment may rise because remittances may reduce or cease one day, so one must continue searching for a job, but another 40% expected that remittances will support inactivity, because nobody is willing to work when there is a constant and stable source of money, and the remaining 30% expected that remittances will be used for establishing own businesses. However, the second round marked an increase in the share of experts expecting that employment will rise, which reached at 50%.

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
I round	663	23,000	50%	70%	80%	40%
Forecasted answer after round I	5.3% decline in remittances inflow in 5 years	15.0% increase of emigration in 5 years	Positive, because emigrants send money (remittances) back	The effect of remittances for poverty reduction will remain as it is	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
II round	650	22,300	50%	80%	80%	50%
Forecasted answer after round II	7.1% decline in remittances inflow in 5 years	11.5% increase of emigration in 5 years	Positive, because emigrants send money (remittances) back	The effect of remittances for poverty reduction will remain as it is	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

Source: Authors' calculations.

Table 3 presents the tests for the stability of responses between the two rounds of the survey. According to the t-test and the Wilcoxon test, means and proportions have not changed between rounds in a statistically meaningful manner, suggesting that there was stability in the responses. Similarly, respondents have shown a satisfactory level of responses maintenance between the two rounds in five out of six cases.

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
T-test of paired samples (H0: Sample means are the same / Sample proportions are the same)	0.861	0.923	0.678	0.726	0.840	0.811
Wilcoxon signed-rank test / Two-tailed test (H0: The two samples follow the same distribution)	0.838	0.919				
Share of individual responses maintained between rounds	60%	80%	50%	60%	60%	40%
<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, experts expect that remittances will slightly decline by 2021, while the number of migrants will mark an increase. Despite their expectations for the slight decline of remittances, they share the opinion that the impact of migration will be positive for the economy because migrants will send remittances back, which are expected to continue having the same impact on poverty reduction. Based on the experts’ opinions, remittances will continue to be used mainly for current consumption and are not expected to deter employment because people will continue searching for a job.

2. Analysis of remittance-receivers’ opinion

The other segment of the survey was to gather the opinions of remittance receivers on the same issue as with the experts. The sample consists of 19 households that come from urban and rural areas and are almost equally distributed between women and men.

Similar to experts, remittance receivers showed satisfactory consensus in their responses. The average consensus in the first round was 69.3%, ranging from 42.6% to 78.2%. The second round of the survey showed consensus improvement on all the questions. The average consensus rate in the second round reached at 77%, ranging from 57.6% to 84.4%. Overall, households showed to have a higher consensus on their responses compared to experts.

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
I round	73.1%	42.6%	75.8%	78.2%	73.1%	73.1%	69.3%
II round	80.8%	57.6%	80.4%	84.4%	80.4%	78.2%	77.0%
Consensus improvement	10.6%	35.1%	6.1%	7.9%	10.0%	7.0%	12.8%

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

Table 5 presents the receivers' expectations on remittances and migration for the next five years. The results collected through the two rounds of the survey show that receivers' responses were highly consistent between the two rounds. The largest share responses remained the same throughout the two rounds, with the second round marking a further increase of the weight of the largest share responses.

Similar to experts, receivers expect that the amount of remittances will decline in the next five years. In the first round, receivers forecasted that the amount of remittances would be stable compared to the actual amount, but in the second round they forecasted that remittances will decline to 653 million, which is by 6.8% lower than the actual amount. Regarding emigration, expectations of experts and receivers moved in opposite directions. While experts forecasted that migration would increase in the next five years, receivers forecasted that migration would decline. Receivers' expectation in the first round suggested that the number of migrants in year 2021 would decline by 10%, which in the second round this figure was revised to 12.4%.

The responses of receivers differ from those of experts also regarding the expected impact of emigration on the society in the next five years. While experts expected that the impact of emigration would be positive because of the expected remittances, the receivers expected that the migration would have a negative impact because the more educated depart. The share of receivers who shared this opinion in the first round was 47% and further increased in the second round to 58%. Similarly, experts and receivers opinions differ with regard to the expected impact of remittances on poverty reduction during the next five years, with experts expecting that the impact will remain as it is now, while receivers expecting that the impact will become stronger.

Receivers' expectations are in line with those of experts when it comes to the usage of remittances and the impact of remittances on the labor market. In the first round, 42% of receivers expected that remittances will continue to be used for basic consumption and, in the second round, the share of receivers who share this opinion increased to 58%. Regarding the impact of remittances on the labor market, receivers expect that remittances will not impair employment because people will continue their search for a job being aware that remittances will be reduced or cease to exist one day.

Table 5 - Results of the forecasting exercise – receivers

	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
I round	700	18,000	47%	53%	42%	42%
Forecasted answer after round I	0.0% change in remittances by year 2021	10.0% decline of migration by year 2021	Negative, because more educated depart, impairing the medium-term economic prospects	The effect of remittances for poverty reduction will become stronger	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
II round	653	17,526	58%	68%	58%	53%
Forecasted answer after round II	6.8% decline in remittances by year 2021	-12.4% decline of migration by year 2021	Negative, because more educated depart, impairing the medium-term economic prospects	The effect of remittances for poverty reduction will become stronger	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>						

Next, table 6 presents the stability tests for the responses of the receivers, which show that receivers have retained their initial responses at quite a high rate and, interestingly, this rate is higher than that of experts for all the questions. However, the statistical stability tests do not support the hypothesis that responses have been statistically stable for the questions on the expected amount of remittances, the effect of remittances on poverty and, at a lower level of statistical significance, for the usage of remittances.

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
T-test of paired samples (H0: Sample means are the same / Sample proportions are the same)	0.067	0.675	0.111	0.031	0.096	1.000
Wilcoxon signed-rank test / Two-tailed test (H0: The two samples follow the same distribution)	0.049	0.975				
Share of individual responses maintained between rounds	78.9%	89.5%	63.2%	68.4%	73.7%	78.9%
<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, remittance receivers expect that both the amount of remittances and the number of migrants will decline in the next five years. According to their opinions, the impact of emigration on the society will be negative because the more educated depart. Regarding remittances, they expect that their impact on poverty alleviation will become stronger, while they will continue to be used mainly for current consumption. The receivers expect that remittances will support employment, because receivers are aware that remittances may decline or cease to exist one day, so they will continue to search for a job.

Comparing the opinions of experts with those of receivers, there are common grounds but also differences. The experts and receivers agree that remittances will decline in the next five years, and that remittances will be used for current consumption and that employment will increase in spite of the flow of remittances. However, they disagree on the other aspects, including: experts expected that the number of emigrants will increase, while receivers expected that the number of emigrants will decrease in the next five years; experts expected that the impact of migration would be positive because of remittances sent home, while receivers expected that the impact would be negative because more educated depart; and experts expected that the impact of remittances on poverty reduction will remain as is, while receivers expected that the impact would become stronger.

Next, we have examined the extent to which the opinions of experts and receivers could reconcile.

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 next.

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 the opinion of receivers on four out of the six questions. Experts and receivers agreed that the amount of remittances will decline by a quite similar rate. Experts and receivers agreed also on the size of emigration, but here it must be emphasized that experts converged towards the opinion of receivers by changing their opinion from initially expecting an increase towards expecting a decrease of the number of emigrants in the next five years. It is interesting that the consensus among experts for this question is higher compared to the consensus of receivers in the second round, but also compared to the experts' previous round own consensus.

On the expected effect of emigration, experts maintained their opinion that the impact of emigration will be positive because of remittances, as opposed to receivers who expected the impact to be negative because more educated depart. The results are different also with regard to the impact of remittances on poverty, but the difference is not only between experts and receivers, but surprisingly also between the experts' second and third-round responses. While receivers in the second round expected that impact of remittances on poverty will become stronger, in the third round they expected that the impact would become weaker as opposed even to their own previous round when they expected that the impact will remain as it is, likely as a result of strong opposition to the strengthening effect forecast by receivers. Nevertheless, the consensus among the experts for this question in the third round was lower than in the second round, while the weight of the largest share response was only 40%. Given that this was the question that encountered most variations between the rounds for both experts and households, it may be considered that both groups might have had difficulties in properly understanding this question, suggesting that the result should be observed with caution.

The experts and receivers agreed on the expected usage of remittances and the impact of remittances in the labor market, with both expecting that the current consumption will be the main usage of remittances and that remittances will support employment in the next five years.

Table 7 – Experts’ opinion on receivers’ consensual responses

	Amount of remittances	Size of emigration	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market
Consensus						
Round II, receivers	80.8%	57.6%	80.4%	84.4%	80.4%	78.2%
Round II, experts	86.0%	41.1%	68.4%	84.2%	84.2%	68.4%
Round III, experts	83.3%	60.6%	68.4%	61.3%	84.2%	68.4%
Does consensus increase?	YES	YES	NO	NO	YES	NO
Results						
Round II, receivers	-6.8%	-12.4%	Negative, educated depart	Will become stronger	Mainly used for current consumption	Employment may rise
Round II, experts	-7.1%	+11.5%	Positive, because of remittances	Will remain as it is	Mainly used for current consumption	Employment may rise
Round III, experts	-10.4%	-12.5%	Positive, because of remittances	Will become weaker	Mainly used for current consumption	Employment may rise

Source: Authors’ calculations.

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. Results suggest that receivers agreed with expert consensual opinion on four out of six questions. Similar to experts, receivers continued to expect that remittances will decline, but further increased the magnitude of decline to 12.8% from 6.8% in their previous own round. However, receivers did not agree with experts on the expected size of emigration. Despite that experts expected migration to increase in the next five years, receivers maintained their initial opinion that emigration will decline. Nevertheless, receivers softened their expectations on the decline of migration from a reduction of 12.4% in their own second round to a reduction of 5.5% in the third round. Receivers showed confidence also regarding the expected impact of emigration. Their responses continued to suggest that the impact of emigration will be negative because more educated depart, as opposed to experts who expected that the impact will be positive because migrants will send remittances. Nevertheless, the degree of consensus among the receivers slightly declined compared to their previous round. Receivers leaned towards experts’ opinions with regard to the impact of remittances on poverty reduction, where receivers shifted their opinion from the impact becoming stronger to the impact remaining as it is. Receivers and experts agreed that remittances will mainly be used to finance current consumption and that employment may rise in the next five years. Receivers had a higher degree of consensus for these questions after having been presented with the opinions of experts.

Table 8 – Receivers’ opinion on experts’ consensual responses

	Amount of remittances	Size of emigration	The emigration effects	The remittances' effect on poverty	Remittances' usage	Remittances' effect on labor market
Consensus						
Round II, experts	86.0%	41.1%	68.4%	84.2%	84.2%	68.4%
Round II, receivers	80.8%	57.6%	80.4%	84.4%	80.4%	78.2%
Round III, receivers	86.0%	76.9%	75.8%	86.3%	84.4%	86.3%
Does consensus increase?	NO	YES	YES	YES	YES	YES
Results						
Round II, experts	-7.1%	+11.5%	Positive, because of remittances	Will remain as it is	Mainly used for current consumption	Employment may rise
Round II, receivers	-6.8%	-12.4%	Negative, educated depart	Will become stronger	Mainly used for current consumption	Employment may rise
Round III, receivers	-12.8%	-5.5%	Negative, educated depart	Will remain as it is	Mainly used for current consumption	Employment may rise

Source: Authors' calculations.

Overall, both groups eventually agreed on four out of six questions on the size and effects of remittances and emigration in Kosovo on the next five years. According to their opinions, the amount of remittances in year 2021 will be in the range of 61.1 to 62.7 million euros, which is a decline in the range of 10.4% to 12.8% compared to the actual level. In line with the decline of remittances, both groups eventually agreed that the number of emigrants will decline in the next five years. Based on their forecasts, the number of emigrants in year 2021 will range between 17.5 to 18.9 thousand people, indicating a decline in the range of 5.5% to 12.5%. The expected impact of migration on the society remained as the main divergence between the two groups, with experts’ opinions suggesting that the impact will be positive because of remittances, while households maintained their opinion that the impact will be negative because the ones that will be departing will be the more educated. Another divergence remained with respect to the expected impact of remittances on poverty reduction, where experts eventually expected that the impact will become weaker, whereas receivers opted for the option that the impact will remain as it is, however both groups revising the effect downward. Both groups quite strongly agreed on the other two questions, by expecting that remittances will mainly be used to finance current consumption and that employment may rise in the next five years.