



# Tajik Labor Migrants and Their Remittances: Is Tajik Migration Pro-Poor?

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# Purpose of the Study

- Tajikistan has been the world's leading country in the proportion of remittances to its GDP since 2006.
  - An outstanding example in examining effects of overseas remittances on small-population countries.
- To overview Tajik households' and international migrants' profile.
- To examine the relationship between households' income level and (1) the size of receiving remittances from overseas or (2) probability of whether or not to send migrants from respective households.
- Based on household survey conducted in 2007 and 2009.

# Tajikistan

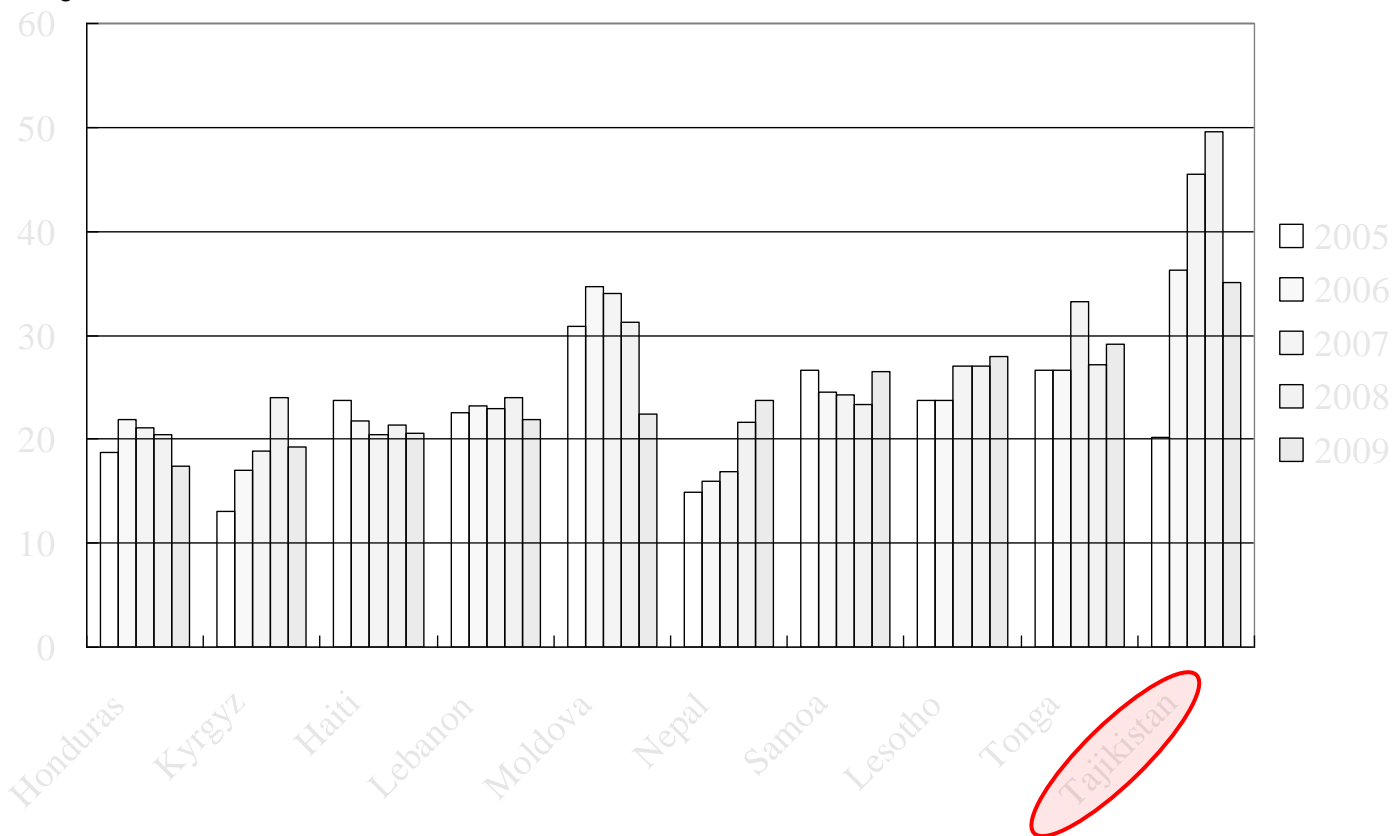
## The Caucasus and Central Asia



<http://fs.huntingdon.edu/jlewis/syl/ircomp/MapsCaucasus.htm>

## Top 10 world's leading countries in the proportion of remittances to their GDP

The scale of remittances vs. GDP was 40% in 2007, and the figure was almost 50% in 2008 in Tajikistan.



Source: Prepared by the author from the World Bank Web site, <http://data.worldbank.org/indicator>.

## Received Amount of International Remittances by Tajikistan viewed through Balance of Payment Statistics

Credit (million USD)	2002	2003	2004	2005	2006	2007	2008
Total Amount	78.5	146	252	466.6	1018.9	1690.7	2544.1
Income account							
Compensation of Employees	0.1	-	-	1.4	3.9	5.3	7.1
Current transfers account							
Workers' remittances	78.4	146	252	465.2	1015	1685.4	2537

Source: Prepared by the author from IMF, *Balance of Payments Statistics Yearbook Part 1*, 2009.

# Official Inter-State Migration Statistics among the CIS

## Limited Information:

In- and out-migration

	2002	2003	2004	2005	2006	2007
Kazakhstan						
In-migration (pop.)	58211	65584	68319	74807	66731	53397
Out-migration	120223	73890	65530	52139	33690	42435
Kyrgyz						
In-migration (pop.)	4894	4483	3285	3761	3420	3960
Out-migration	32717	21209	22607	30741	34423	54608
Tadzikistan						
In-migration (pop.)	1468	1435	1075	1124	1044	1291
Out-migration	12006	10189	7848	7275	8337	11414
Russia						
In-migration (pop.)	184612	129144	119157	177230	186380	286956
Out-migration	106685	94018	79795	69798	54061	47013

## Labor Migrants into Russia

- Data from Federal'naya migratsionnaya sluzhba (FMS) of Russia, which grasps the number of issued work permission.
  - Leaping in 2007.

### Labor Migrants into Russia

	2005	2006	2007	2008
Total	702,500	1,014,013	1,717,137	2,425,921
of them from CIS	343,665	537,722	1,152,786	1,779,996
of them from Tajikistan	52,602	98,736	250,190	391,438

Source: Prepared by the author by internal documents obtained from FMS.

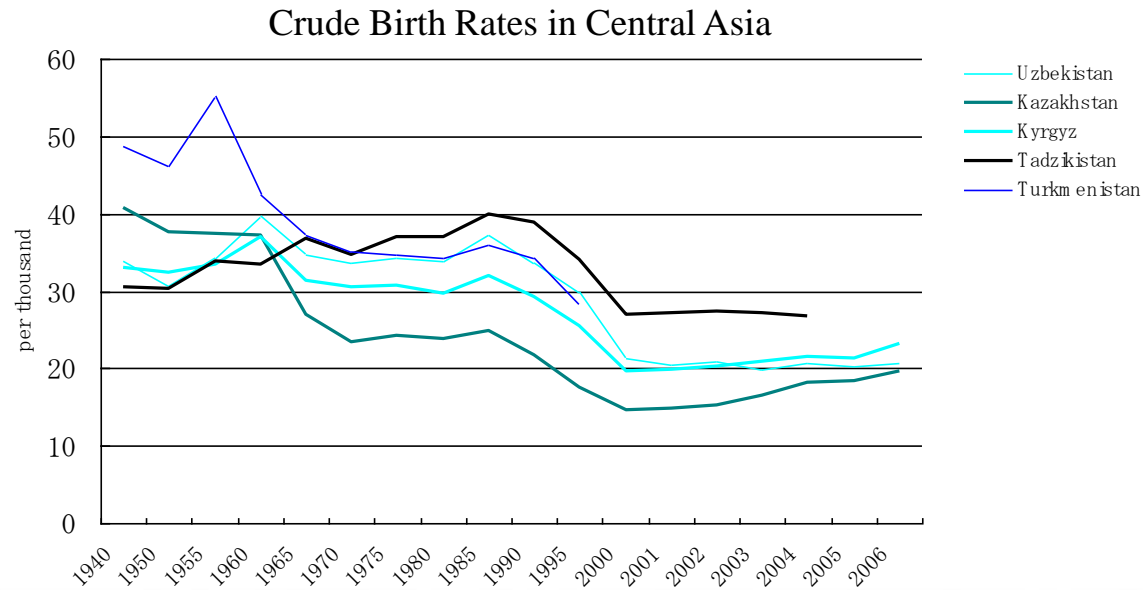
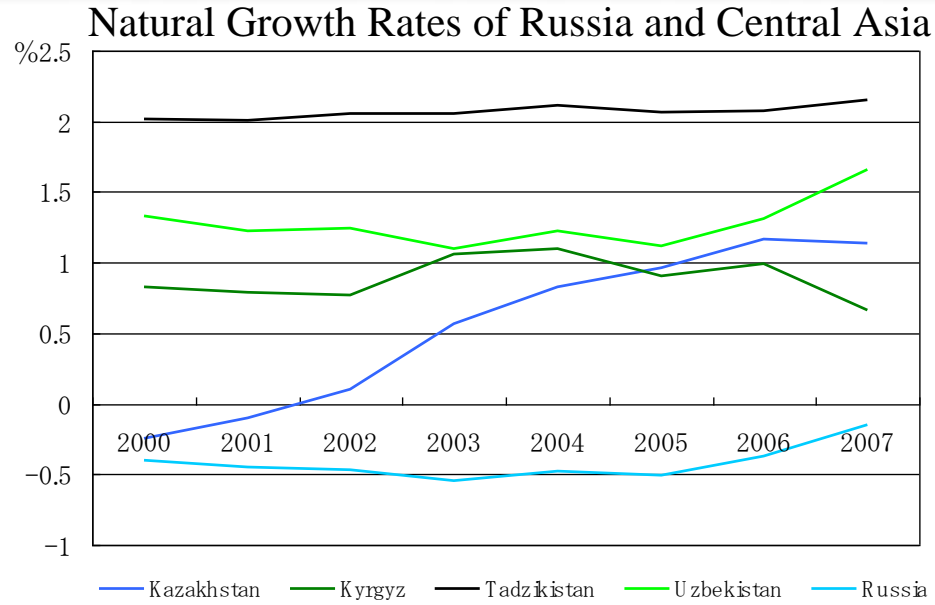
### Labor migrants into Russia: other countries

	2005	2006	2007	2008
Uzbekistan	49,043	105,061	344,559	642,696
Tajikistan	52,602	98,736	250,190	391,438
Ukraine	141,777	171,292	209,301	245,292
China	160,569	210,784	228,848	281,679
Kyrgyz	16,228	32,981	109,643	184,641
Turkey	73,695	101,407	131,248	130,477
Moldova	30,613	50,958	93,700	121,964

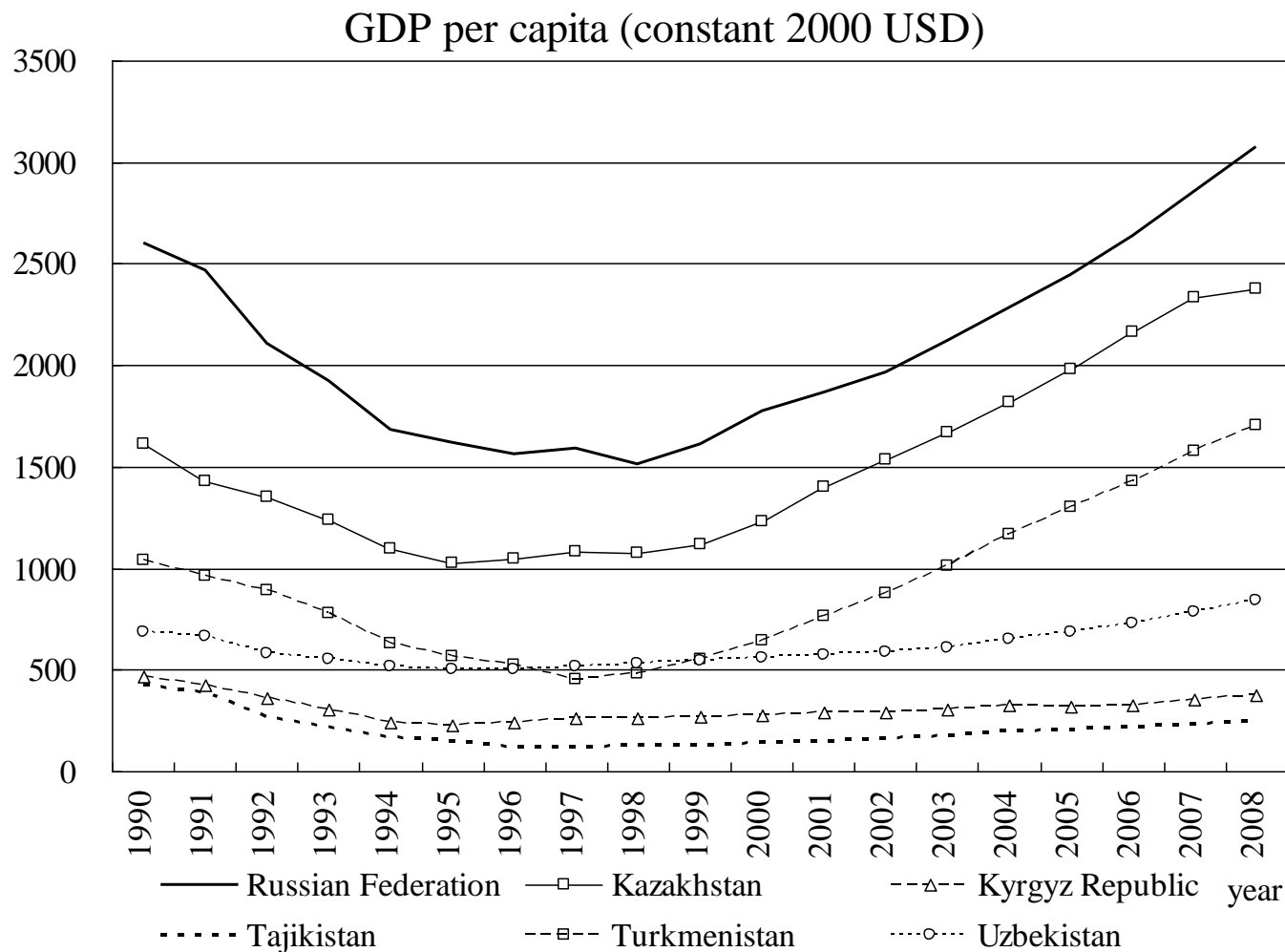
# Backgrounds

- Mutual agreements; Amendment in Law
  - Mutual agreement on labor migrants between Russia and Tajikistan in 2004;
  - Law on “Migration registration of Foreign Nationality and Persons without Nationality” in July 2006, enforced in July 2006.
- Population Dynamics (Labor shortage in Russia; Rapid population increase in Tajikistan);
- Income Disparity (Different situation from that during the Soviet period);
- Special relationship with Russia.





## Per Capita GDP of Russia and Central Asia



Source: *World Development Indicators 2009*, the World Bank, 2010.

# Per capita income level in Tajikistan

- GNI per capita, PPP (current international \$)  
among 168 countries in 2008:
  - Russia: ranked 42 (15,630\$)
  - Tajikistan: 133 (1,860\$)

118	Pakistan	2700
119	Vietnam	2700
120	Uzbekistan	2660
121	Nicaragua	2620
122	Solomon Islands	2580
123	Guyana	2510
124	Djibouti	2330
125	Yemen, Rep.	2210
126	Cameroon	2180
127	Kyrgyz Republic	2140
128	Lao PDR	2040
129	Lesotho	2000
130	Papua New Guinea	2000
131	Nigeria	1940
132	Sudan	1930
133	Tajikistan	1860
134	Cambodia	1820
135	Sao Tome and Princip	1780
136	Senegal	1760
137	Cote d'Ivoire	1580
138	Kenya	1580
139	Benin	1460
140	Bangladesh	1440
141	Ghana	1430
142	Gambia, The	1280
143	Tanzania	1230

(Source: *World Development Indicators 2009*, World Bank, 2010.)

# Scope

- To overview Tajik households' and international migrants' profile based on households survey conducted in 2007 and in 2009;.
- To Compare poverty indicators, the scale of migrants, size of remittances between two rounds;
- To examine the relationship between households' income level and (1) the size of receiving remittances from overseas or (2) probability of whether or not to send migrants from respective households.

# Migrants and remittances

- Becker (1974): Altruism model...
  - Utility increase of remittances recipients directly increase the utility of remittance senders;
  - Income level of remittance recipients and the scale of remittances received always have negative correlation.
- Lucas and Stark (1985): Exchange model...
  - Migrants send money home because the migrants expect services provided by recipients later;
  - Income of remittances recipients and the size of remittances have no correlation or they can show positive correlation.
- Macro-data based previous studies on developing countries (Adams and Page, 2005; Gupta *et al.*, 2009; Adams, 2009; Aydas *et al.*, 2005) show results in line with the altruism models;
- Studies based on household survey (Semyonov and Gorodzeisky, 2005, 2008; Dustmann and Mestres, 2010; Du *et al.*, 2005) suggest applicability of exchange models.

## Migrants and Remittances 2

- Tajikistan: More migrants from poorer households; poorest households are more dependent on remittances...Implies applicability of altruism models ( Olimova and Bosc, 2003; Brown, Olimova and Boboev, 2008; World Bank, 2009; Khakimov and Mahmadbekov, 2009 )
- Is that REAL?
- Olimova *et al.* (2003), Brown *et al.* (2008), World Bank (2009), and others are based on descriptive statistics/very primitive statistical examination.
- All the previous studies rely on cross-sectional data for one year; hence, they cannot identify interdependence between explaining/explained variables in migration decision, remittances and consumption.
  - (Send migrants in order to escape from poor? The household became poor because the household member go out of labor market given that migrant are expected to send remittances?)
- RE-examine the relationship between household income and remittances/migrants by panel-data.

# Data

- Individual / household data from Tajikistan Living Standards Measurement Survey (TLSS) conducted by the World Bank and UNICEF
  - Conducted in 1999, 2003, 2007 and 2009;
  - Surveys from 1999 to 2007 were repeated cross-sectional just as the same as other LSMSs.
  - The sample size of the 2009 round is one-third that in the rounds of 2003 and 2007, but the 2009 round and the 2007 round contain panel samples.
- Limitation in data: lacking migration&remittance data up to 2003; Remittance leaping can be observed since 2006; hence, the study analyze 2 rounds data for 2007 and 2009.
- TLSS2007: from September to November 2007; TLSS 2009: from September to November 2009, visited panel households in the same month as of 2007 survey.
- Sample size: 4,860 households and 30,139 individuals in TLSS2007; 1,503 households and 10,069 individuals in TLSS2009.
- Complete panel samples between 2007 and 2009: 1,414.

# The size of foreign passengers from TLSS samples

## Comparison of Macro- and Micro-data

	2007	2009
All the sample	30,139	10,069
Among them who went abroad (in the households at the time of the survey)	328	501
Among them who are abroad (absent at the time of the survey)	934	246
The number of population who went abroad during the year	4.19%	7.42%
Population of Tajikistan:	7.216 million	7.545 million
Percentage share of foreign passengers in the sample:	×4.19%	×7.42%
Estimated number of migrants from samples and national population:	=302 thousand	=560 thousand
Tajik labor immigrants to Russia based on FMS data:	250 thousand	391 thousand (in 2008)

Source: Estimated from CISSTAT (2010), TLSS2007, TLSS2009.



## Poverty Profile (Panel samples) in 2007

Poverty level and household size; Poverty level and female household heads

TLSS2007	All Data	Extreme Poor	Poor	Non-Poor
Number of Household	1,414 (100.0)	196 (13.9%)	424 (30.0%)	794 (56.1%)
Average monthly expenditure per capita in Tajikistan somoni in 2007)	178.2	70.7	114.8	238.5
Average monthly income per household (in Tajikistan somoni in 2007)	681.2	482.7	633.9	755.5
Wage	380.4	307.7	366.4	405.7
Income Transfer	14.2	10.2	11.7	16.6
Social Security	22.5	21.0	24.6	21.7
Scholarship	0.3	0.1	0.3	0.4
Self-consumption of agricultural goods	112.7	82.6	114.1	119.5
Others	20.3	4.2	15.4	27.0
Remittances received from abroad	130.8	56.9	101.4	164.7
Average number of children (in person)	2.11	2.85	2.39	1.78
Average number of elder persons (in person)	0.3	0.36	0.38	0.25
→ Average number of household members (in person)	6.23	7.52	6.8	5.6
→ Average number of international migrants (in person)	0.33	0.32	0.34	0.33
Average age of the household head (age)	51.7	52.19	52.5	50.5
Household head is an employee (in percent)	62.4%	55.1%	59.4%	65.9%
→ Female household head (in percent)	19.6%	23.98%	16.3%	20.0%

Source: Author's calculation from TLSS2007.

## Poverty Profile (Panel samples) in 2009

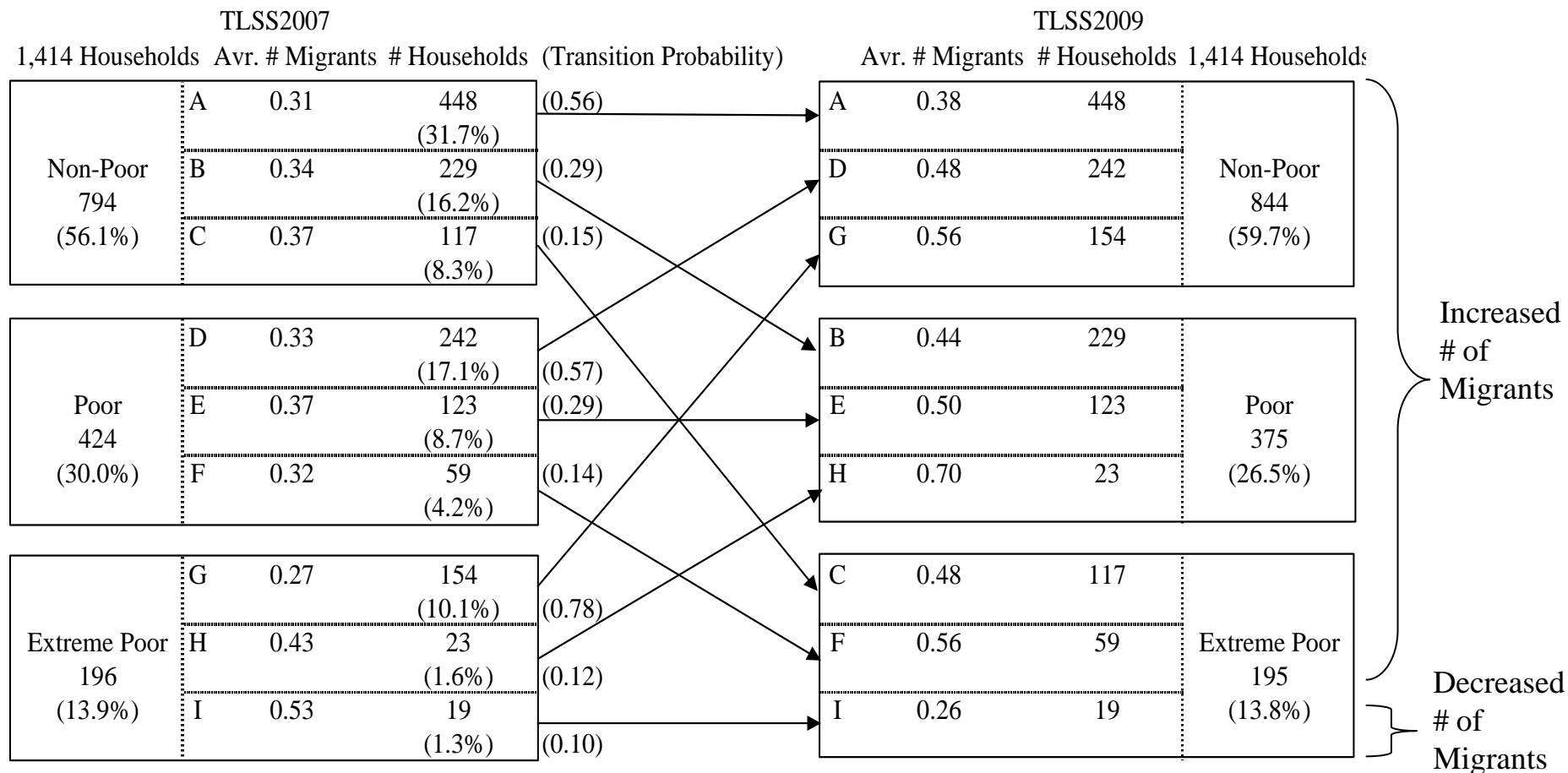
Poverty level and household size; Poverty level and female household heads

TLSS2009	All Data	Extreme Poor	Poor	Non-Poor
Number of Household	1,414 (100.0)	195 (13.8%)	375 (26.5%)	844 (59.7%)
Average monthly expenditure per capita in Tajikistan somoni in 2007)	170.8	62.9	100.4	227
Average monthly income per household (in Tajikistan somoni in 2007)	784.1	620.3	689.7	863.9
Wage	453.5	374.1	397.2	496.8
Income Transfer	21.2	13.0	8.9	28.5
Social Security	39.0	42.3	45.0	35.6
Scholarship	0.5	0.1	0.1	0.7
Self-consumption of agricultural goods	94.1	64.9	97.6	99.3
Others	68.0	29.3	46.2	86.6
Remittances received from abroad	107.9	96.5	94.8	116.4
Average number of children (in person)	2.22	3.07	2.66	1.82
Average number of elder persons (in person)	0.29	0.34	0.35	0.25
→ Average number of household members (in person)	6.78	8.33	7.63	6.04
→ Average number of international migrants (in person)	0.45	0.48	0.47	0.44
Average age of the household head (age)	52.8	54.5	53.8	52
Household head is an employee (in percent)	60.0%	49.7%	56.3%	63.7%
→ Femail household head (in percent)	17.4%	20.5%	15.2%	17.7%

Source: Author's calculation from TLSS2009.

# Poverty Dynamics of Households and the Number of Migrants per Household in Tajikistan

( The Number of Complete Panel Household Samples: 1,414 )



Source: Prepared by the author from TLSS2007 and TLSS2009.

## Tajik Migrants' Profile (from all the samples of each round)

Profile of Tajik Migrants through TLSS2007

All migrants	Migrants, who live within households at the time of survey		Migrants, who are away from household at the time of	
All the data	1262	328	934	
Female	89 (7.1%)	26(7.9%)	63 (6.7%)	
Average age*	29.7	34	28.2	
Completed elementary school	147 (1.7%)+	33 (0.1%)@	114 (2.2%)#	
Completed secondary school	970(77.0%)+	252(77.1%)@	718(77.0%)#	
Completed tertiary school	142(11.3%)+	42(12.8%)@	100(10.7%)#	
Went into Russia	1191 (94.4%)	303(92.4%)	888	
Went into Moscow	706 (55.9%)	177(54.0%)	529	
Aim of visit "to work/to look for work"	—	310(94.5%)	—	
Average wage (USD per month)	320(of 1131)	309(of 262)	323(of 869)	
Median of wage (USD per month)	300 (of 1131)	300(of 262)	300 (of 869)	
Average amount remitted (USD per year)	—	—	2836(of 754)	
Median of the amount remitted (USD per year)	—	—	1720(of 754)	

Profile of Tajik Migrants through TLSS2009

All migrants	Migrants, who live within households at the time of survey		Migrants, who are away from household at the time of	
All the data	747	501	246	
Female	69 (9.2%)	37(7.4%)	32 (3.1%)	
Average age*	30.4	31.7	27.8	
Completed elementary school	90 (2.1%)+	61 (2.2%)+	29 (1.8%)	
Completed secondary school	565(75.9%)+	378(75.9%)+	187(76.0%)	
Completed tertiary school	89(12.0%)+	59(11.2%)+	30(12.2%)	
Went into Russia	737 (98.7%)	497(99.2%)	240(97.6%)	
Went into Moscow	476 (63.7%)	325(64.9%)	151(61.4%)	
Aim of visit "to work/to look for work"	—	491(98.0%)	—	
Average wage (USD per month)	390 (of 583)	375(of 399)	420 (of 194)	
Median of wage (USD per month)	350 (of 583)	300(of 399)	400(of 194)	
Average amount remitted (USD per year)	—	—	2754(of 199)	
Median of the amount remitted (USD per year)	—	—	2400(of 199)	

—: No such question; :: lacking for three persons; @: lacking one person; #: lacking two persons; \*: aged 19-49=93.2%; \*\*: 19-49=91.8%.

## Tajik Migrants

- Huge share of working age population;
- Aim of visit is, principally, to work (95%);
- 80% of migrants sent money to home;
- Higher education level compared with the national average;
- More than 94% of migrants go to Russia, more than 50% of those go to Moscow.

# Analysis

- Effects of household income on (1) the size of remittances and (2) whether or not the household send out migrants.
  - Pooled; Panel (fixed/random effects). Random effect models were chosen for all the analyses.
  - Household income:
    - If coefficient is positive and significant: Altruism model. (consistent with previous descriptive studies)
    - If coefficient is negative or insignificant: Exchange model. (consistent with descriptive examination of this study.)

Variables introduced in the analysis	TLSS2007		TLSS2009	
	Average	Std. Deviation	Average	Std. Deviation
<b>Explained Variables</b>				
Remittance Received Per Household Per Month Sent Migrants	130.77	786.68	107.948	440.984
	0.241	0.428	0.331	0.471
<b>Explaining Variables</b>				
<b>(1) Location</b>				
Dushanbe (Unity for households in Dushanbe, zero for others)	0.17	0.376	0.17	0.376
Urban (Unity for households in Cities, zero for others)	0.347	0.476	0.347	0.476
<b>(2) Household Characteristics</b>				
Number of Household Members (in person)	6.226	2.88	6.779	3.038
Employee (Unity if the household head is an employee, zero for others)	0.624	0.484	0.598	0.49
Sex of household head	0.804	0.397	0.826	0.379
Age of the household head (in age)	51.69	13.97	52.8	13.11
<b>(3) Education attainment</b>				
Completed secondary education	0.586	0.493	0.587	0.493
Completed tertiary education	0.191	0.393	0.19	0.393
<b>(4) Income</b>				
Real monthly income of the household <b><u>without international remittances</u></b>	550.468	768.039	676.16	698.82
Logarithm of real monthly income of the household	5.917	1.004	6.116	1.009
Real monthly wage income of the household	380.35	669.18	581.38	761.77

## Household income => Size of the remittances received: no effects

Table 7 Determinants of the volume of international remittances received by the households.

Explaining variables	2B-2 Random e.	2C-2 Random e.	2D-2 Random e.
<b>Location</b>			
Dushanbe	ns	ns	ns
Urban	significant negative	significant negative	significant negative
<b>Household characteristics</b>			
Number of household members	ns	ns	ns
Household head-employee	ns	ns	ns
Male household head	ns	ns	ns
Age of the household head	ns	ns	ns
<b>Education attainment of the household head</b>			
Secondary education	ns	ns	ns
Tertiary education	ns	ns	ns
<b>Household income</b>			
Income without remittances	ns	—	—
Logarithm of income without remittances		ns	—
Wage income	—	—	ns
Observation	2828	2674	2828



## Household income => Probability to send migrants: Positive and significant effects

Explaining variables	2B-2 Random e.	2C-2 Random e.	2D-2 Random e.
<b>Location</b>			
Dushanbe	Significant -	Significant -	Significant -
Urban	Significant -	Significant -	Significant -
<b>Household characteristics</b>			
Number of household members	Significant +	Significant +	Significant +
Household head-employee	Significant -	Significant -	Significant -
Male household head	ns	ns	ns
Age of the household head	Significant -	Significant -	Significant -
<b>Education attainment of the household head</b>			
Secondary education	ns	ns	ns
Tertiary education	ns	ns	ns
<b>Household income</b>			
Income without remittances	Significant +	—	—
Logarithm of income without remittances	—	Significant +	—
Wage income	—	—	Significant +
Observations	2828	2674	2828

## Results and interpretation

- Household income: no significant effects on the size of remittances.
  - Poorer households does NOT receive comparatively larger size of remittances.
  - Tajik labor migrants may not be pro-poor.
  - Endogeneity:
    - Possible remittances may encourage household members to quit from labor markets;
    - Good earners might go abroad and the household income in motherland may decrease;
      - Both will predict negative correlation, and they are not applicable to the results.
  - Remittances may be invested on household member's education and they can affect positively on household income. This effects should be log-term one and are not plausible in this case.

## Results and interpretation

- Household income affects on sending migrants positively.
  - The richer households send out more migrants.
  - This result is similar with the last one in that Tajik labor migrants may not be pro-poor.
  - Dushanbe/Urban dummies are significant and positive.
  - Household size apparently affects on sending migration positively.
  - Insignificant coefficients for education attainment...broadly spread phenomena of migration in Tajikistan?
  - Insignificant coefficients for sexuality...consistent with descriptive examination.

## Results and interpretation

- The results here show that
  - (1) Poorer households do not receive larger remittances;
  - (2) Richer households send out more migrants.
- For Tajik migration, altruism models of the household income and remittances may not be applicable: Poorer households are not in better situation than richer households in either receiving remittances nor sending migrants.
- Thus, it was shown that neither Tajik international remittances nor labor migrants may not be pro-poor.

## Results and interpretation

- Poverty level (headcount) decreased from 43.9% to 40.3% (from 2007 to 2009) in Tajikistan.
  - However, it is not clear whether or not this is a result of migration and remittances.
- Scale of migrants shows undoubtedly increasing trends. Tajikistan macro economy, however, also grows continuously (in 3~7 % per year): thus, examination of the factors of poverty reduction requires another study.

## Challenges remaining

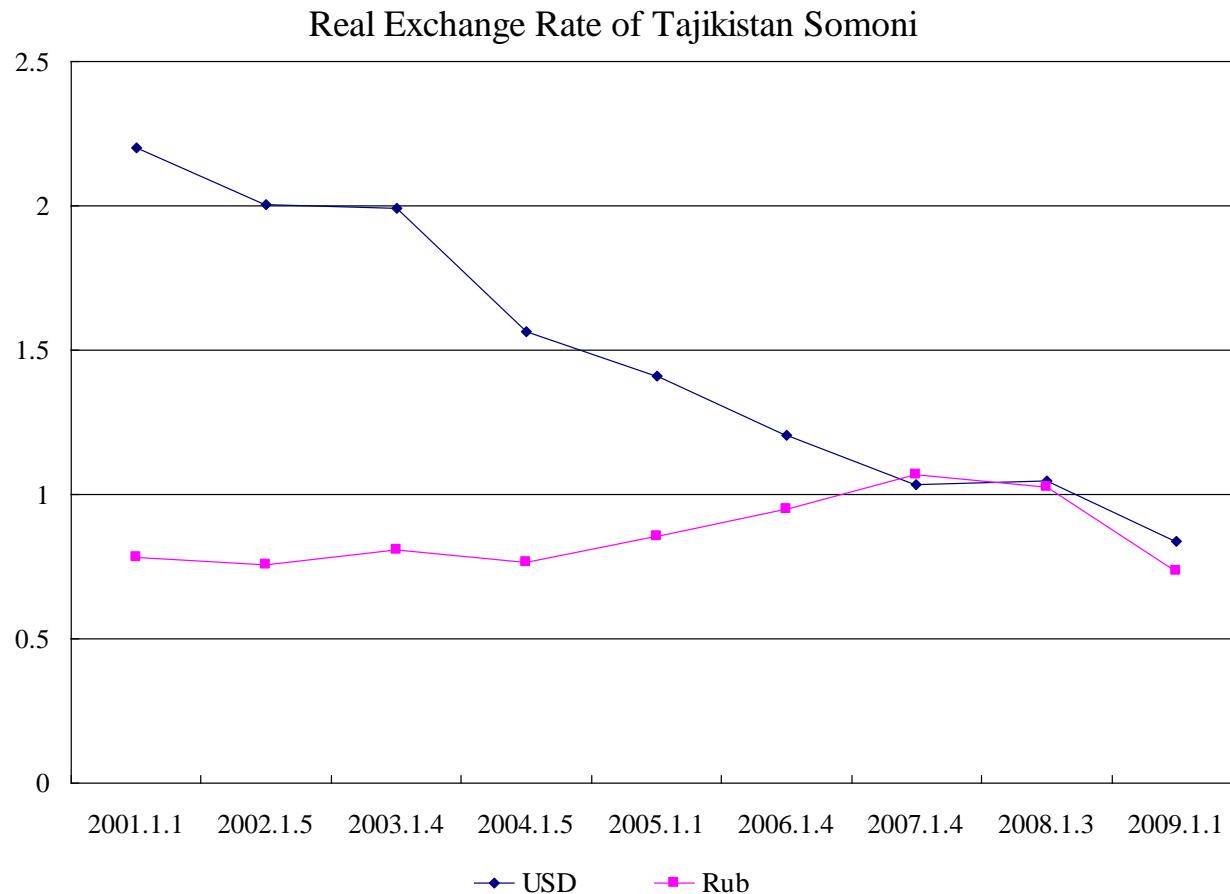
- Omitted aspects:
  - Further in-depth examination of individual and household specifics.
  - What kind of people will migrate, from what kind of households?
- It is obvious that the patterns of international migration are not determined by individual-level decision.
  - Changes in migration registration in 2006-2007 affect deeply on Tajik labor migration patterns. Further examination on political decision and law-enforcement is required.

## Special relationship with Russia

Among 934 family members currently away from the household, the number of those who can speak

Only Tajik:	38
A. 1. Tajik; 2. Russian:	755
B. 1. Russian; 2. Tajik or Other lang.:	54
C. 1. Other lang.; 2. Russian:	13
A+B+C:	822 (88%)
D. Russian is the third usable lang.:	49
A+B+C+D:	871 (93.2%)

# Macroeconomic effects: Real exchange rate of Tajikistan somoni



Source: Calculated from *World Development Indicators 2009*, World Bank, 2010 and the National Bank of Tajikistan Website, <<http://www.nbt.tj/>>..