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Migration Relationship in Tajikistan**

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ABSTRACT

Changes in the Forsaken Schooling and Migration Relationship in Tajikistan*

We examine how the forsaken schooling phenomenon in migration evolved over time in Tajikistan. After completing compulsory schooling at ages 16-17, young men in Tajikistan are forsaking professional education because of opportunities to migrate for higher paid low-skilled jobs in the Russian Federation. We study how the forsaken schooling effect changed because of migrant-receiving Russia's recent tightened migration policy and economic slowdown, and policies promoting fair access to professional education in migrant-sending Tajikistan.

JEL Classification: O15, P46, F22, I24

Keywords: migration, traps, education, skill

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Introduction

Abdulloev, Epstein and Gang (2019, 2020) describe a new migration phenomenon – large-scale forsaken schooling – resulting from earning opportunities abroad. According to their theoretical model, with existing higher earnings opportunities for low skilled labor in host countries, individuals in migrant sending countries may forgo professional education, opting to migrate and work at unskilled occupations abroad.

After finishing compulsory schooling, people make their decision whether to enter the labor market or continue their education in vocational or tertiary schools. Abdulloev, Epstein and Gang (2019) argue that there are several factors such as reputation and status, time preferences, benefits, and earnings, which influence people's decision on continuing their education and/or migrating. If a professional worker has higher reputation and social status, more people would decide to continue their professional education to become professional in their home country. Moreover, if people care more about their present and less about own future, with lower probability of migration for professional than for non-professional workers, then these people choose not to acquire professional education and decide to enter the labor market as non-professionals. Finally, if the non-professional worker has more benefits and earnings in the host country than professional workers in the migrants' home country, then people in the home country may forego the professional education and migrate for work in low-skilled occupations abroad. The later effect of migration is called *forsaken schooling*.

Studying the *forsaken schooling* phenomenon contributes additional insight to the existing economic literature. The current literature discusses the brain drain and the brain gain of migration effects on education. The former defines the negative impact of skilled emigration on the whole economy. The country loses its professional workers who migrate and contribute their expertise in other countries' economies (Bhagwati and Hamadam, 1974; Grubel and Scott, 1966). The brain-gain emphasizes the positive effect of migration on the origin country inducing more human capital formation (Mountford, 1997; Stark, Helmenstein, and Prskawetz, 1997, 1998; Stark and Wang, 2002; Edwards and Ureta, 2003; Piracha, Randazzo and Vadean, 2013). This positive effect of migration on education happens through enhanced skills of returned migrants and remittances (Co, Gang and Yun, 2000; Dai, Liu, and Xie, 2015; Beine, Docquier and Rapoport, 2001, 2008). Migrants' families in the origin countries using remittances increase educational attainment of their members (Dimova, Epstein and Gang, 2015; Duryea, Cox and

Ureta, 2003; Acosta, 2006; Calero, Bedi, & Sparrow, 2009; Amuedo-Dorantes & Pozo ,2010; Yang, 2005).

We look at Tajikistan, a former Soviet republic, which is one of the major migrant-sending countries to the Russian Federation. The large wage differential between these countries draws many of economically active population of Tajikistan to Russia. A joint Soviet background, use of Russian language as a *lingua franca*, visa free entry and other factors reduce migrants' economic and social migration costs making Russia their major destination country. Migration plays an important role in migrants' households in Tajikistan allowing them to cover a substantial share of their consumption through remittances. The share of remittances to GDP of Tajikistan reached 47% in 2013 but has declined with the Russian financial crisis.

Tajikistan is the poorest country of former Soviet Union. There is too little job creation for its increasing working age population resulting in many men choosing to migrate, mainly to the Russian Federation (Stroková & Ajwad, 2017). Young people are discouraged from looking for jobs in Tajikistan and a significant share of workers are informally employed in Tajikistan (Ajwad, et.al., 2014). The labor migration helped families cover immediate consumption expenses (International Labor Organization, 2010; Clemént, 2011; Gang, et.al, 2018).

We are interested in learning how the forsaken schooling phenomenon has evolved in Tajikistan during 2007-2013. The country has faced two financial crises during this period, changes in migration policies in its major migrant destination country, the Russian Federation, and the reform in professional schools' entry examination system. We look at how these factors have influenced on people's decision on acquiring professional education and migrating abroad for work.

In the next section, we look at forsaken schooling in Tajikistan using the most recent survey data from 2018. In the following section, we discuss how two financial crises in the period of 2007-2018 have influenced forsaken schooling decisions – whether migrate abroad for work without the professional education. In the third section, we look at how the decisions on continuing education for young people evolved during 2007-2018 in Tajikistan, and what major factors have influenced on these changes. The final section concludes.

Forsaken Schooling and Migration Phenomenon in 2018

Abdulloev, Epstein and Gang (2019, 2020) studied the forsaken schooling phenomenon using 2007 and 2013 survey data for Tajikistan and 2013 survey data for Kyrgyzstan and Uzbekistan. In this paper, we use the newly collected data by Ogata Sadako Research Institute for Peace and Development of the Japan International Cooperation Agency in 2018 (JICA Research Institute, 2020). There are 2,000 households with 14,932 individuals interviewed during the survey on migration experience, education, health, expenditure, and about other individual, household and community characteristics.

Our sample is limited to 25-44 years old respondents who received professional education after the dissolution of the Soviet Union. Normally, by age 25, an individual completes professional education (vocational or tertiary) and enters to labor force. The upper age limit of 44 (i.e. 17 years old in 1991) is defined so that we are looking at the choice between migration and schooling after the dissolution of the Soviet Union in 1991. The internal migration in the Soviet Union was limited and controlled by government. Our total sample size is 3,571 people, with 971 migrants (27.9%) and 2,600 non-migrants. Migrants are defined as those individuals who have ever migrated abroad for any reason.

Russia and Tajikistan share the joint seventy-year history of the Soviet rule and have a mutual visa-free regime. The Russian language is used as the lingua franca among citizens of countries of the former Soviet Union. Their common history, language, mutually recognized diplomas, free entry, significant wage differentials and existing migrant network and experience are major factors for choosing Russia as the destination country for Tajikistan's labor migrants. According to the 2018 survey 98.7% of current migrants and 95.8% of returned migrants chose Russia as the destination country. The main reason for household members to go abroad was for a job – 92.1%, about 4.1% went for family reasons, and only 2.5% migrated for study, and 1.3% for other reasons (to visit friends, for health, etc.) (JICA Research Institute, 2020).

Sample summary statistics are shown for both the population sample and male subsample by migration experience in Table 1. The labor migration from Tajikistan is male dominated: 91.9% of migrants are men. Labor migrants are largely from rural areas: 74.7% of those who migrate for work and 54.8% of those who migrate abroad for other reasons (for study or health reasons, to join family, to visit friends, etc..) come from rural areas.

Table 1. Sample statistics.

Variables	Women and men	Ever migrated abroad		Never migrated	Men	Ever migrated abroad		Never migrated
		for work	for other			for work	for other	
<i>Migration experience:</i>								
Ever migrated abroad	0.2789 [0.0123]	1	1	0	0.4857 [0.0218]	1	1	0
Never migrated abroad	0.7211 [0.0123]	0	0	1	0.5143 [0.0218]	0	0	1
Ever migrated abroad for work	0.2599 [0.0120]	1	0	0	0.4690 [0.0221]	1	0	0
Ever migrated for other reasons	0.0190 [0.0030]	0	1	0	0.0166 [0.0051]	0	1	0
<i>Obtained Education:</i>								
Less than secondary	0.2625 [0.0166]	0.1661 [0.0224]	0.2893 [0.0581]	0.2965 [0.0175]	0.1756 [0.0184]	0.1536 [0.0240]	0.2509 [0.0896]	0.1931 [0.0218]
Secondary	0.4971 [0.0174]	0.5872 [0.0246]	0.4346 [0.0566]	0.4662 [0.0192]	0.5156 [0.0203]	0.6065 [0.0263]	0.5484 [0.0763]	0.4316 [0.0252]
Vocational	0.0886 [0.0085]	0.1019 [0.0133]	0.1060 [0.0367]	0.0834 [0.0086]	0.0977 [0.0109]	0.1005 [0.0140]	0	0.0983 [0.0116]
Tertiary	0.1518 [0.0114]	0.1448 [0.0141]	0.1701 [0.0481]	0.1539 [0.0131]	0.2112 [0.0159]	0.1394 [0.0152]	0.2007 [0.0851]	0.2770 [0.0219]
Any professional education (vocational or tertiary)	0.2405 [0.0150]	0.2466 [0.0214]	0.2761 [0.0565]	0.2373 [0.0158]	0.3089 [0.0207]	0.2399 [0.0233]	0.2007 [0.0851]	0.3753 [0.0245]
<i>Individual characteristics:</i>								
Household head	0.1081 [0.0091]	0.1756 [0.0200]	0.0682 [0.0315]	0.0848 [0.0080]	0.1711 [0.0160]	0.1834 [0.0219]	0.1525 [0.0709]	0.1604 [0.0177]
Married/ <i>nikoh</i>	0.8653 [0.0076]	0.8688 [0.0125]	0.8950 [0.0360]	0.8633 [0.0090]	0.8854 [0.0096]	0.8952 [0.0125]	0.8939 [0.0740]	0.8762 [0.0123]
Age	33.1167 [0.1762]	33.0410 [0.2218]	32.2549 [0.7678]	33.1667 [0.1902]	32.8028 [0.1777]	32.8421 [0.2167]	31.9285 [1.0342]	32.7953 [0.2106]
Male	0.5091 [0.0055]	0.9187 [0.0112]	0.4471 [0.0936]	0.3631 [0.0105]	1	1	1	1
<i>Household characteristics:</i>								
Number of children (with age of <18)	3.3602 [0.0980]	3.3765 [0.1151]	3.2031 [0.3228]	3.3584 [0.1172]	3.3575 [0.1020]	3.4119 [0.1144]	3.2684 [0.6265]	3.3107 [0.1575]
Number of elders (with age of >64)	0.2993 [0.0220]	0.2541 [0.0269]	0.2830 [0.0621]	0.3161 [0.0233]	0.2856 [0.0211]	0.2435 [0.0264]	0.2026 [0.0974]	0.3266 [0.0238]
Number of working age members (age of 15-64)	4.9102 [0.0992]	5.0441 [0.1137]	5.3916 [0.3078]	4.8493 [0.1125]	5.0836 [0.0970]	5.0990 [0.1099]	5.6660 [0.5564]	5.0507 [0.1325]
Number of male members	4.2006 [0.0886]	4.2444 [0.1041]	4.6857 [0.2994]	4.1721 [0.1025]	4.3694 [0.0913]	4.3248 [0.1066]	5.1273 [0.4648]	4.3856 [0.1309]

Number of female members	4.1457 [0.1146]	4.2332 [0.1377]	3.9842 [0.3455]	4.1184 [0.1284]	4.1548 [0.1094]	4.2274 [0.1331]	3.7824 [0.5625]	4.1006 [0.1506]
Female headed household	0.2361 [0.0148]	0.2419 [0.0190]	0.3205 [0.0655]	0.2317 [0.0154]	0.2327 [0.0148]	0.2288 [0.0187]	0.3712 [0.1625]	0.2319 [0.0178]
Living in capital	0.0915 [0.0050]	0.0671 [0.0088]	0.1675 [0.0501]	0.0983 [0.0062]	0.0825 [0.0052]	0.0634 [0.0093]	0.0699 [0.0510]	0.1002 [0.0104]
Living in another urban area	0.1823 [0.0220]	0.1858 [0.0301]	0.2849 [0.0753]	0.1783 [0.0218]	0.1900 [0.0256]	0.1771 [0.0318]	0.3761 [0.1662]	0.1958 [0.0288]
Living in rural area	0.7263 [0.0202]	0.7471 [0.0294]	0.5476 [0.0785]	0.7235 [0.0204]	0.7275 [0.0235]	0.7595 [0.0312]	0.5540 [0.1588]	0.7040 [0.0280]
<i>Subjective poverty:</i>								
Household does not have enough to cover basic food necessities	0.1138 [0.0134]	0.0899 [0.0126]	0.1908 [0.0526]	0.1203 [0.0158]	0.1037 [0.0129]	0.0886 [0.0137]	0.2186 [0.0960]	0.1139 [0.0182]
Household can pay for food necessities, but the income is not enough to purchase new clothes or pay for utilities	0.4159 [0.0187]	0.4163 [0.0257]	0.4182 [0.0800]	0.4156 [0.0197]	0.4063 [0.0197]	0.4139 [0.0261]	0.3402 [0.1026]	0.4016 [0.0238]
Household can pay for food necessities, utilities and clothes but not enough for appliances like a new fridge	0.3497 [0.0200]	0.3781 [0.0250]	0.2620 [0.0655]	0.3417 [0.0206]	0.3613 [0.0219]	0.3811 [0.0250]	0.2109 [0.0965]	0.3482 [0.0258]
Enough for all of the above and to pay for some appliances like anew fridge	0.0894 [0.0086]	0.0974 [0.0134]	0.1053 [0.0950]	0.0861 [0.0092]	0.0982 [0.0103]	0.1009 [0.0135]	0.2302 [0.1797]	0.0915 [0.0124]
Enough if necessary, to get a new house, new apartment or a new car	0.0313 [0.0066]	0.0182 [0.0050]	0.0238 [0.0177]	0.0362 [0.0086]	0.0304 [0.0066]	0.0155 [0.0047]	0	0.0450 [0.0115]
<i>Professional schools in community:</i>								
Vocational school exists in the community	0.0620 [0.0252]	0.0711 [0.0297]	0.1184 [0.0692]	0.0573 [0.0234]	0.0590 [0.0247]	0.0666 [0.0288]	0.1208 [0.0908]	0.0500 [0.0212]
University exists in the community	0.0374 [0.0207]	0.0250 [0.0153]	0.0338 [0.0251]	0.0420 [0.0231]	0.0360 [0.0199]	0.0195 [0.0128]	0.0544 [0.0498]	0.0504 [0.0273]
Observations	3571	905	66	2600	1810	824	24	962

Sample-weighted standard errors in brackets
Source: Author's calculations from MLCSS (2018)

Six percent of respondents have a vocational school in their communities. The majority of vocational schools in Tajikistan are state-owned, which face major difficulties in their transition to the market-based system. These schools operated under the auspices of state-owned enterprises, which contributed the development of schools' curricula, provision of equipment and internship programs during the Soviet era. With privatization of state-owned enterprises, such collaboration linkages were lost, and the private companies do not demand schools' services. Consequently, the curricula and equipment in vocational schools become outdated attracting fewer young people for education.

Of the respondents, 3.7% said that they have a tertiary school/university in their communities. With high education support programs of international donor organizations, the universities have exhibited positive development in both curricula and equipment. The representation of universities has also increased in rural areas contributing to their competition and improvement of the quality of education. Universities created career centers assisting their graduates in job placement. Consequently, the universities become popular among young people in Tajikistan.

A closer look at average values of migration and education variables shows the existence of the forsaken schooling phenomenon in Tajikistan – relationship between migration and education has an inverted-U form. The migrants, mainly male (as migration is male dominated in Tajikistan), go abroad to work after obtaining the secondary education, but fewer migrate with tertiary education. After finishing their compulsory education, young men in Tajikistan are choosing to migrate for work abroad as wages in their major destination country, Russia, are several times higher of those in Tajikistan. They choose to forsake professional education because of opportunities to work at higher paid low-skilled jobs in the Russian Federation. The average nominal wages in Russia were 5 times higher than those in Tajikistan in 2017 (ISCCIS, 2019).

We estimated a multinomial logit model on the decision to acquire vocational and tertiary education in order to find the effect of migration while controlling the effects of some other factors which influence the educational attainment decision. The logarithms of the odds ratio and marginal effects of our regression analysis for both all and men samples are provided in Tables 2 and 3. The reference group in

our regression is the individuals without any completed professional education, i.e. neither vocational nor tertiary.¹

Our regression analysis shows that men have greater access than women to vocational and tertiary education as the result of parental decisions to invest in the professional education of boys. Coefficient estimates of log odds for men having vocational and tertiary education are positive and statistically significant at the 1% significance level. Although, the Tajikistan government is paying attention to girls' involvement in education, there is still high disproportion in secondary and professional school attendance between boys and girls. With existing conservative cultural norms concerning gender roles, parents invest less in the education of their girls who after marriage will leave parents' households to join their husbands' families. The young women are expected to take care of the household and raise children.²

Living in the rural areas of Tajikistan is negatively correlated with the decisions of acquiring the vocational and tertiary education. This effect is larger for tertiary education and remains statistically significant at the 1% level for the male sample. Availability of a tertiary school in the community is positively correlated with the likelihood of having the tertiary education, for the entire sample the coefficient of log odds is statically significant at the 1% level and for the male sample the significance level is 10%. The existence of vocational schools in the community does not necessarily positively affect the decision to attend such schools. The corresponding coefficient is negatively correlated with the completed vocational education in both samples. This is probably due to the outdated curricula and the equipment base of state-owned vocational schools which become unattractive.³

¹ Please see Abdulloev, Epstein and Gang (2020) for the endogeneity discussion and tests of the relationship between professional schooling and migration for Tajikistan, Kyrgyzstan, and Uzbekistan using 2013 survey data.

² Zarinam Turdieva and Maria Hellborg, Institute for Security and Development Studies “Losing Out: Barriers to Girls’ Education in Tajikistan.” Retrieved on September 1, 2019, from: <http://isdpeu/losing-barriers-girls-education-tajikistan/>

³ ADB Concept paper “Proposed Project Grant and Project Preparatory Technical Assistance Tajikistan: Strengthening Private Sector Participation in Technical and Vocational Education and Training”. Retrieved on September 1, 2019 from: <https://www.adb.org/sites/default/files/project-document/79580/46535-001-cp.pdf>

Table 2. Multinomial Logit of Obtained Education: Log Odds and Marginal Effects, Women and Men

Variables	Log Odds		Marginal Effects		
	Vocational	Tertiary	Secondary or less	Vocational	Tertiary
Ever migrated abroad for work	-0.0427 (0.1480)	-0.6141*** (0.1357)	0.0623*** (0.0181)	0.0061 (0.0112)	-0.0684*** (0.0155)
Ever migrated abroad for other reasons	0.2539 (0.5154)	-0.1204 (0.5765)	-0.0043 (0.0781)	0.0218 (0.0362)	-0.0175 (0.0613)
Married/ <i>nikoh</i>	-0.2686 (0.1694)	-0.2317 (0.1612)	0.0394* (0.0217)	-0.0175 (0.0127)	-0.0219 (0.0175)
Age	-0.5053*** (0.1553)	-0.2920 (0.1798)	0.0601*** (0.0223)	-0.0351*** (0.0113)	-0.0250 (0.0198)
Age-square	0.0082*** (0.0022)	0.0042 (0.0026)	-0.0009*** (0.0003)	0.0006*** (0.0002)	0.0003 (0.0003)
Male	0.5093*** (0.1610)	1.3917*** (0.1257)	-0.1671*** (0.0178)	0.0184 (0.0115)	0.1486*** (0.0133)
Household head	-0.0931 (0.2350)	-0.1656 (0.1757)	0.0219 (0.0231)	-0.0047 (0.0184)	-0.0172 (0.0196)
Number of children (with age of <18)	-0.3094** (0.1411)	-0.1303 (0.1543)	0.0321* (0.0183)	-0.0222* (0.0115)	-0.0099 (0.0174)
Female headed household	-0.0778 (0.1589)	-0.1250 (0.1627)	0.0170 (0.0189)	-0.0042 (0.0127)	-0.0129 (0.0182)
Number of elders (with age of >64)	-0.1489 (0.2007)	0.2696 (0.1870)	-0.0168 (0.0238)	-0.0158 (0.0155)	0.0326 (0.0206)
Number of working age members (age of 15-64)	-0.2834* (0.1600)	-0.0779 (0.1465)	0.0254 (0.0177)	-0.0210 (0.0132)	-0.0044 (0.0167)
Number of male members of the household	0.2947* (0.1582)	0.0393 (0.1468)	-0.0224 (0.0178)	0.0225* (0.0130)	-0.0001 (0.0167)
Number of female members of the household	0.2512 (0.1568)	0.0561 (0.1606)	-0.0213 (0.0200)	0.0188 (0.0125)	0.0024 (0.0178)
Living in rural area	-0.6896*** (0.2599)	-1.3074*** (0.2039)	0.1702*** (0.0287)	-0.0339* (0.0198)	-0.1364*** (0.0244)
Household can pay for food necessities, but the income is not enough to purchase new clothes or pay for utilities	0.0270 (0.2513)	0.3828 (0.2376)	-0.0388 (0.0291)	-0.0038 (0.0194)	0.0426 (0.0261)
Household can pay for food necessities, utilities and clothes but not enough for appliances like a new fridge	0.5434** (0.2362)	0.8215*** (0.2210)	-0.1139*** (0.0264)	0.0299 (0.0187)	0.0840*** (0.0243)
Enough for all of the above and to pay for some appliances like a new fridge	0.8848** (0.3518)	1.1085*** (0.3186)	-0.1632*** (0.0409)	0.0522* (0.0276)	0.1110*** (0.0348)
Enough if necessary, to get a new house, new apartment or a new car	-0.9004* (0.5306)	1.1842*** (0.3541)	-0.0582 (0.0510)	-0.0888** (0.0416)	0.1470*** (0.0384)
Vocational school exists in the community	-0.0405 (0.2671)	0.5394*** (0.2046)	-0.0498* (0.0264)	-0.0115 (0.0211)	0.0613*** (0.0224)
University exists in the community	-0.2213 (0.4403)	0.7347*** (0.2664)	-0.0573 (0.0352)	-0.0287 (0.0358)	0.0860*** (0.0300)
Constant	5.6552** (2.7037)	3.3327 (3.2250)			
Observations	3571		3571		

Sample-weighted standard errors in parentheses

* p<0.1; ** p<0.05; *** p<0.01

Source: Author's calculations from MLCSS (2018)

Table 3. Multinomial Logit of Obtained Education: Log Odds and Marginal Effects, Men

Variables	Log Odds		Marginal Effects		
	Vocational	Tertiary	Secondary or less	Vocational	Tertiary
Ever migrated abroad for work	-0.1992 (0.1551)	-0.8303*** (0.1415)	0.1174*** (0.0227)	0.0006 (0.0123)	-0.1180*** (0.0201)
Ever migrated abroad for other reasons	-20.1520*** (0.5314)	-0.7833 (0.7637)	1.3916*** (0.1580)	-1.7027*** (0.1762)	0.3111** (0.1330)
Married/ <i>nikoh</i>	-0.0371 (0.2708)	0.0813 (0.2108)	-0.0079 (0.0379)	-0.0049 (0.0215)	0.0127 (0.0287)
Age	-0.5647*** (0.2062)	-0.3012* (0.1562)	0.0742*** (0.0257)	-0.0418** (0.0164)	-0.0324 (0.0220)
Age-square	0.0091*** (0.0029)	0.0042* (0.0023)	-0.0011*** (0.0004)	0.0007*** (0.0002)	0.0004 (0.0003)
Household head	-0.2957 (0.3752)	-0.3977 (0.2561)	0.0691 (0.0455)	-0.0168 (0.0304)	-0.0523 (0.0351)
Number of children (with age of <18)	-0.2093 (0.2107)	-0.0121 (0.1851)	0.0150 (0.0304)	-0.0176 (0.0176)	0.0026 (0.0263)
Female headed household	-0.2300 (0.2198)	-0.2914 (0.2000)	0.0515* (0.0300)	-0.0135 (0.0188)	-0.0380 (0.0291)
Number of elders (with age of >64)	-0.2087 (0.3185)	0.1808 (0.2062)	-0.0094 (0.0392)	-0.0216 (0.0254)	0.0310 (0.0281)
Number of working age members (age of 15-64)	-0.2821 (0.2520)	-0.0529 (0.1728)	0.0248 (0.0308)	-0.0229 (0.0213)	-0.0018 (0.0245)
Number of male members of the household	0.2579 (0.2314)	-0.0394 (0.1947)	-0.0116 (0.0320)	0.0228 (0.0196)	-0.0113 (0.0278)
Number of female members of the household	0.1941 (0.2501)	0.0320 (0.1802)	-0.0165 (0.0325)	0.0159 (0.0206)	0.0006 (0.0250)
Living in rural area	-0.6293* (0.3561)	-1.2757*** (0.2208)	0.2011*** (0.0395)	-0.0267 (0.0282)	-0.1744*** (0.0297)
Household can pay for food necessities, but the income is not enough to purchase new clothes or pay for utilities	-0.2366 (0.3226)	0.6187** (0.2684)	-0.0628 (0.0417)	-0.0333 (0.0266)	0.0960** (0.0393)
Household can pay for food necessities, utilities and clothes but not enough for appliances like a new fridge	0.3770 (0.3053)	0.8994*** (0.2998)	-0.1375*** (0.0452)	0.0131 (0.0254)	0.1244*** (0.0430)
Enough for all of the above and to pay for some appliances like a new fridge	0.7547* (0.4222)	1.2808*** (0.3720)	-0.2098*** (0.0581)	0.0373 (0.0352)	0.1725*** (0.0536)
Enough if necessary, to get a new house, new apartment or a new car	-2.3142** (1.0728)	1.0433** (0.4134)	0.0170 (0.0919)	-0.2195** (0.0935)	0.2025*** (0.0625)
Vocational school exists in the community	-0.0772 (0.3897)	0.3561 (0.2815)	-0.0399 (0.0412)	-0.0141 (0.0346)	0.0540 (0.0427)
University exists in the community	-0.2022 (0.4720)	0.7559* (0.4034)	-0.0823 (0.0638)	-0.0332 (0.0409)	0.1155** (0.0573)
Constant	7.3450** (3.6478)	4.7475* (2.6875)			
Observations	1810		1810		

Sample-weighted standard errors in parentheses

* p<0.1; ** p<0.05; *** p<0.01

Source: Author's calculations from MLCSS (2018)

Households' wealth is also positively correlated with completed tertiary education. If the likelihood of acquiring tertiary education increases with wealth, people with the vocational education consider themselves being in the middle of the wealth distribution. People with tertiary education normally earn more and have higher status in their communities.

Now we turn to the variable of interest – having a working abroad experience, which defies the forsaken schooling effect. This variable is statistically negatively correlated with the completed tertiary education for both samples at the 1% significance level. The wage differential between Tajikistan and its major migrant destination is so high that migrants choose to forego tertiary education and to migrate to work at low skills occupations in Russia. Migrant earnings from working in such low skills occupations are higher than the wages of professional workers in Tajikistan. Such forsaken phenomenon may result in lower investment in human capital formation in Tajikistan and may reduce its economic growth potential if the country does not further implement reforms on promoting the equity and integrity in education and economic reforms aiming at creation of good quality jobs.

Forsaken Schooling and Migration Trends during Financial Crises

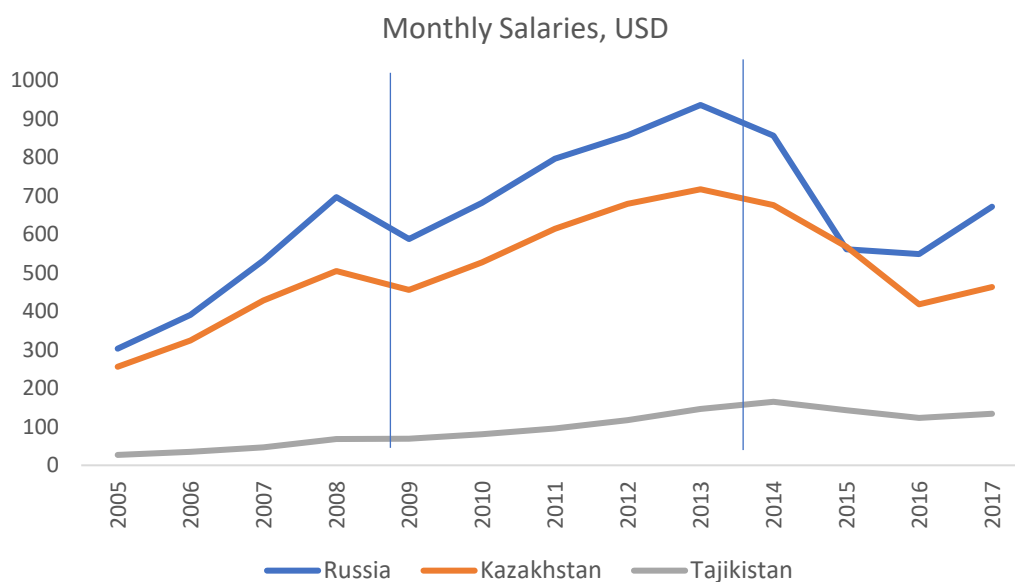
The forsaken schooling phenomenon changes over time under the influence of different factors. The financial crises when the economies undergo through structural changes create a good natural experiment for studying different factor effects. We used four different surveys' data to analyze the historical episodes of the decision to migrate for work without acquiring the professional education at the home country during two different crises. The survey data used for this analysis are from (1) 2007 World Bank's Living Standards Measurement Survey in Tajikistan (TLSS, 2007), (2) 2009 World Bank's Living Standards Measurement Survey Tajikistan (TLSS, 2009), (3) 2013 World Bank and GIZ's Jobs, Skills, and Migration Surveys (JSMS, 2013), and, (4) 2018 JICA Research Institute's Migration, Living Conditions and Skills Survey (JICA Research Institute, 2020).

In the period of 2007-2018, Tajikistan faced two major international crises. The first crisis – the global financial crisis – impacted the country in 2008. The global crisis began with the crisis in the mortgage market in the United State of America, affecting the banking sector and other regional financial markets in Asia and Europe. Real remittances to Tajikistan decreased during the 2008 crisis impacting migrants' households making and increasing their vulnerability to poverty (Gang, et.al, 2018). The second

crisis – the long-term Russian financial crisis –has affected Tajikistan in 2014-2017. The financial crisis in Russia started with the significant devaluation of the Russian currency in 2014 as the consequences from the impact of western economic sanctions,⁴ the capital outflow from Russia, and the fall of the international price of oil, which is Russia’s key source of foreign currency income (Eberhardt, A. and Menkiszak, M., 2015; World Bank, 2017).

Figure 1 compares the wages in Tajikistan with those its two major migrant destination countries, Russia and Kazakhstan before, during and after two financial crises. The wage differentials between Tajikistan and Russian and Kazakhstan were increasing until the 2008 global financial crisis, and after the sharp drop in 2008 they were still increasing until the 2014 Russian financial crisis and reduced again. The impact of Russian financial crisis lasted longer until 2016 when with recovery of Russian and Kazakh economies the wage differentials started growing again.

Figure 1. Wage differences of Tajikistan with Russia and Kazakhstan, 2006-2017

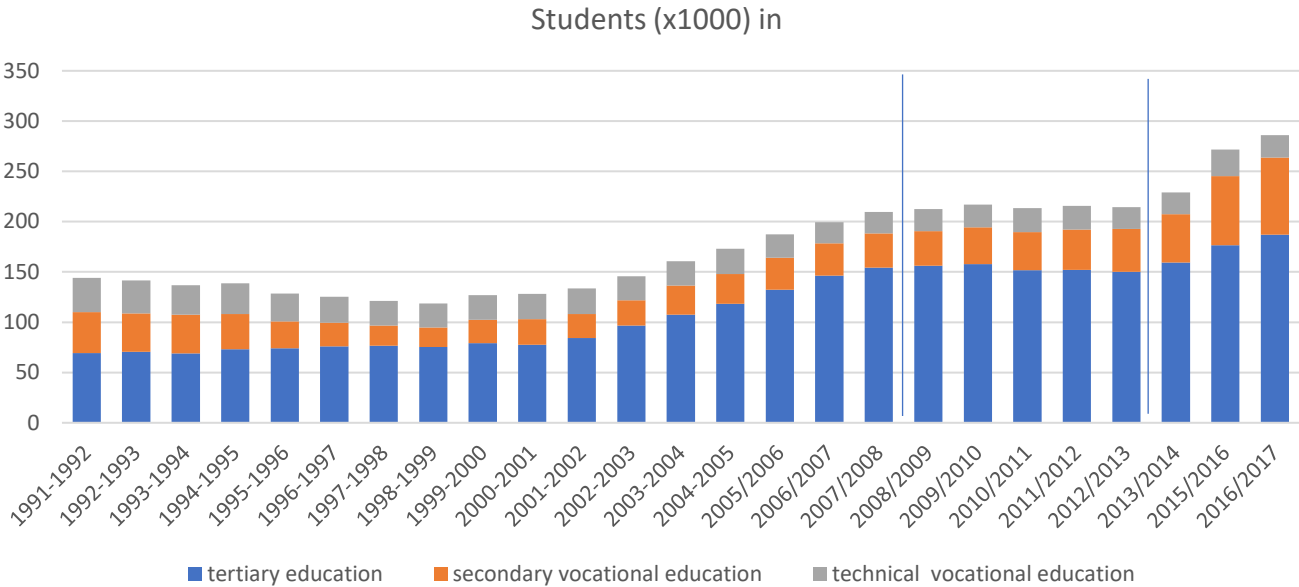


Note: data from the table of “Average monthly nominal wage (counted at annual average rates of national currencies to the Russian ruble, us dollar and euro)” of the Interstate Statistical Committee of the Commonwealth of Independent States (2019). Retrieved on September 1, 2019 from: <http://www.cisstat.com/rus/macro/zp-2.pdf>

⁴ The sanctions were imposed by western countries because of Russia’s annexation of Crimea and its intervention in Ukraine.

We compare this observation with the trend of the educational attainment in Tajikistan during this period. Figure 2 shows the number of students in professional schools of Tajikistan. The number of students in professional schools reduced during the civil war period and start increasing until the global financial crisis and did not significantly change until the start of the 2014 Russian financial crisis. Interestingly, when the wage differentials between Tajikistan and Russia/Kazakhstan were increasing in the period of 2008-2013, the number of enrolled students in professional schools did not change. However, since the 2014 Russian financial crisis when the wage differentials reduced considerably, more and more students enrolled in professional schools of Tajikistan. The labor migration option, because of its reduced earnings and tightened migration policy in Russia, became less attractive for young people in Tajikistan, and they preferred to continue their professional education in Tajikistan.

Figure 2. Number of Students in Professional Schools of Tajikistan, 1991-2017

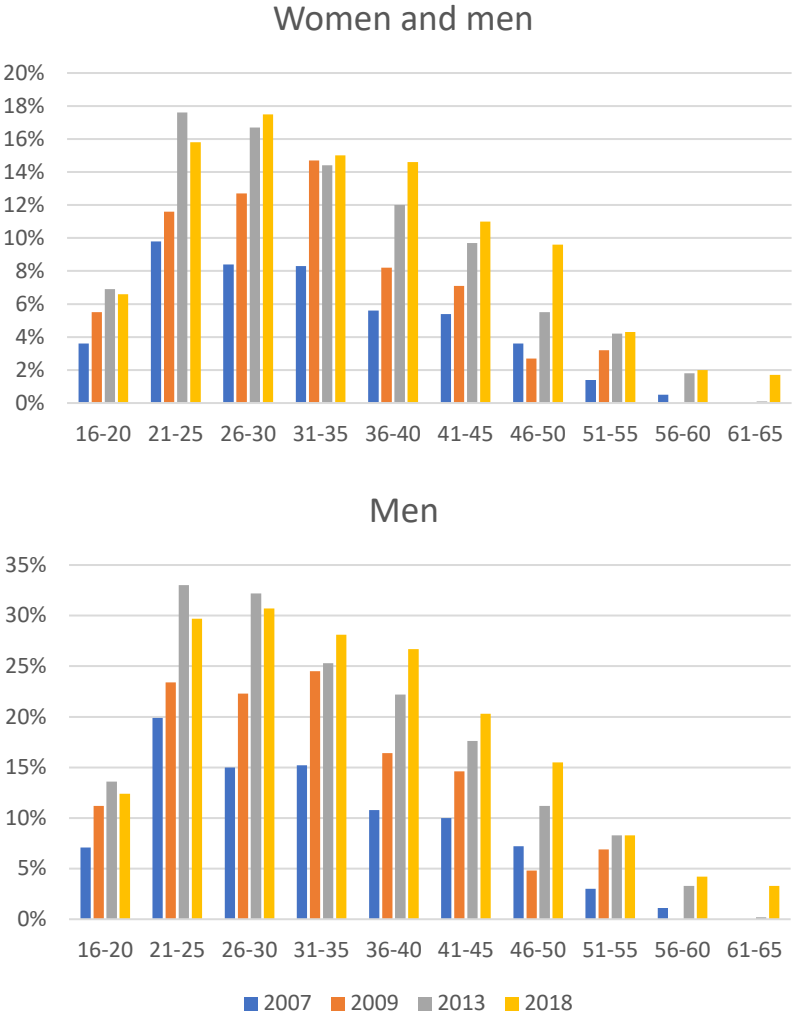


Note: data from the databases of “Secondary professional schools, 1991-2018”, “Professional technical educational institutions, 1991-2018” and “Higher education, 1991-2018” of the State Statistical Agency of Tajikistan (2020a, 2020b and 2020c). Retrieved on June 1, 2020 from:
http://stat.wv.tj/library/en/secondary_professional_schools.xls
http://stat.wv.tj/library/en/professional_technical_educational_institutions.xls
http://stat.wv.tj/library/en/higher_education.xls

The migration patterns during these crises vary due to different factors. In contrast to 2008 global financial crisis conditions in Russia, because of the 2014 economic downturn the Russian Government

chose to tighten its migration policies imposing new administrative barriers for migrants from January 2015, such as reentry bans for migrants who had administrative violations, using biometric passports for entry to Russia, and a new work permission patent system with compulsory tests on the knowledge of Russian history, language and constitution.⁵ These new policies, along with the significant number of migrant workers in the Russian reentry ban list, decreased labor outmigration from Tajikistan, reduced the size of remittances, and increased the pressure on domestic labor market.

Figure 3. Share of migrant workers without professional education as a share of all population cohorts



Source: Author’s calculations from MLCSS (2018)

⁵ During Soviet schools, children in each of the republic of the Soviet Union attended compulsory classes on the history of the Soviet Union, Russian language and literature.

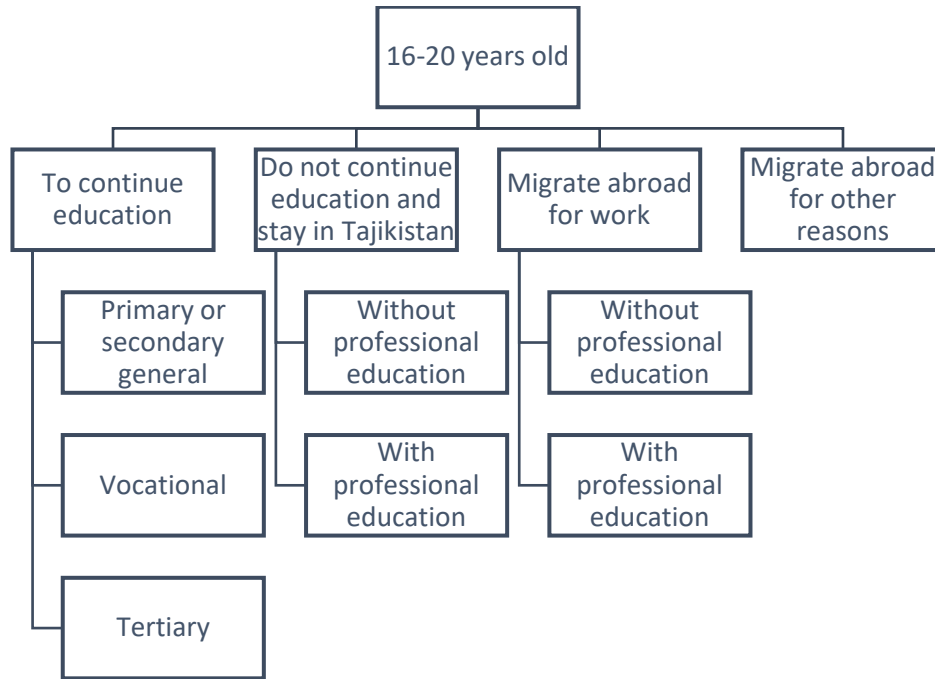
Figure 3 highlights the trend of forsaken schooling as the changes in shares of those who migrated abroad for work during last 12 months without any professional education in the corresponding age cohorts for the period of 2007-2018. Unlike during the 2008 global financial crisis, when the share of Tajikistani migrants with no professional education increased in all age groups, the share of these migrants during the 2014 Russian financial crisis reduced for 16-25 age cohort group. During the 2008 crisis, households in Tajikistan were sending more than one migrant by including younger members of the households for shorter durations of migration stay (Danzer & Ivaschenko, 2010). Many of these young migrants did not have professional education. The share of such migrants was increasing until 2013. In contrast, during the 2014 Russian financial crisis, when Russia has introduced stricter migration policy, the share of elderly migrants without professional education increased. Elderly migrants, who graduated from Soviet schools, speak fluent Russian, have well-established networks, and longer employment contracts. Many elderly migrants have dual citizenships, both of Tajikistan and Russia, that helps avoid acquiring work patents (permits), and passing examinations and medical tests. Furthermore, people by age 25 complete their education and enter labor force, they form families and start earning money to feed families and invest in children.

The decrease in the shares of migrants without professional education among 16-20 age cohorts after 2014 implies the reducing forsaken schooling effect in Tajikistan. We will study the decisions of migration and education of this age group in the next section.

Decisions of Migration and Education of 16-20 Old Youth during 2007-2018

We look at the decisions on acquiring the education among the young people ages 16-20. After completing basic and secondary education at ages 16-17, young people in Tajikistan make their decisions on whether to continue their secondary general, to enter vocational or tertiary schools to acquire professional education or enter the labor market. The decisions on migration is attractive as the young people can earn higher wages doing unskilled work in Russia compared to wages in Tajikistan. The four survey data samples were restricted to those young people who were 16-20 years of old. Decisions categories are defined as it follows:

Figure 4. Decision tree of 16-20 years old after finishing basic education



The share of young people in ages of 16-20 in each of decision category is estimated using the survey sample weights for male and female groups for years of 2007, 2009, 2013 and 2018. All the surveys ask a question whether a member of the household was in the school during the last academic year. We chose people who were in school by the level of education (primary/secondary, vocational and tertiary) which they were acquiring during this academic year. Since some of surveys were conducted after the end of the academic year in Tajikistan, during the summer and fall, some young people, were in school during the last academic year and migrated abroad. We included them “in school” category and excluded them from “abroad” category as we are interested in looking at their decisions to acquire professional education. Those who did not attend school during the last academic year and remained in Tajikistan, were divided into two group categories: people with any professional (vocational or tertiary) education and people without professional education. Migrants, who migrated abroad during last twelve months excluding those who were in school during last academic year, are divided into those who migrated for work and those who migrated for other reasons. Of those who migrated for work, we defined a category of people who have any professional education and another category of migrant workers who do not have any professional education.

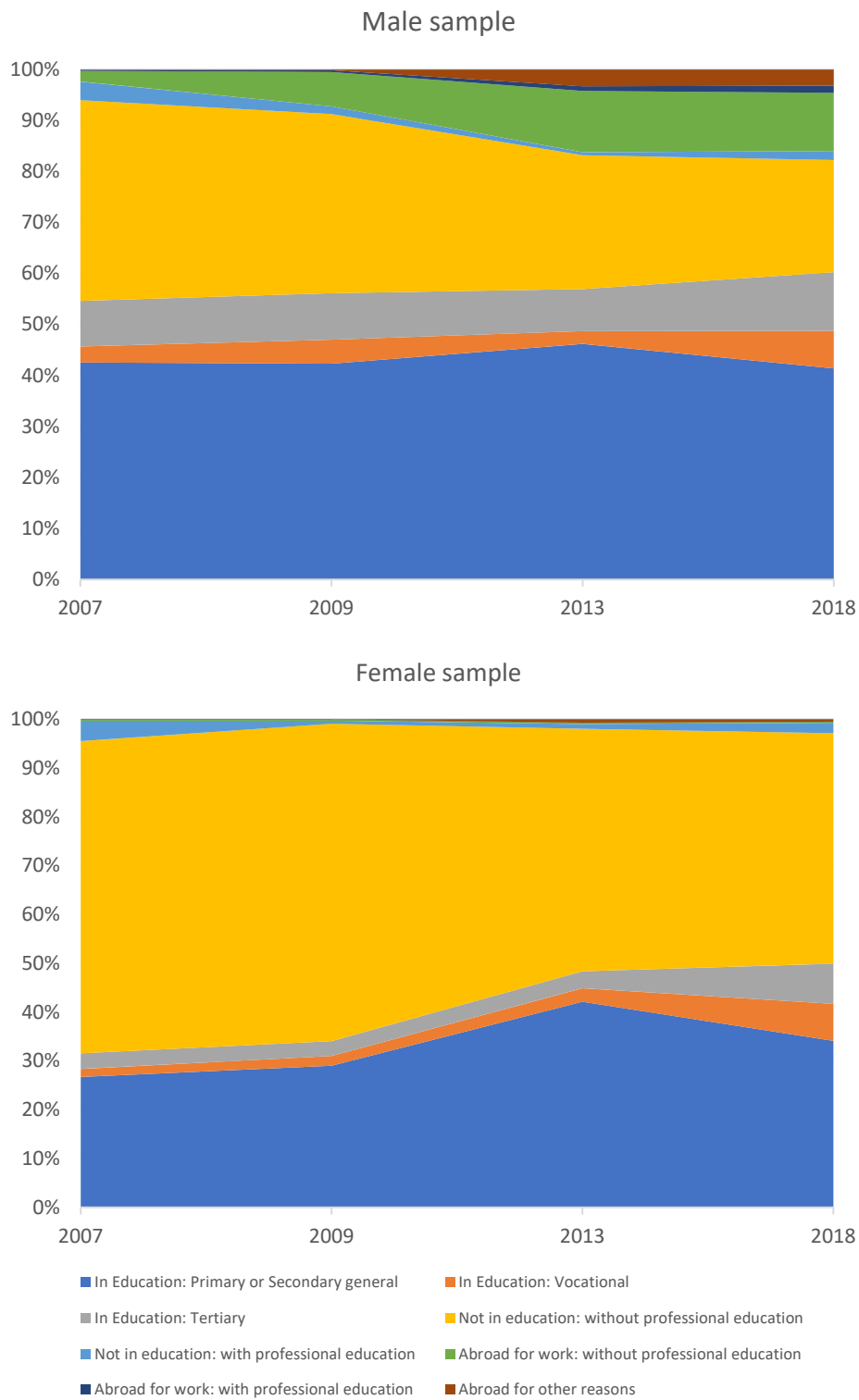
The changes in the shares of young people in each of the decision categories are shown in Figure 5. The share of young men who continued their primary or secondary education increased slowly from 42.6% to 46.2% during the period 2007 to 2013 and then fell to 41.4% in 2018. A significant change in continuing primary or secondary education is observed in the female sample during 2009-2018. The share of young women who were in primary or secondary education increased in 2013, and, like young men, dropped in 2018. The drop was compensated by the transition to professional education. The share of young women who attended professional education schools increased in 2018. The share of young women who were not in the school without professional education decreased in 2009-2018. There was a significantly positive shift in decisions of continuing education by young women in the period of 2013-2018. Gatskova, Ivlevs and Dietz (2017) using 2007, 2009 and 2011 survey data find that having a migrant member in the household improves school attendance of girls in ages 7-11, but reduces school attendance of girls in ages 12-17 until 2011. Our results also confirm this finding, the school enrollment for 16-20 years old young women remained low until 2009.

The share of people who were in school for professional education increased in 2013-2018 for both male and female samples. During this period, Tajikistan reformed its professional education school admission system. This has positively influenced in the decision to of acquire professional education. Tajikistan has established a centralized admission for vocational and tertiary education through the National Testing Center in 2014. The new system provided fair and equal access to professional education schools based on testing the knowledge and skills of applicants. The applicants with best performance or from marginalized groups are provided benefits during the enrollment.⁶ The National Testing Center organizes the centralized entry exams, assigns applicants to professional education schools based on their test results, chosen specialty and stated priority fields. The centralized examination system helped reduce corruption at the admissions level in professional education schools.⁷ Reform allowing fair and equal access has resulted in larger enrollment of young people to professional schools in Tajikistan.

⁶ Informational and methodological manual “Applicant's Handbook - 2019”, Section “Who is eligible for benefits” (Информационно-методическое пособие «Справочник абитуриента – 2019», раздел «Кому предоставляются льготы»). Retrieved on September 1, 2019 from: http://ntc.tj/images/Downloads/21_lgoti.pdf

⁷ World Bank: Higher Education Admission Reforms to Provide Greater Opportunity and Equity for Tajikistan’s Youth. Retrieved on September 1, 2019 from: <https://www.worldbank.org/en/results/2015/05/04/higher-education-admission-reforms-to-provide-greater-opportunity-and-equity-for-tajikistans-youth>

Figure 5. Categories of people by school enrollment and migration, 16-20 years old



Source: Author's calculations from MLCSS (2018)

The new policies favoring school enrollment in Tajikistan helped to reduce the share of young people without professional education who were not in the school and remained in Tajikistan in the period of 2009-2018. In contrast, the share of people with professional education who were not in the school and stayed in Tajikistan increased from 2013-2018 for both female and male samples.

The forsaken phenomenon – outmigration for work without any professional education – as the share of young men was increasing in the period of 2007-2013. However, this phenomenon started its slight decrease after 2013. Two major factors contributed to reducing this phenomenon for young people. The first is the Russian financial crisis, when the Russian currency devaluated significantly, and the Russian government introduced new more restrictive immigration policies. This crisis reduced the real earnings of Tajikistani migrants and increased their migration costs. Consequently, the number of Tajikistani labor migrants in Russia and migrant remittances dropped significantly after 2014. The second is a favorable reform in education that created a fair and equal enrollment in professional education schools in Tajikistan.

We also conducted the t-tests for the differences in these decision categories for the period intervals of 2007-2009 and 2013-2018, and estimated differences between these periods. The results of these tests are shown in Table 4. The differences show that the share of female students in the primary and secondary schools has dropped significantly in 2013-2018. The corresponding estimate of this difference is negative and significantly different from zero at the 5% significance level. This drop was due to an increase of young women's enrollment into vocational and tertiary schools, the corresponding estimates of these differences in 2013-2018 are significantly different from zero at the 1% significance level. Male sample enrollment into vocational schools has also increased, the estimate is significantly different from zero at the 1% significance level. The enrollment of young men into tertiary schools also increased, the corresponding difference estimate is positive and statically different from zero at the 10% significance level. The reform of the admission system for professional education schools has improved the enrollment of young men and women into vocational and tertiary schools.

Table 4. Education and migration status (ages of 16-20), 2007-2018

Status	Year and gender								Differences					
	2007		2009		2013		2018		2007-2009		2013-2018		DiD	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<i>In education:</i>														
Primary or Secondary general	0.4260 [0.0133]	0.2670 [0.0150]	0.4230 [0.0248]	0.2900 [0.0211]	0.4620 [0.0220]	0.4210 [0.0229]	0.4140 [0.0216]	0.3410 [0.0213]	-0.0030 [0.0281]	0.0230 [0.0259]	-0.0480 [0.0308]	-0.0800** [0.0313]	-0.0450	-0.1030
Vocational	0.0313 [0.0046]	0.0165 [0.0041]	0.0471 [0.0103]	0.0201 [0.0059]	0.0253 [0.0061]	0.0276 [0.0067]	0.0738 [0.0119]	0.0755 [0.0133]	0.0158 [0.0113]	0.0036 [0.0072]	0.0485*** [0.0134]	0.0479*** [0.0149]	0.0327	0.0443
Tertiary	0.0894 [0.0091]	0.0318 [0.0046]	0.0914 [0.0140]	0.0305 [0.0061]	0.0826 [0.0093]	0.0345 [0.0060]	0.1150 [0.0148]	0.0824 [0.0130]	0.0020 [0.0167]	-0.0013 [0.0077]	0.0324* [0.0175]	0.0479*** [0.0143]	0.0304	0.0492
<i>Not in education:</i>														
Without professional education	0.3940 [0.0166]	0.6390 [0.0170]	0.3510 [0.0240]	0.6500 [0.0210]	0.2620 [0.0193]	0.4970 [0.0235]	0.2200 [0.0238]	0.4720 [0.0277]	-0.0430 [0.0292]	0.0110 [0.0270]	-0.0420 [0.0306]	-0.0250 [0.0363]	0.0010	-0.0360
With professional education	0.0362 [0.0068]	0.0413 [0.0075]	0.0153 [0.0062]	0.0060 [0.0034]	0.0061 [0.0027]	0.0096 [0.0035]	0.0178 [0.0049]	0.0210 [0.0057]	-0.0209** [0.0092]	-0.0353*** [0.0082]	0.0117** [0.0056]	0.0115* [0.0067]	0.0326	0.0468
<i>Abroad for work:</i>														
Without professional education	0.0214 [0.0051]	0.0035 [0.0017]	0.0672 [0.0139]	0.0030 [0.0021]	0.1200 [0.0156]	0.0027 [0.0018]	0.1140 [0.0140]	0.0028 [0.0017]	0.0458*** [0.0148]	-0.0005 [0.0027]	-0.0060 [0.0210]	0.0001 [0.0025]	-0.0518	0.0006
With professional education	0.0018 [0.0011]	0 [0.0011]	0.0036 [0.0022]	0 [0.0022]	0.0092 [0.0034]	0 [0.0034]	0.0141 [0.0046]	0 [0.0046]	0.0017 [0.0025]		0.0049 [0.0057]		0.0032	0.0000
<i>Abroad for other reasons</i>														
	0.0004 [0.0004]	0 [0.0004]	0.0012 [0.0009]	0 [0.0009]	0.0329 [0.0064]	0.0071 [0.0030]	0.0315 [0.0073]	0.0048 [0.0026]	0.0008 [0.0010]		-0.0014 [0.0097]	-0.0022 [0.0040]	-0.0022	-0.0022
Observations	1804	1995	587	665	1106	1142	636	628						

Sample-weighted standard errors in brackets

Source: Author's calculations from MLCSS (2018)

During the period of 2007-2009, the share of male and female young people who were not in education and stayed in Tajikistan, but have professional education, decreased. The estimates of these differences are negative and statistically significant at the 5% and the 1% significance levels for male and female samples, correspondingly. Young people were forgoing professional education in Tajikistan because of existing opportunities for migration and higher earnings abroad. This situation changed in 2013-2018, these differences of shares become positive, implying that more people having professional education remained in Tajikistan. The estimates of the differences are positive and statistically significant at the 5% and the 10% significance levels, for male and female samples.

The forsaken phenomenon estimated as the share of male migrant workers, who do not have professional education, increased during 2007-2009. The estimate is positive and statistically significant at 1% significance level. There was no increase in share of young people who migrated to Russia without professional education since 2014. This is due to changes in Russian migration policies and the financial crisis, which increased migration costs and decreased real earnings of Tajikistani migrants in Russia, and many young people become less attracted to migrate to Russia for work.

The Russian financial crisis in 2014-2017 and new migration policies reduced the effect of forsaken schooling in Tajikistan. The open-door opportunities for enrollment to professional, both vocation and tertiary, schools through the centralized entry examination system, which provided fair and equal access to professional education in Tajikistan, allowed many young people to continue their schooling. It is important that the government in Tajikistan continues its economic reforms in job creation and a better investment climate, which help to employ its professionalizing young people.

Conclusion

We looked at how the forsaken schooling phenomenon in migration evolved during 2007-2018 in Tajikistan. During this period, Tajikistan experienced two major international crises. The first crisis – the global financial crisis – impacted the country in 2008. The second crisis – the Russian financial crisis – affected Tajikistan in 2014-2017, when the Russian currency underwent a significant devaluation, and there was a large capital outflow from Russia. The forsaken schooling phenomenon increased during the 2008 global financial crisis and continued its increase until 2013. Households in Tajikistan were sending

more than one migrant by including younger members of the households for shorter durations of migration stay. These young migrants did not have professional education.

During the 2014 Russian financial crisis, Russia introduced stricter migration policies, including re-entry bans for those with any administrative violations, tests on the knowledge of Russian history, constitution and language. The number of younger migrants, who have not received Soviet education, and have less knowledge of joint Soviet history, decreased. The share of elder migrants without professional education who graduated from Soviet schools, speak Russian fluently, and have well-established networks, and longer employment contracts, increased during the crisis of 2014-2017.

In contrast to the 2008 global financial crisis conditions in Russia, because of economic downturn the Russian Government chose to tighten its migration policies, imposing new administrative barriers for migrants from January 2015 such as reentry bans for migrants who had administrative violations, using biometric passports for entry to Russia, and a new work permission patent system with compulsory tests. These new policies, along with the significant number of migrant workers on the reentry ban list, decreased labor outmigration from Tajikistan, reduced the size of remittances, and increased the pressure on domestic labor market.

On other hand, the new opportunities for enrollment to professional, both vocation and tertiary, schools through the centralized entry examination system, which provided fair and equal access to professional education in Tajikistan, allows many young people to continue their schooling. The enrollment of young people, especially young women, to professional schools increased during 2013-2018. Labor migration with forsaken professional schooling and the share of 16-20 years old people without professional education, who were not in education but remained in Tajikistan has decreased. It is important that the migrant sending countries like Tajikistan continue their efforts on promoting equity and integrity in education and economic reforms directed at the creation of job places and investment climate, which help to employ it professionalizing young citizens.

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