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# Civil war, famine and the persistence of human capital: Evidence from Tajikistan

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## What this paper does

- ▶ Focuses on southern border regions, GBAO and Khatlon
- ▶ Compares Afghan-Tajik regions on border, and Khatlon-GBAO
- ▶ Examines how adult heights, education changed after Soviet breakup, civil war
- ▶ Early childhood education child anthropometry scores from MICS, DHS
- ▶ Shows persistence of early childhood advantages of GBAO children

# Literature

- ▶ A Sen (1981) “Ingredients of famine analysis: Availability and entitlements” QJE
- ▶ A Alesina and N Fuchs-Schündeln (2003) “Goodbye Lenin or Not? ...” AER
- ▶ C Blattman and E Miguel (2010) “Civil War” JEL
- ▶ O Shemyakina (2011) “The effect of armed conflict on accumulation of schooling: Results from Tajikistan” JDE
- ▶ R Akresh, S Bhalotra M Leone, and UO Osili (2012). “War and stature: Growing up during the Nigerian civil war” AERPP



## Stylised facts:

- ▶ Tajik peoples at the Panj and Amu Darya rivers between Britain and Russia in 1895
- ▶ Afghan side initially more developed
- ▶ Maintained as an impermeable border from 1930s until 1991, again after Civil War
- ▶ Tajik side was geo-strategically very important to Soviet Union
- ▶ Food subsidised in Soviet times as part of industrialisation strategy
- ▶ Investments in irrigation and cotton (“white gold”) in Khatlon.
- ▶ Forced population transfers of Pamiris to Khatlon under Stalin

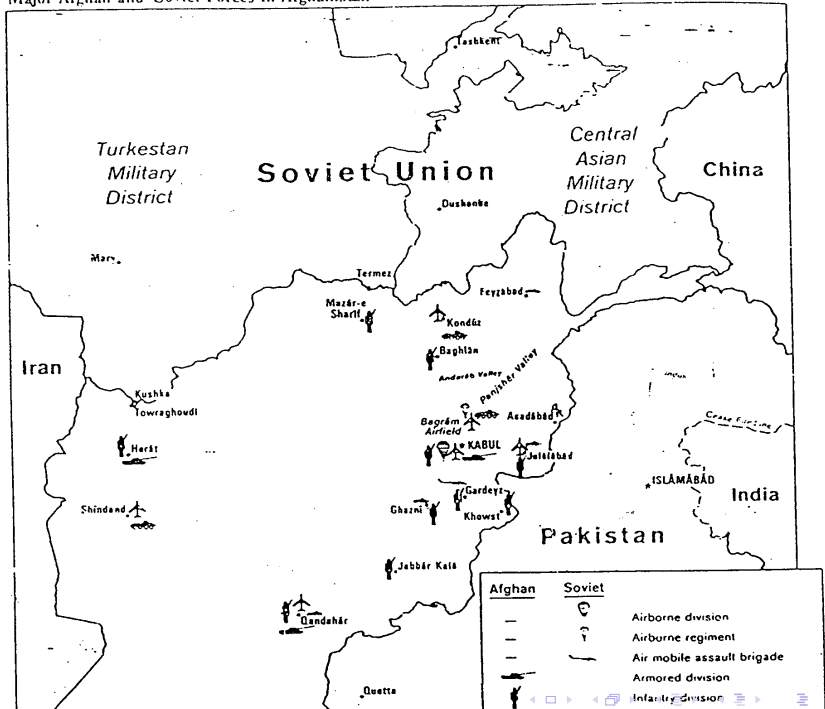


# War, refugees, reconstruction, policies

- ▶ Mujahadeen, then Soviet military base in Fayzabad from 1980
- ▶ Tajikistan, civil war 1992-97
- ▶ Some refugee flows (both ways) in 90s, early 2000s
- ▶ Governmental, AKDN, other NGO activity on both sides in Badakhshan since Soviet collapse



Major Afghan and Soviet Forces in Afghanistan



Afghan	Soviet	
—	⊕	Airborne division
—	⊖	Airborne regiment
—	→	Air mobile assault brigade
—	—	Armored division
⊕	⊖	Infantry division

# What can we learn from adult stature data about late Soviet era childhoods?

- ▶ Height reflects nutrition and disease conditions in childhood
- ▶ Women achieve adult at about age 15
- ▶ Almost no ethnic component of height

# The Soviet Experiment at the Tajikistan-Afghanistan border

- ▶ Adult stature data of women aged 15-49
- ▶ Gorno-Badakhshan Autonomous Oblast (GBAO), Tajikistan and Badakhshan Province, Afghanistan
- ▶ Khatlon Province Tajikistan and Kunduz, Balkh Provinces Afghanistan
- ▶ Three groups for analysis: pre-1977 births, 1977-1991 births and post-1991 birth cohorts

## Nationally-representative survey data

- ▶ Tajikistan 2012, 2017 Demographic and Health Surveys (DHS) and Afghanistan Multiple Indicator Cluster Surveys (MICS) 2010-11, Afghanistan National Nutrition Survey (NNS) Tajikistan MICS 2005/06
- ▶ Labour market, anthropometry, fertility, household violence, bargaining power
- ▶ Women aged 15-49, children surveyed
- ▶ Freely available: *measureddhs.com*, *www.mics.unicef.org*

# Late Soviet Policies

- ▶ “Moscow Provisions”, education, labour market opportunities in GBAO
- ▶ Healthcare, family planning
- ▶ *Hujum*
- ▶ Disease environment
- ▶ Electricity, water, infrastructure, industrialisation . . .
- ▶ Infrastructure for cotton in Khatlon

Table 2: Heights of women by birth year in Afghanistan and Tajikistan

	<u>Badakhshan</u>			<u>Khatlon, Kunduz and Balkh</u>		
	<b>Pre-1977</b>	<b>1977-1991</b>	<b>1992 and later</b>	<b>Pre-1977</b>	<b>1977-1991</b>	<b>1992 and later</b>
<b>Afghanistan</b>						
	153.4763	158.4509	156.5350	154.0342	154.0314	152.8811
	(1.124)	(0.988)	(1.334)	(0.573)	(0.422)	(0.392)
<b>Tajikistan</b>						
	159.0184	158.6748	157.7396	157.8352	157.8033	157.0099
	(0.282)	(0.221)	(0.278)	(0.188)	(0.133)	(0.140)
<b>Difference (Tajikistan-Afghanistan)</b>						
	5.5421***	0.2239	1.2046	3.8010***	3.7719***	4.1288***
	(1.151)	(1.009)	(1.354)	(0.602)	(0.442)	(0.416)

Table 4: Heights and educational attainment of women in southern border regions by birth cohort

	<u>Year of birth</u>		
	<u>Pre-1977</u>	<u>1977-1991</u>	<u>1992 and later</u>
<b>PANEL A: Adult height in centimetres</b>			
<b><u>GBAO</u></b>			
	159.018	158.610	157.740
	(0.282)	(0.216)	(0.278)
<b><u>Khatlon</u></b>			
	157.835	157.803	156.987
	(0.188)	(0.133)	(0.138)
<b>Difference (GBAO-Khatlon)</b>			
gbao	1.183***	0.806***	0.753**
	(0.339)	(0.254)	(0.310)
<b>PANEL B: Years of schooling completed</b>			
<b><u>GBAO</u></b>			
	11.603	12.544	11.891
	(0.090)	(0.093)	(0.131)
<b><u>Khatlon</u></b>			
	9.947	9.096	10.081
	(0.072)	(0.072)	(0.082)
<b>Difference (GBAO-Khatlon)</b>			
gbao	1.656***	3.448***	1.809***
	(0.115)	(0.118)	(0.154)

Table 8: Early childhood outcomes in southern border regions of Tajikistan

<b>PANEL A: Early childhood education</b>				
<b>Read books</b>	0.206*** (0.025)	0.206*** (0.026)	0.165*** (0.028)	0.137*** (0.029)
<b>Told stories</b>	0.233*** (0.026)	0.227*** (0.027)	0.200*** (0.030)	0.154*** (0.030)
<b>Sang songs</b>	0.084*** (0.021)	0.088*** (0.022)	0.069*** (0.023)	0.045* (0.024)
<b>Any outside</b>	0.037** (0.018)	0.041** (0.020)	0.039* (0.022)	0.016 (0.022)
<b>Play</b>	0.082*** (0.017)	0.084*** (0.018)	0.092*** (0.020)	0.065*** (0.020)
<b>Naming</b>	0.016 (0.029)	0.014 (0.030)	0.009 (0.032)	-0.029 (0.032)
<b>PANEL B: Anthropometric outcomes</b>				
<b>Stunting</b>	0.005 (0.027)	0.004 (0.028)	0.014 (0.030)	0.026 (0.031)
<b>Wasting</b>	-0.018 (0.023)	-0.020 (0.023)	-0.028 (0.026)	-0.011 (0.025)
<b>Underweight</b>	-0.051*** (0.015)	-0.048*** (0.015)	-0.051*** (0.016)	-0.049*** (0.017)
Other controls:				
Age months*sex	no	yes	yes	yes
Mother's ed.	no	no	yes	yes
hhld. wealth quantile	no	no	no	yes



# Conclusions

- ▶ GBAO women about 3-4 cm shorter in post-Soviet cohorts
- ▶ Educational advantages in GBAO persist across post-war, famine cohorts
- ▶ Soviet legacy of greater height quickly disappeared in GBAO but not in Khatlon
- ▶ Children under 60 months in GBAO receive much more ECE from parents than in Khatlon
- ▶ Stunting, wasting, underweight levels high, but not worse in GBAO than Khatlon
- ▶ Results consistent with stronger need to invest in human capital of future migrants where agricultural conditions poor
- ▶ “Quantity-quality” differences persist across southern border regions