

Столица Дарваза Қалаи-хумъ на р. Пянджъ.

Изображение: В. Липский, С. Штерман, Издательство «Искусство», М., 1974.  
Снимок: В. Липский.

# The Soviet Union and the Status of Women in Central Asia

Louise Grogan  
University of Guelph,  
University of Central Asia (UCA), and IZA (Bonn)

October 23rd and 24th 2019  
Life In Kyrgyzstan Conference (LiK), UCA Bishkek

# How can we assess the legacy of the Soviet Union for the status of women in Central Asia?

- ▶ Case studies, descriptive and ethnographic reports
- ▶ Randomised Control Trials (RCTs)
- ▶ Natural experiments



# We need to construct a counterfactual

What would have happened in Badakhshan in the absence of the Soviet Union?

- ▶ Divided by the Panj between Britain and Russia in 1895
- ▶ Afghan side initially more developed
- ▶ Maintained as an impermeable border from 1930s until 1991
- ▶ Afghan side had very little contact with central governments in Kabul
- ▶ Tajik side was geo-strategically very important to Soviet Union



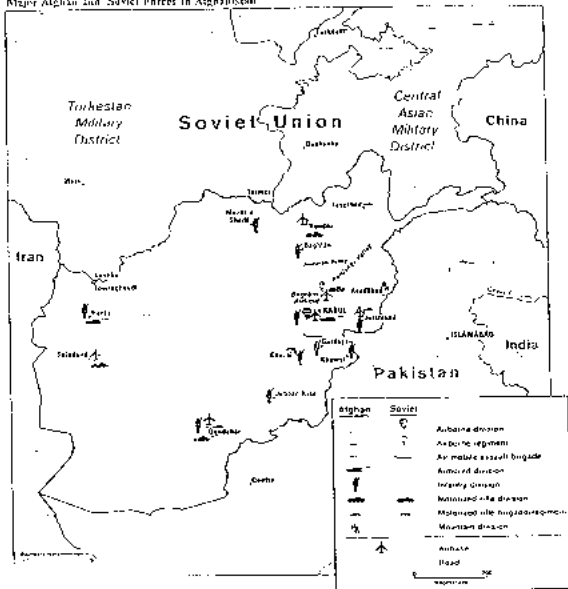


# War, refugees, reconstruction, policies

- ▶ 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 since Soviet collapse
- ▶ Nevertheless ...



Figure 3  
Major Afghan and Soviet Forces in Afghanistan



# The Natural Experiment

- ▶ Women in Badakhshsan in 2010-17
- ▶ Gorno-Badakhshan Autonomous Oblast (GBAO), Tajikistan and Badakhshan Province, Afghanistan
- ▶ Two groups for analysis: Women who grew up in time of Soviet Union, post-1991 birth cohorts

# What are the potential channels for effects?

- ▶ “Moscow Provisions”, education, labour market opportunities
- ▶ Healthcare, family planning
- ▶ *Hujum*
- ▶ Disease environment
- ▶ Electricity, water, infrastructure, industrialisation ...

# Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS)

- ▶ Labour market, anthropometry, fertility, household violence, bargaining power
- ▶ Women aged 15-49, children surveyed
- ▶ Afghanistan, Tajikistan. . . and also Kyrgyzstan, Uzbekistan, Kazakhstan
- ▶ GIS information → proximity of respondents to Panj River
- ▶ Freely available: *measureddhs.com*, *www.mics.unicef.org*  
Tajikistan 2012, 2017 DHS and Afghanistan MICS 2010-11, 2015 DHS surveys.

# What the economist wants to do

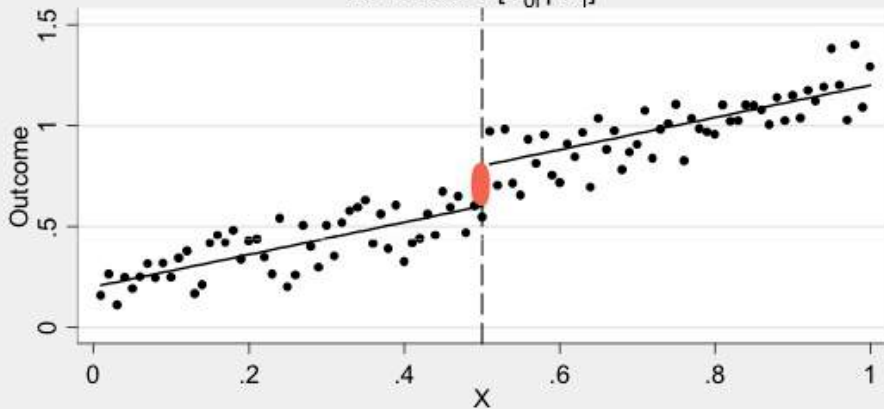
- ▶ Think of “treatments” and “controls”
- ▶ Estimate a multivariate regression model
- ▶ Use the natural experiment created by the 1895 border in the regression
- ▶ Allow for possibility that being “right on the river” has some direct effects on wellbeing

# Regression Discontinuity

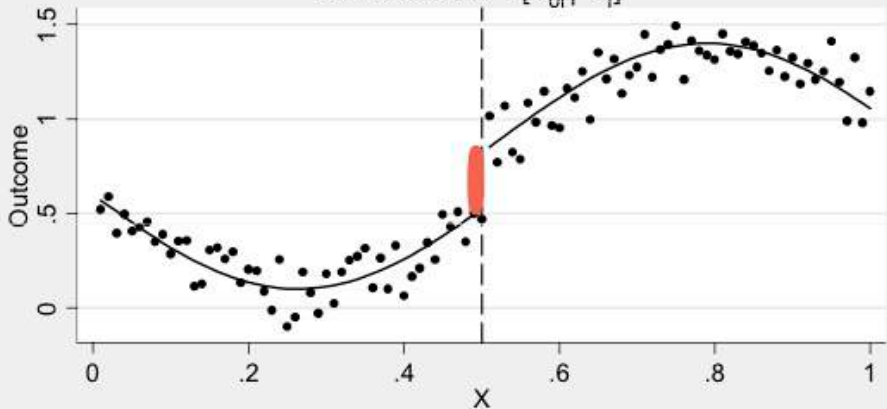
$$OUTCOME_i = \beta_0 + \beta_1 DISTPANJ + \beta_2 SOVIETUNION + \dots + \epsilon_i$$

$OUTCOME_i \in$  (height, weight, underweight, education, employment, fertility, health, bargaining power, violence ...).

### A. Linear $E[Y_{0i} | X_i]$

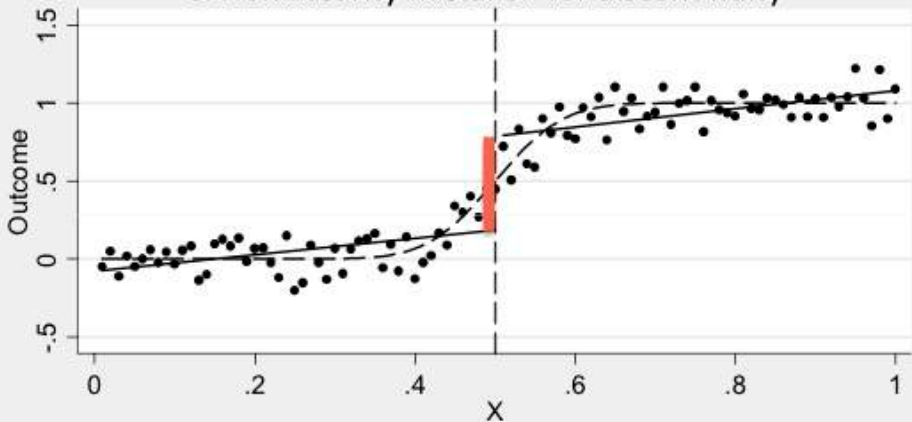


### B. Nonlinear $E[Y_{0i} | X_i]$





### C. Nonlinearity mistaken for discontinuity



# What can we learn from adult anthropometric data?

- ▶ Height reflects nutrition and disease conditions in childhood
- ▶ Women achieve adult at about age 15
- ▶ Almost no ethnic component of height
- ▶ Weight informs about nutrition, disease and living standards now.

Table 1: Anthropometric outcomes of women born before 1976

	Height (cm)	Weight (kg)	Underweight BMI<18.5
<b>Badakhshan Province, Afghanistan</b>			
	154.264	51.543	0.135
	(0.94)	(0.84)	(0.04)
No.obs	74	74	74
<b>GBAO, Tajikistan</b>			
	157.628	65.348	0.049
	(0.28)	(0.65)	(0.01)
No.obs	664	664	664
<b>Difference</b>			
	3.628***	14.773***	-0.080*
	(1.21)	(1.16)	(0.05)

**Table 2:** Regression discontinuity estimates of causal effect of the Soviet Union on height, women in Badakhshan born before 1976

<b>OLS: Dependent variable is height (cm)</b>		
Soviet Union	4.522*** (0.54)	3.545*** (0.63)
distance Panj (km/100)	-0.475*** (0.12)	-0.239* (0.14)
rural		-1.026*** (0.27)
R <sup>2</sup>	0.01	0.01
No. obs.	5044	5044

Table 3: Mean socioeconomic characteristics of women born before 1976

	Married/ Widowed	Currently works	Years of school	Total children	Child died	Age at marriage
<b>Badakhshan Province, Afghanistan</b>						
	0.999 (0.00)	0.010 (0.01)	0.366 (0.10)	6.827 (0.17)	1.236 (0.10)	17.984 (0.31)
N	285	285	285	285	285	285
<b>Gorno-Badakhshan Autonomous Region, Tajikistan</b>						
	0.906 (0.01)	0.397 (0.03)	11.821 (0.12)	3.108 (0.09)	0.188 (0.03)	22.680 (0.28)
N	391	391	389	391	391	368
<b>Difference</b>						
	-0.093*** (0.01)	0.388*** (0.03)	11.455*** (0.15)	-3.720*** (0.19)	-1.048*** (0.10)	4.696*** (0.42)

**Table 4:** Means of socioeconomic characteristics for women aged 18-25 in Badakhshan in 2015

	married/ widowed	works currently	yrs of schooling	no. children born
<b>Badakhshan Province, Afghanistan</b>				
	1.000	0.019	3.888	1.618
	.	(0.01)	(0.29)	(0.09)
No.obs	291	280	280	280
<b>Gorno-Badakhshan Autonomous Region, Tajikistan</b>				
	0.397	0.162	12.129	0.510
	(0.04)	(0.03)	(0.19)	(0.06)
No.obs	197	197	196	197
<b>Difference</b>				
	-0.603***	0.143***	8.241***	-1.108***
	(0.04)	(0.03)	(0.35)	(0.11)

Table 5: Socioeconomic outcomes for married woman aged 18-25

	hhld	working	In the last week, respondent:		
	size	currently	read	listened	watched
			newspaper	radio	TV
<b>Badakhshan Province, Afghanistan</b>					
	8.881	0.019	0.082	0.170	0.222
	(0.31)	(0.01)	(0.02)	(0.02)	(0.03)
No.obs	280	280	280	280	280
<b>Gorno-Badakhshan Autonomous Region, Tajikistan</b>					
	6.955	0.146	0.615	0.190	0.988
	(0.27)	(0.04)	(0.06)	(0.05)	(0.01)
No.obs	78	78	78	78	78
<b>Difference</b>					
	-1.926***	0.127***	0.533***	0.020	0.766***
	(0.42)	(0.04)	(0.06)	(0.05)	(0.03)

**Table 6:** Married woman aged 18-25 agrees that husband justified in beating wife if ...

	goes out without permission	neglects children	argues w. husband
<b>Badakhshan Province, Afghanistan</b>			
	0.777	0.752	0.763
	(0.03)	(0.03)	(0.03)
No.obs	280	280	280
<b>Gorno-Badakhshan Autonomous Region, Tajikistan</b>			
	0.507	0.590	0.392
	(0.06)	(0.06)	(0.06)
No.obs	78	78	78
<b>Difference</b>			
	-0.270***	-0.163**	-0.371***
	(0.06)	(0.06)	(0.06)



**Table 7:** Married woman aged 18-25 agrees that husband justified in beating wife if ...

	goes out without permission	neglects children	argues w. husband
<b>Kyrgyzstan</b>			
	0.295 (0.01)	0.335 (0.02)	0.209 (0.01)
No.obs	1324	1324	1324
<b>Tajikistan</b>			
	0.608 (0.01)	0.549 (0.01)	0.556 (0.01)
No.obs	3724	3724	3724
<b>Difference</b>			
	0.313*** (0.02)	0.214*** (0.02)	0.346*** (0.02)

**Table 8:** Adult height in centimetres, pre- and post-1991 birth cohorts in Central Asia

	<b>Tajikistan</b>	<b>Kyrgyzstan</b>	<b>Afghanistan</b>
<b>born before 1991</b>			
	158.147	159.775	155.125
	(0.06)	(0.11)	(0.14)
No.obs	11099	4482	5057
<b>born in 1991 or later</b>			
	157.486	159.806	153.392
	(0.07)	(0.11)	(0.18)
No.obs	9192	3618	3075
<b>Difference</b>			
	-0.661***	0.001	-1.733***
	(0.09)	(0.15)	(0.23)

## Do women still work more in FSU countries of Central Asia?

	<b>GDP pc at PPP 2017</b>	<b>Female Employment % women aged 18-55</b>
Afghanistan	1 981	12
India	7 056	24
<b>Kazakhstan</b>	<b>26 410</b>	<b>74</b>
<b>Kyrgyzstan</b>	<b>3 394</b>	<b>44</b>
Nepal	2 683	22
Pakistan	5 527	23
<b>Tajikistan</b>	<b>3 354</b>	<b>41</b>
<b>Uzbekistan</b>	<b>6 865</b>	<b>40</b>

# Conclusions

- ▶ Natural experiment of division of Badakhshan by Russian and British Empires
- ▶ Compare outcomes of women aged 15 before 1976, women aged 18-25 on either side of Panj
- ▶ Soviet legacy of more schooling, higher ages at marriage, fewer children, more employment and greater height
- ▶ Married women aged 18-25 more access to information, autonomy in GBAO than in Badakhshan
- ▶ Height data for Tajikistan, Afghanistan suggests decline in living conditions during childhood since 1991

Thank-you!



Ущелье р. Пяндж в Дарвазъ возлѣ афганской крѣпости Шикай.

