

What factors support the early age patterns of fertility in a developing country: the case of Kyrgyzstan

Vladimir Kozlov

National Research University – Higher School of Economics, Moscow

vakozlov@hse.ru

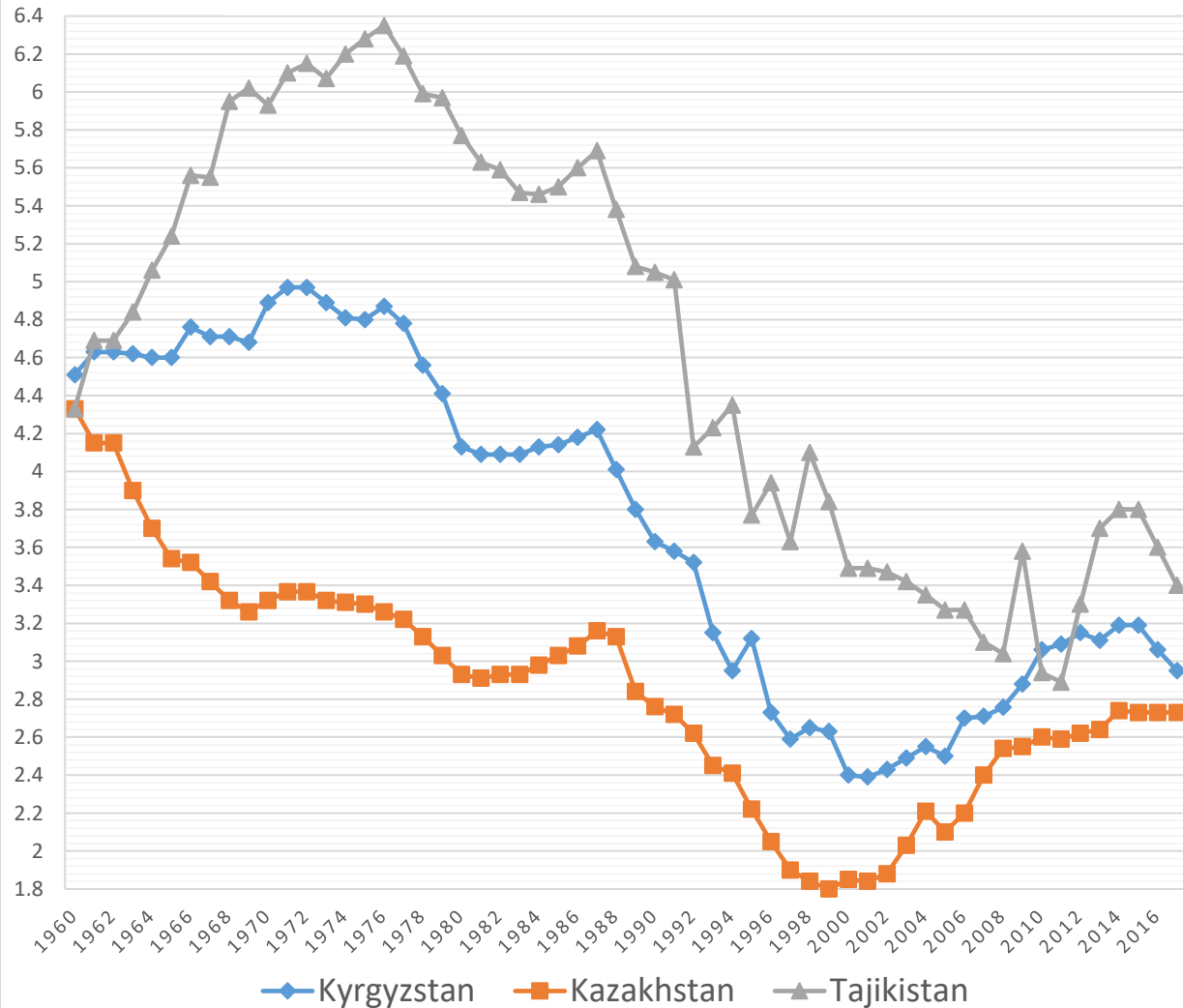
Konstantin Kazenin

Russian Academy for National Economy and Public Administration, Moscow

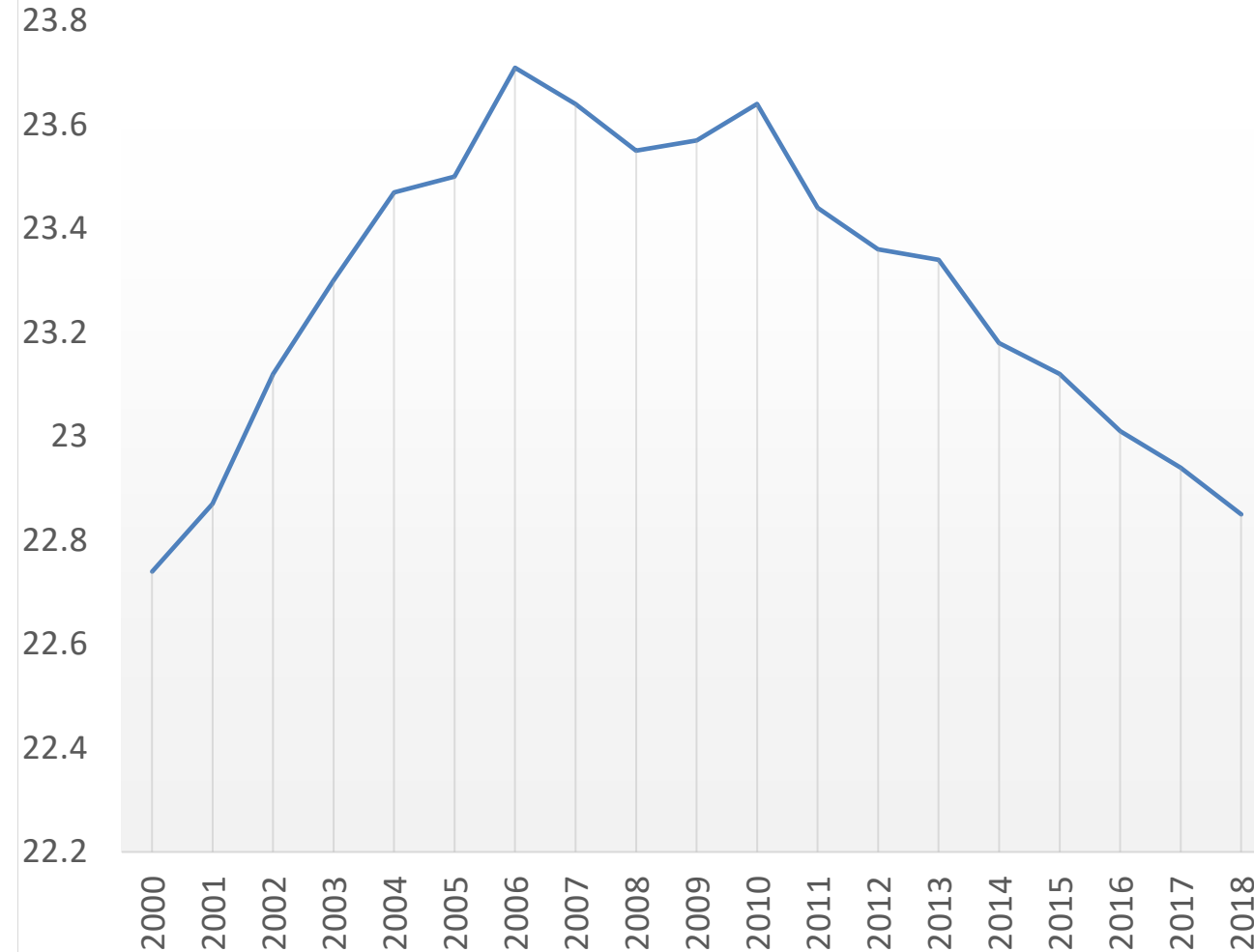
kz@ranepa.ru

Post-Soviet countries and demographic transition

TFR



MAB 1, Kyrgyzstan



Research problem

- The stable trend for maternity ageing in Post-Socialist countries since 1990-s - a 2nd Demographic transition (Frejka 2008, Frejka et al. 2016;) The cases are following: (Russia – Zakharov 2008; Ukraine – Perelli-Harris 2008, Baltic states – Puur et al. 2009).
- **However in the Central Asia it looks like that the “young” fertility models exists (Spoorenberg 2015, 2017, 2018)**

Goals:

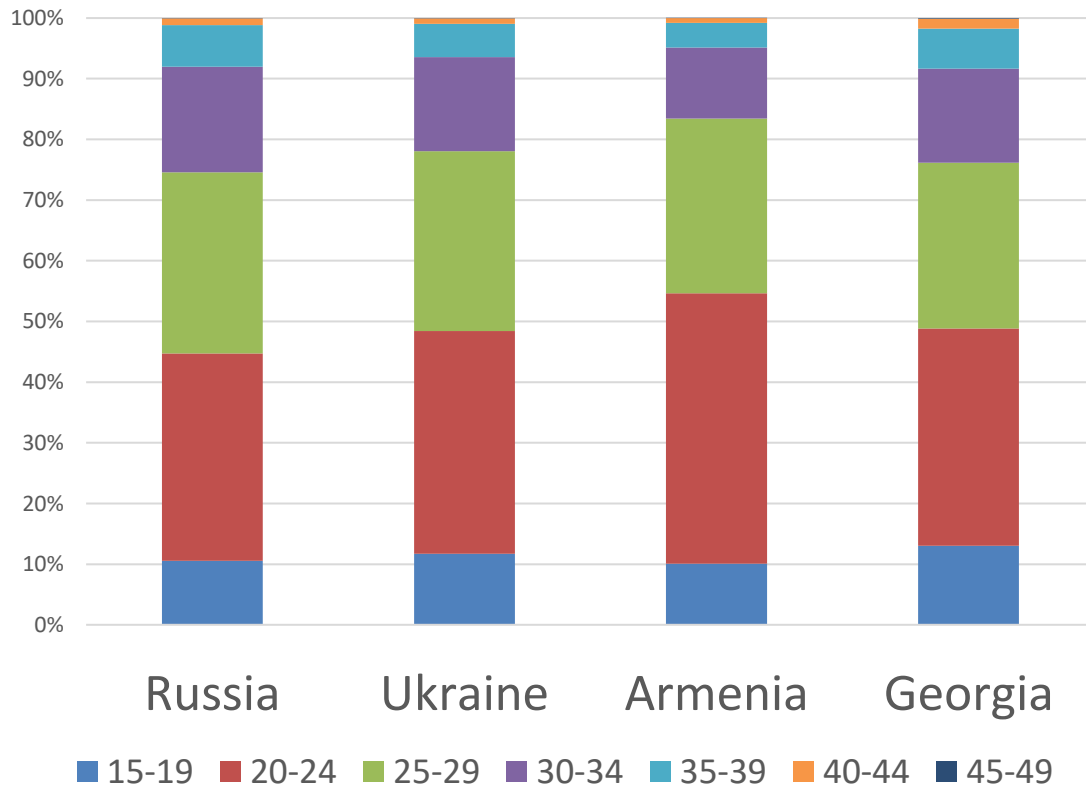
- To find the factors supporting the “young” model of fertility in Kyrgyzstan.
- To distinguish the statistical facts from the possible artefacts

Official statistics

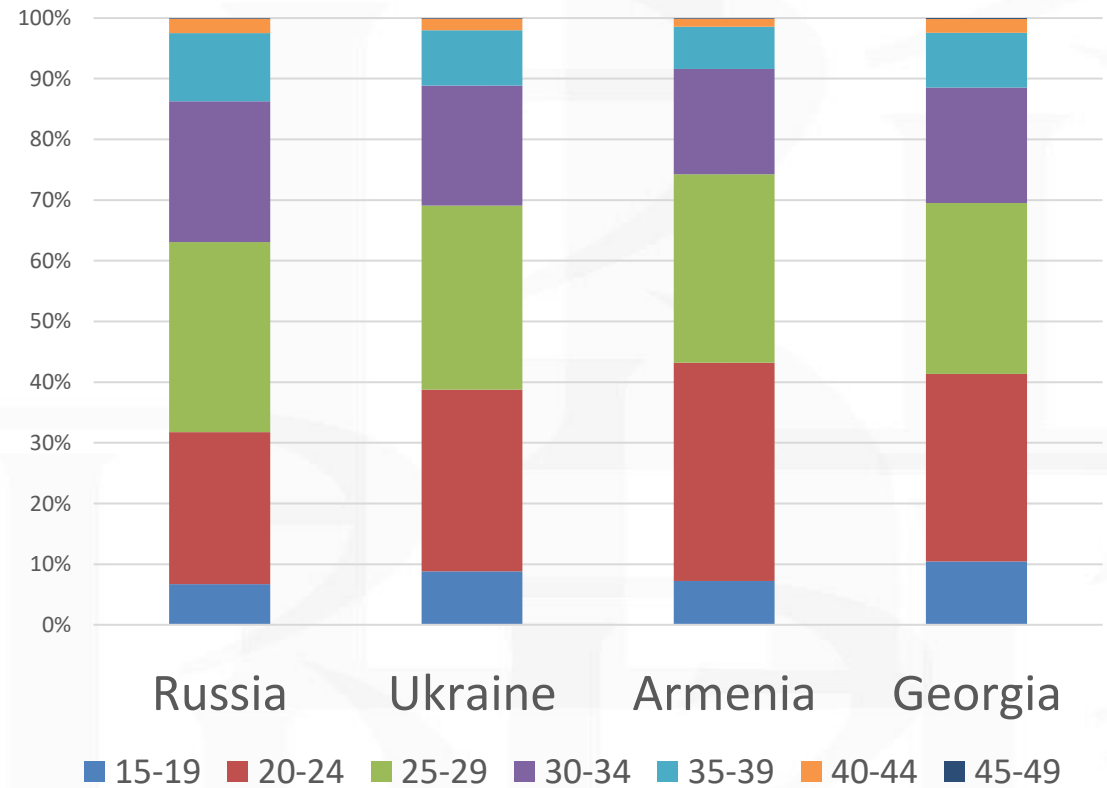
- ASFR for 5-year groups → National statistical offices
- MAB → National statistical offices and MICS & DHS
- NB! There are not so many countries with observed “young” fertility patterns and reliable statistics

ASFRs impacts in TFR: Russia, Ukraine, Armenia, Georgia (%)

2004-2006

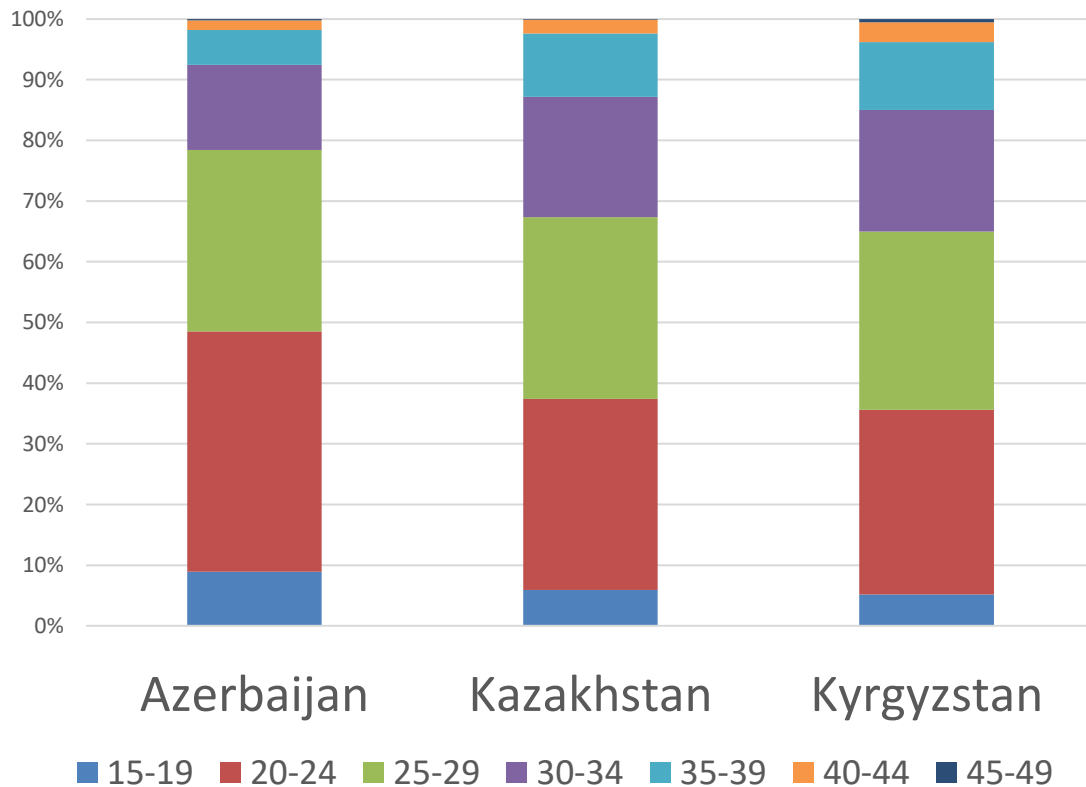


2014-2016

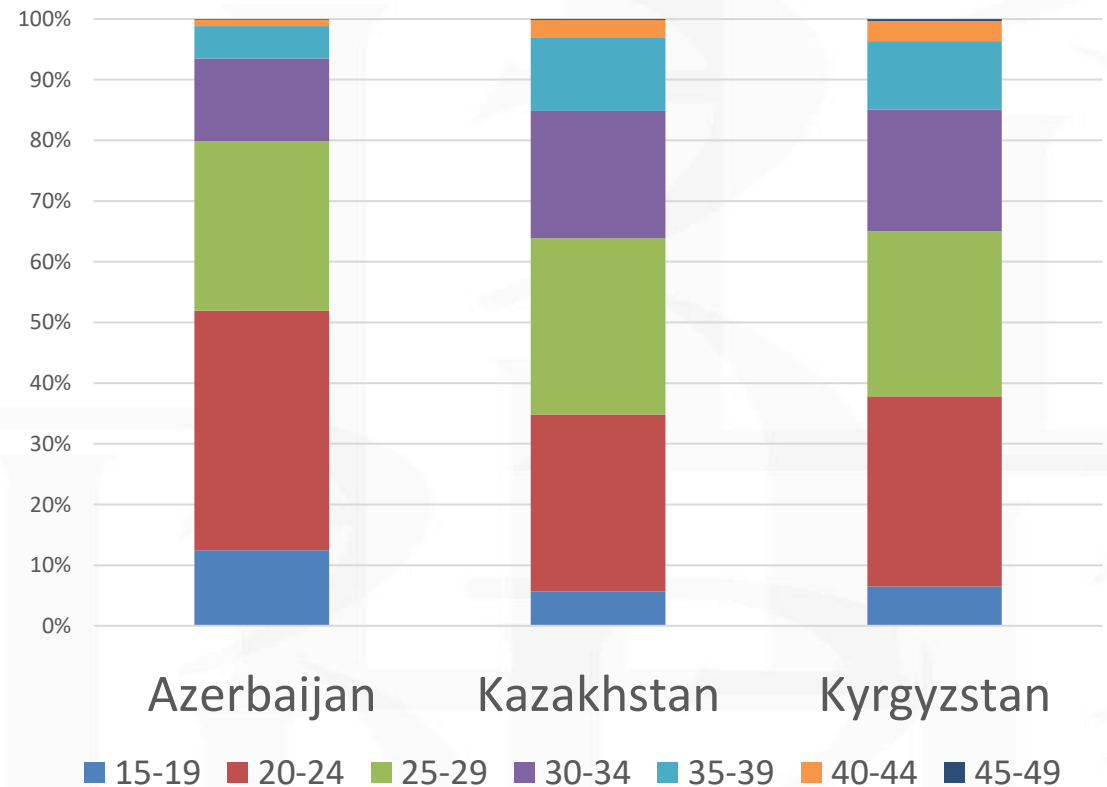


ASFRs impacts in TFR: Azerbaijan, Kazakhstan, Kyrgyzstan (%)

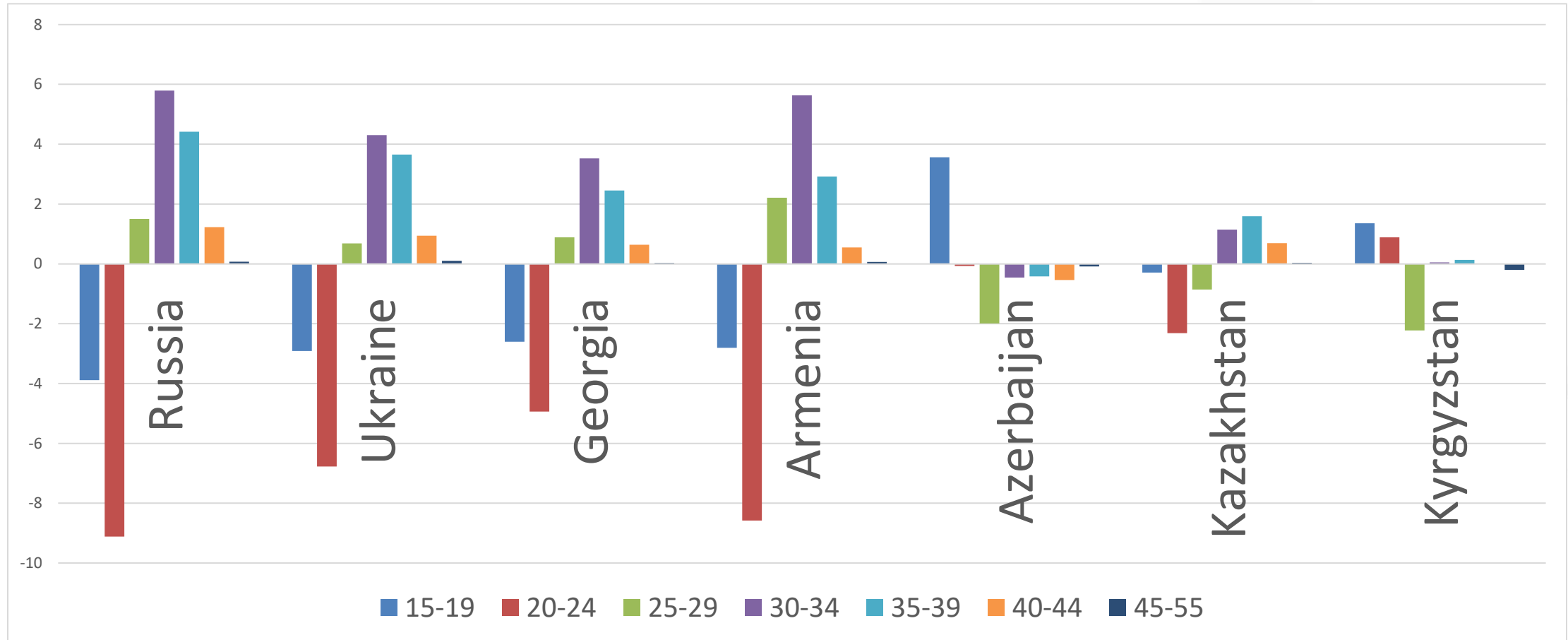
2004-2006



2014-2016



Difference between shares: 2014-16 - 2004-2006



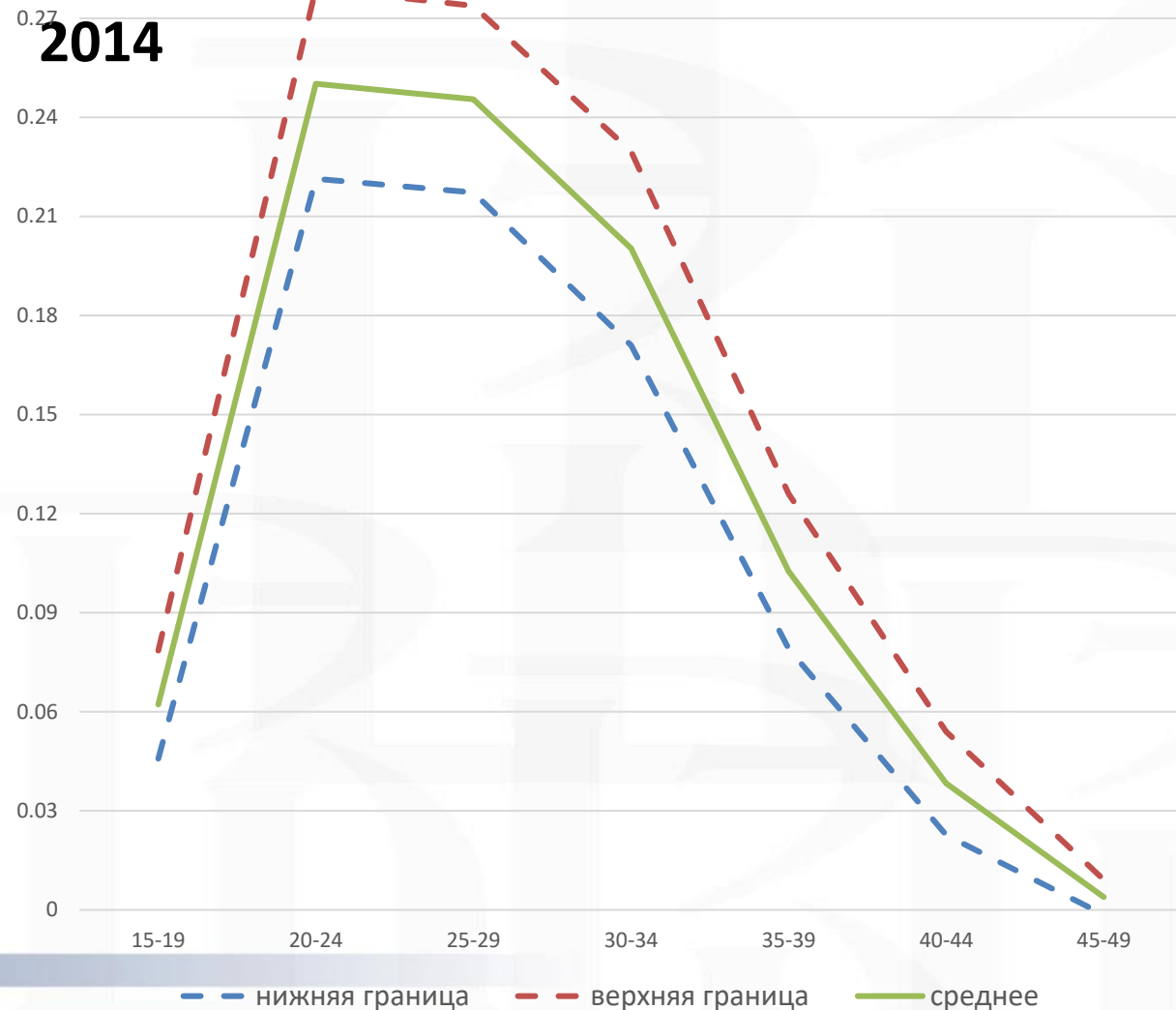
Kyrgyzstan: surveys

- Multiple Index Clusters Survey (MICS), 2005-2006 и 2014; Demography and health survey (DHS), 2012.
- ASFR based on surveys
- Hazard ratios for the childbearing in different cohorts

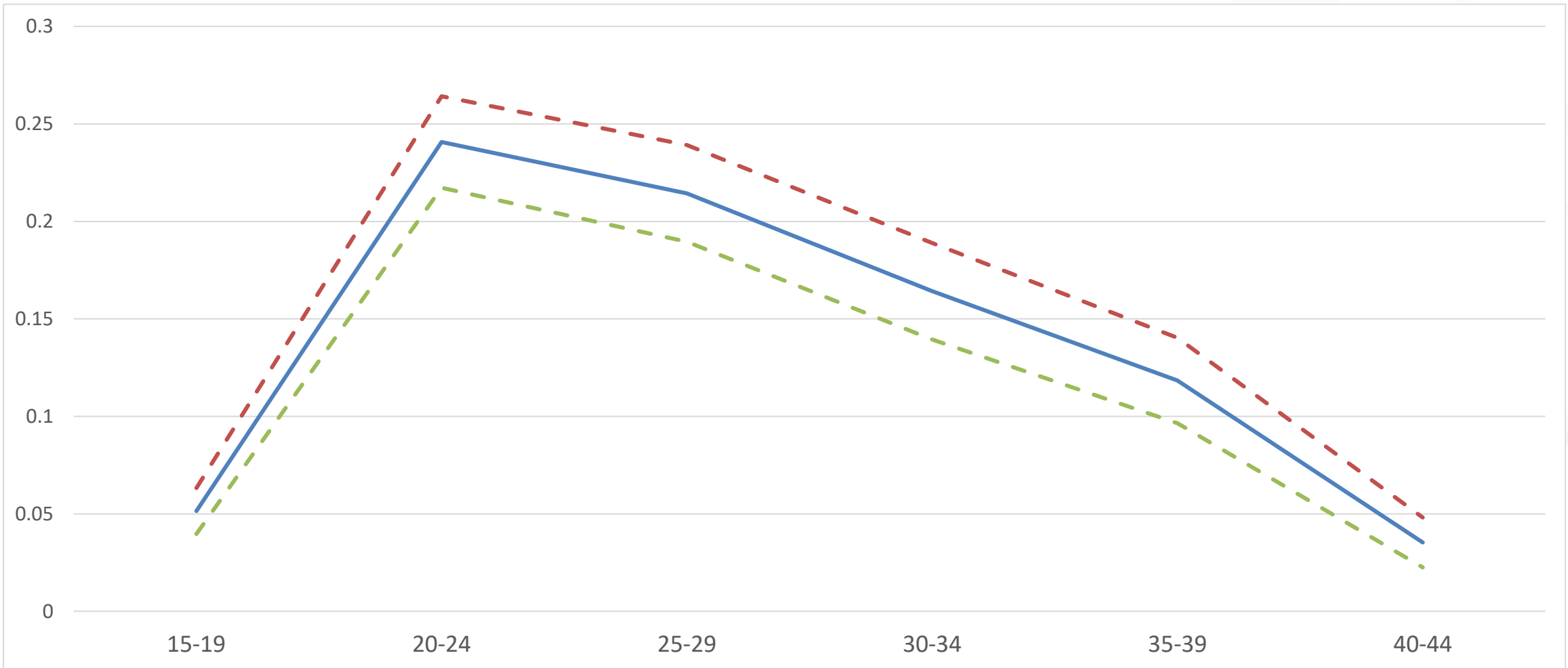
2005-2006



2014



ASFR for Kyrgyz women in Kyrgyzstan, 2011(DHS2012)



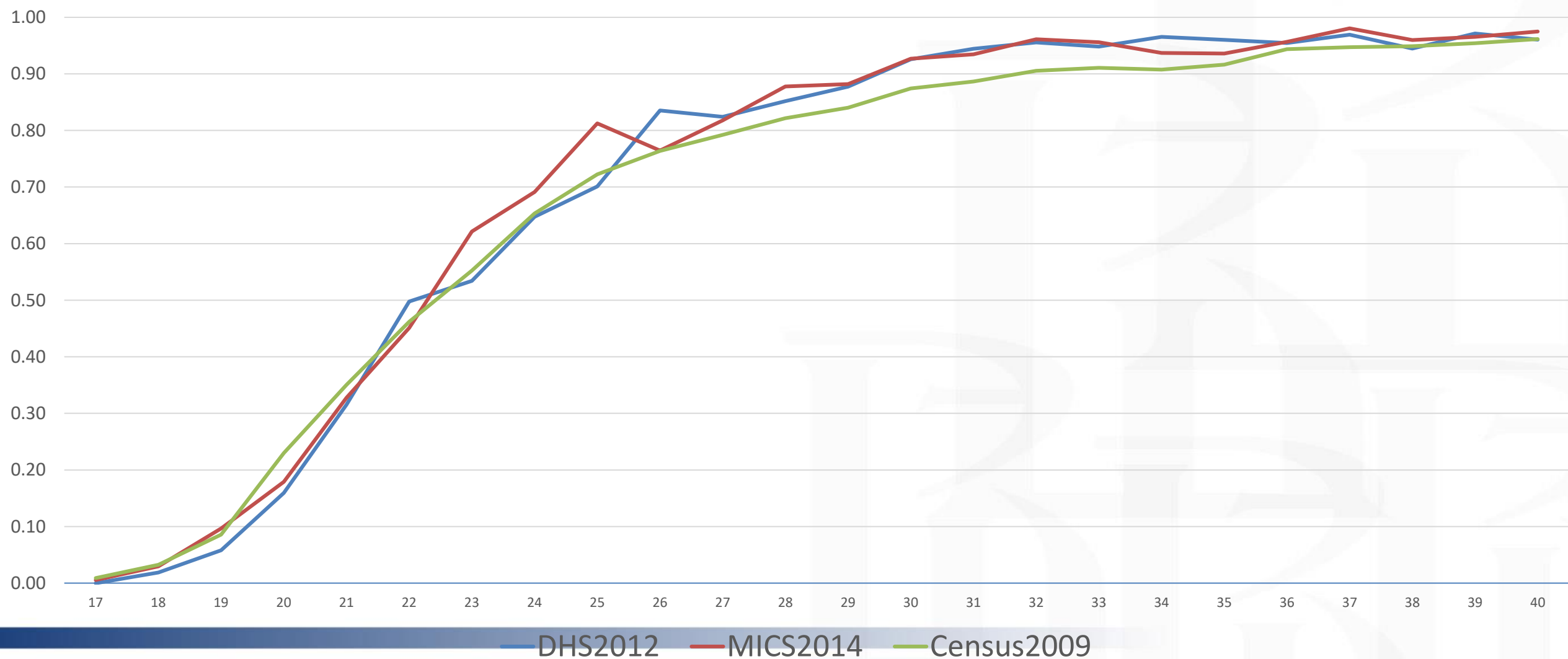
Reliability and validity of surveys:

Overestimated young ages fertility?

Validity: Census (2009) comparing TFR1 in 2009 and surveys data



Cumulative fertility rates for 1st children in 2009 : Census, DHS2012, MICS2014



Factors identification

- Proportional hazard models (Cox regressions) for transition to the chikdbearing
- With the cohort as an independent parameter
- Education, nationality, wealth are social-demographic factors

Real cohorts, Kyrgyz women, DHS2012

Birth cohort	(1)	(2)
1965-69	1	1
1970-74	1,117**	1,080
1975-79	1,180***	1,133**
1980-84	0,936	0,932
1985-89	0,881**	0,898**
1990-94	0,948	0,984
1995-98	Not enough obs.	Not enough obs.
Area		
Urban		1
Rural		1,404***
Education		
No higher education		1
Higher education		0,679***
Chi-square	47,033***	335,804***
-2Log Likelihood	60549,612	60258,972
N	5797	5797

Real cohorts, Russian women, DHS2012

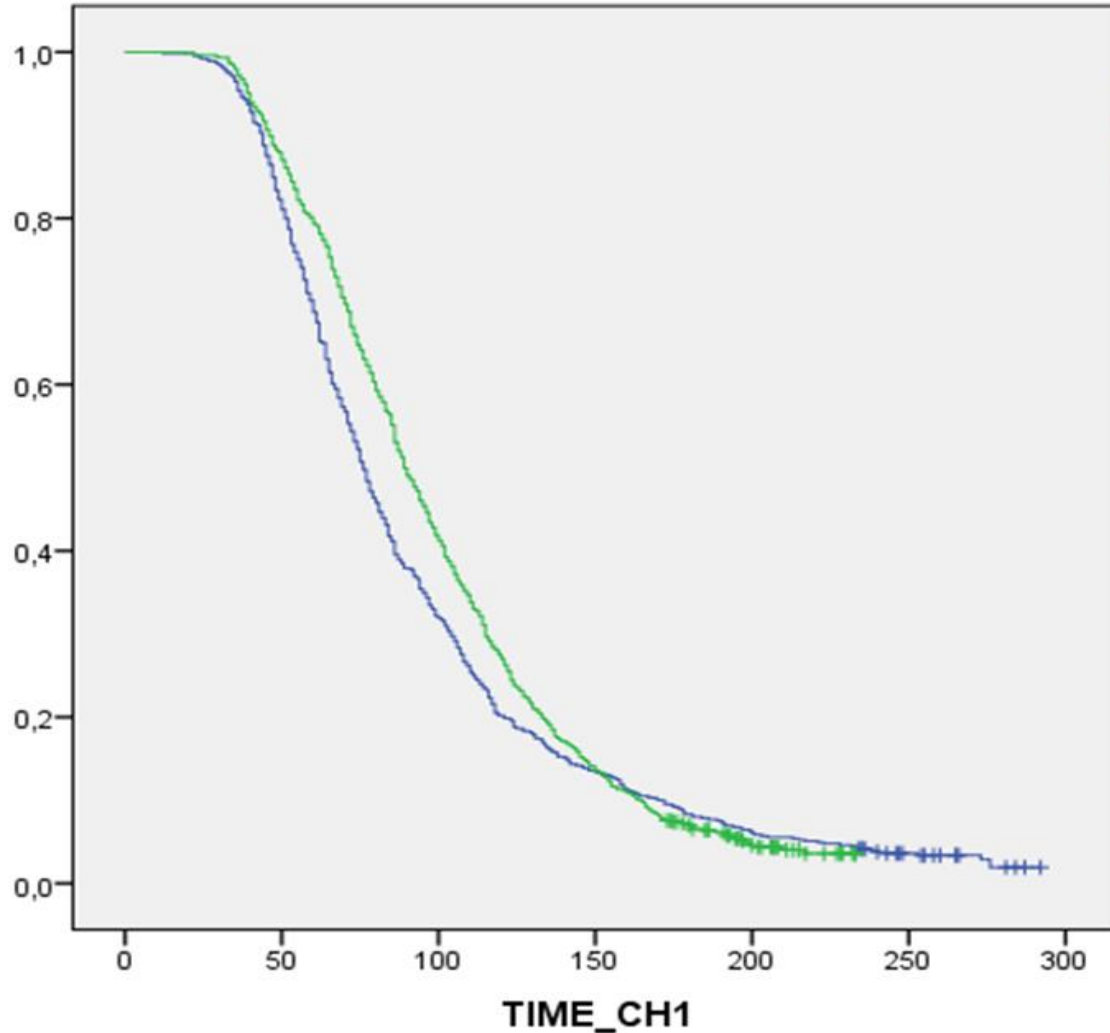
Birth cohort	(1)	(2)
1965-69	1	1
1970-74	1,014	1,022
1975-79	0,761	0,688**
1980-84	0,865	0,798
1985-89	0,518**	0,517***
1990-94	0,441**	0,416**
1995-98	Not enough obs.	Not enough obs.
Area		
Urban		1
Rural		1,368**
Education		
No higher education		1
Higher education		0,661**
Chi-square	18,011***	33,458***
-2Log Likelihood	2545,249	2530,384
N	412	412

Real cohorts, Kyrgyz women, MICS2014

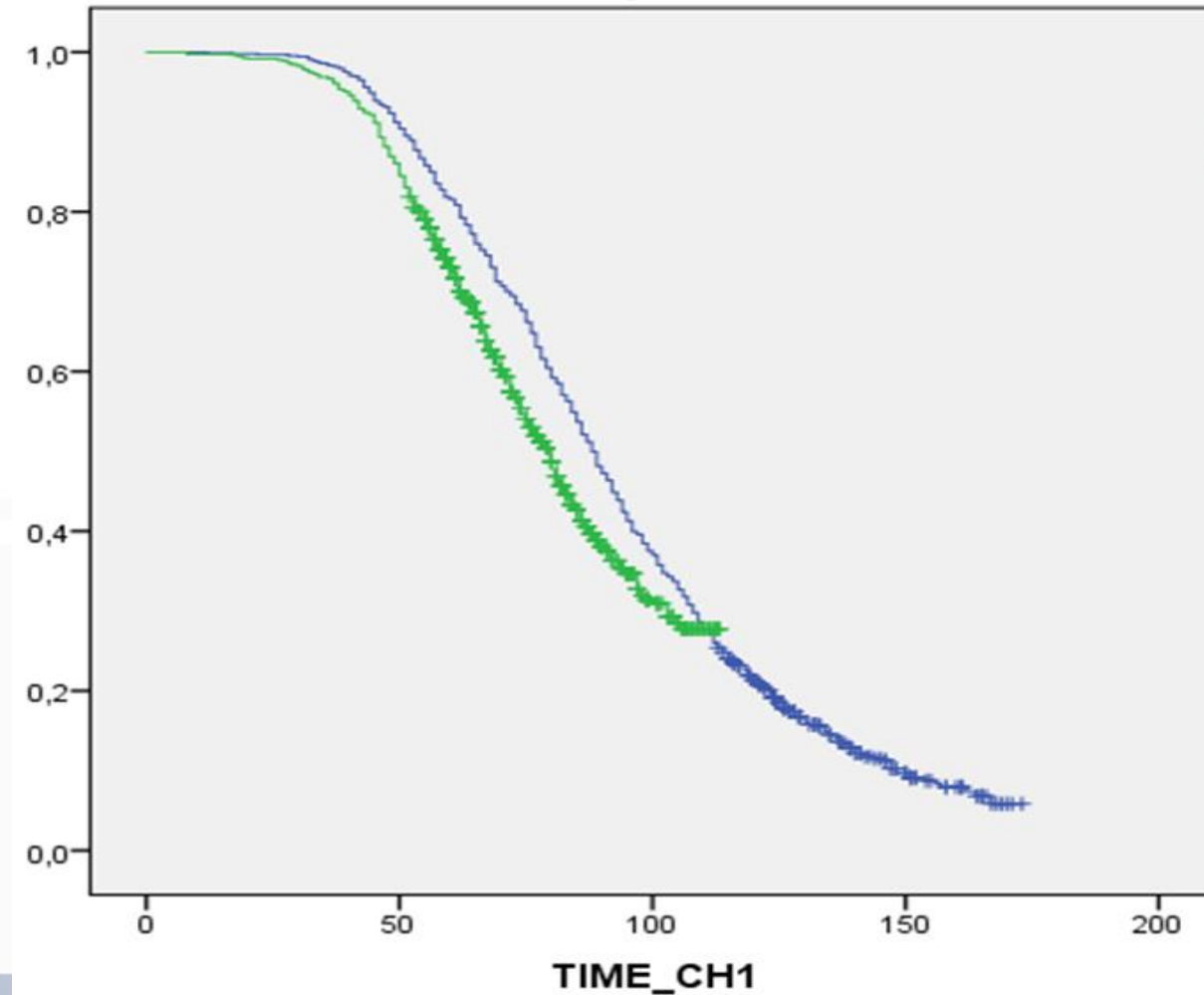
	(1)	(2)	(3)
Birth cohort			
1965-69	1	1	1
1970-74	1,041	1,032	1,032
1975-79	1,113*	1,134**	1,131**
1980-84	0,957	1,006	1,003
1985-89	1,008	1,084	1,083
1990-94	1,163**	1,273***	1,271***
1995-98	1,271	1,327	1,329
Area			
urban		1	1
rural		1,397***	1,337***
Education			
No higher education		1	1
Higher education		0,630***	0,640***
Wealth index			
poorest			1
second			0,969
middle			0,952
fourth			0,984
richest			0,888*

Cumulative probability for childlessness, MICS2014, Kyrgyz

1975-79 *blue 1980-84 *green



1985-89 *blue и 1990-94 *green



Ethnic factors

- In Kazakhstan “young” fertility is mainly spread among Kazakh population (MICS2006, 2015).
- Stability of age patterns in North Caucasian republics (Census and surveys; Kazenin, Kozlov 2016, 2017).

Competitive hypotheses

- Migration selectivity: more active and educated women, postponing fertility are in migration
- No places for young women in the labour market (e.g. see Egypt Al Zalak & Goujon 2017).

Thank you for your attention!