
Why she had to go...

migration
and sex ratios

Ilya Kashnitsky

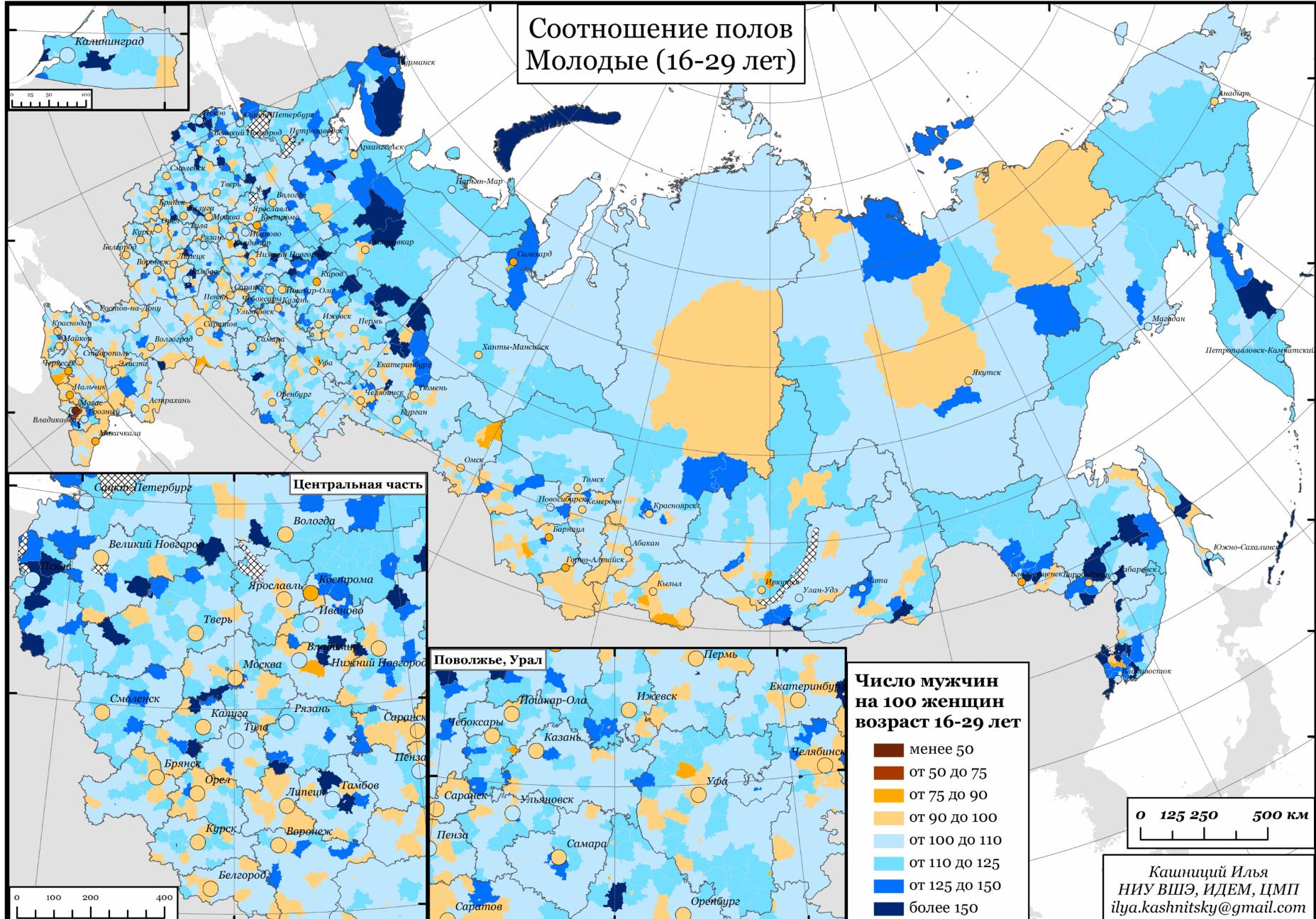
BSPS19

Ravenstein says:

“Females appear to predominate among short-journey migrants”

(1889, p.288)

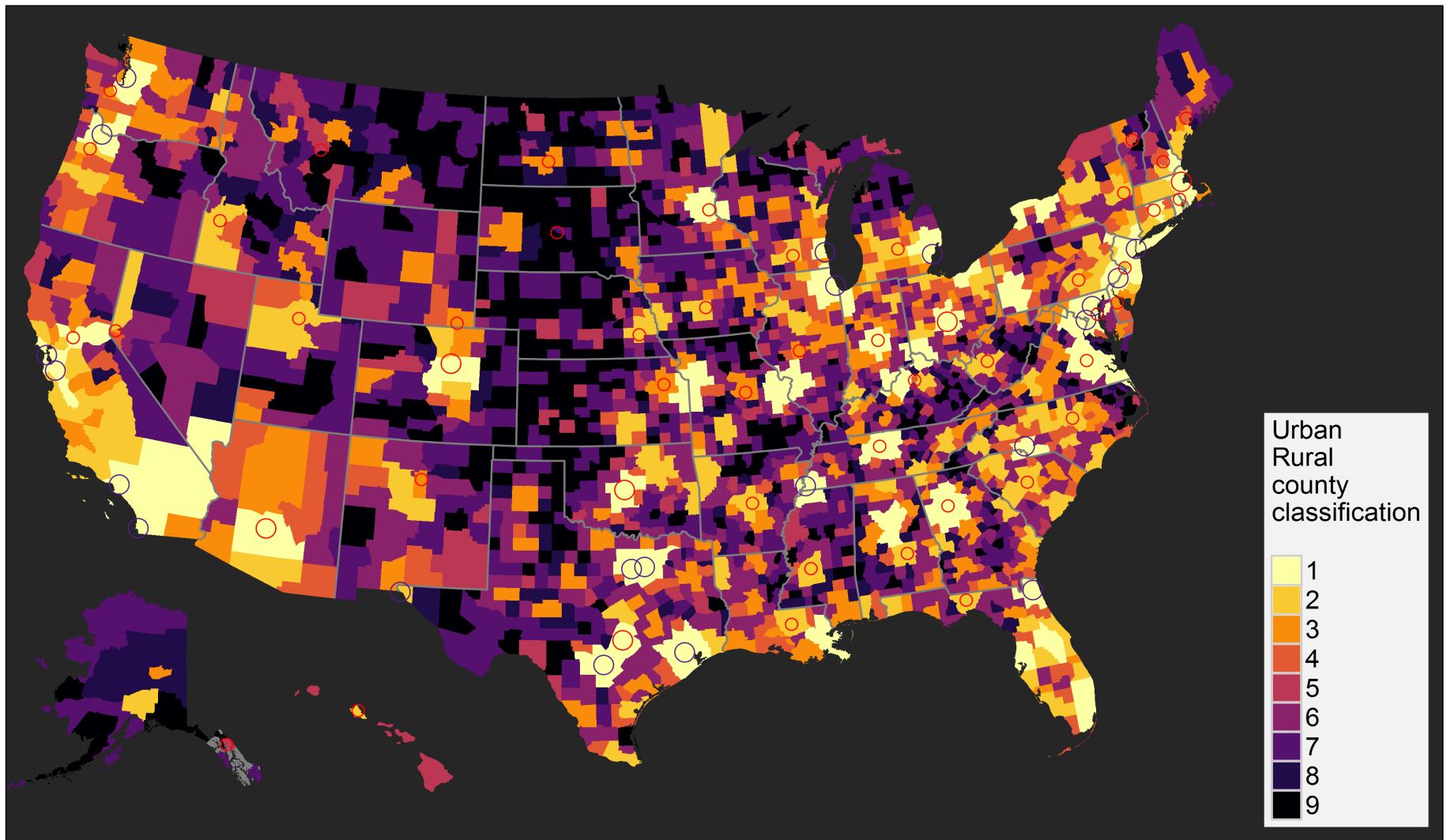
Соотношение полов Молодые (16-29 лет)



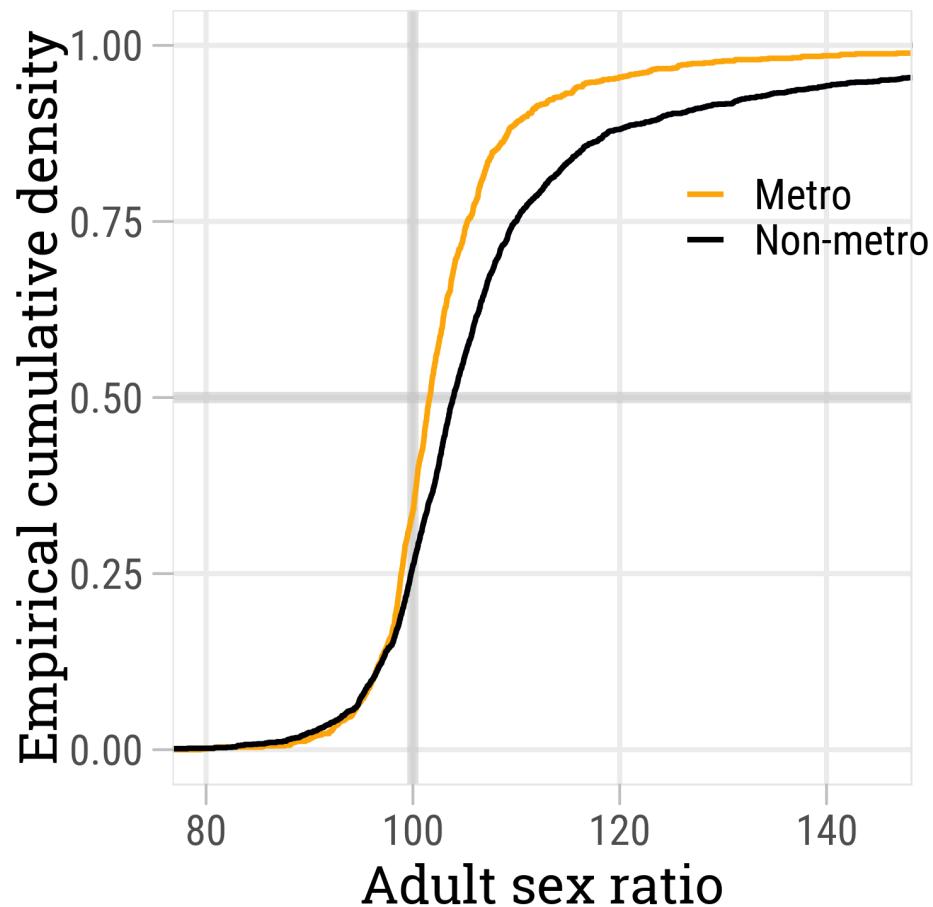
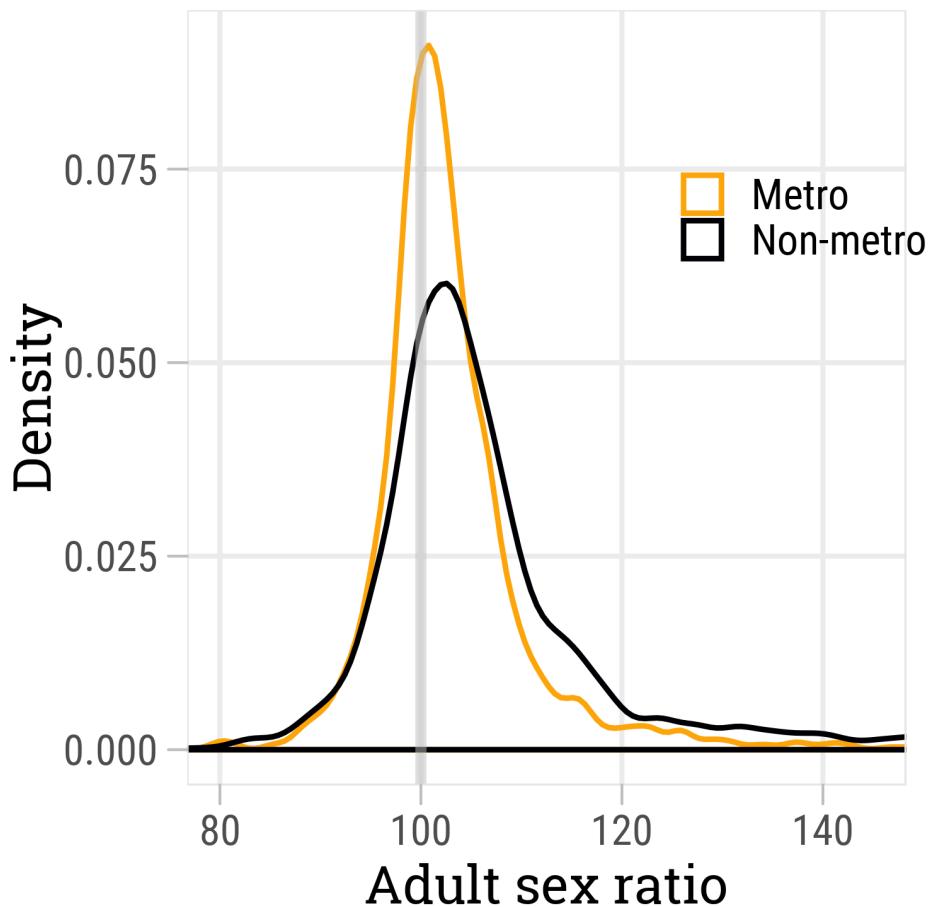
Kashnitsky, I. (2018). Russian periphery is dying in movement: A cohort assessment of internal youth migration in Central Russia. *GeoJournal*. <https://doi.org/10.1007/s10708-018-9953-5>

US counties

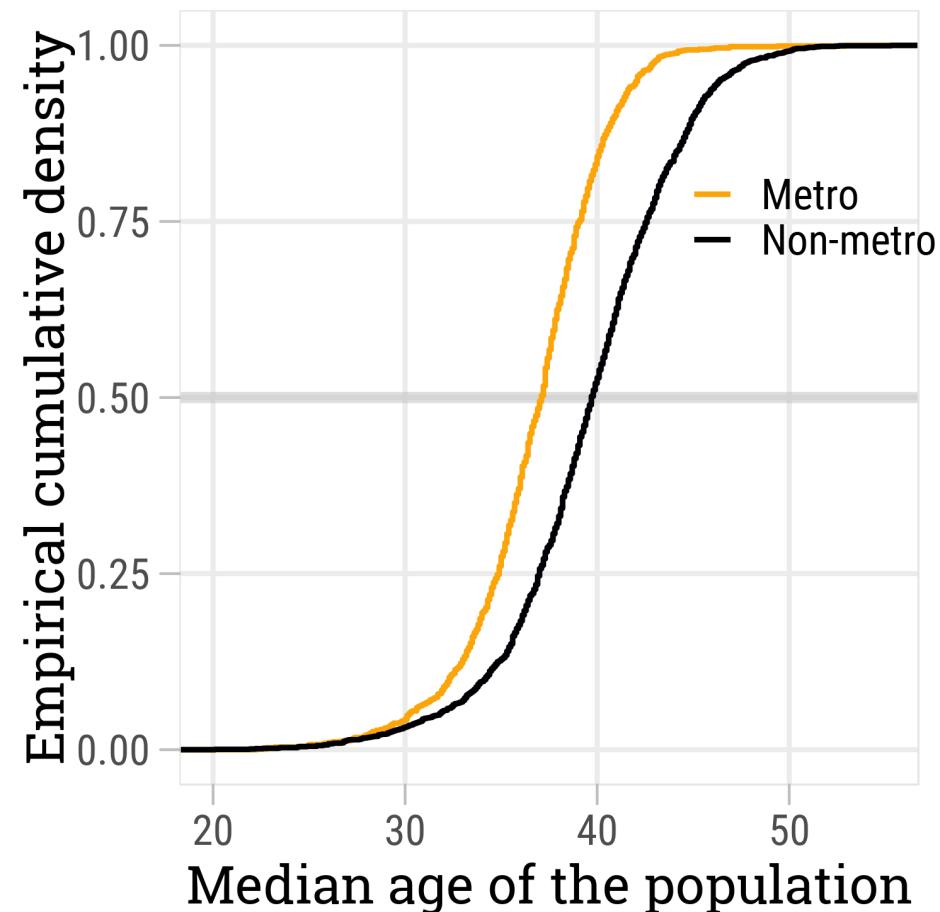
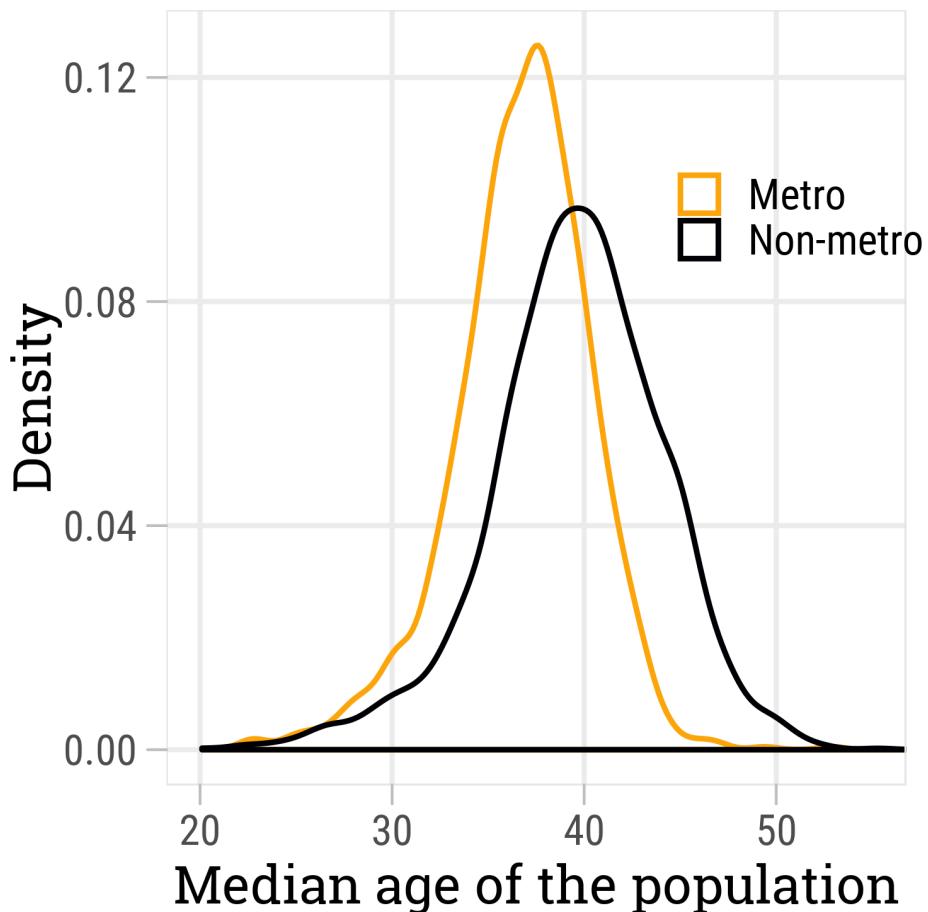
urban/rural classification



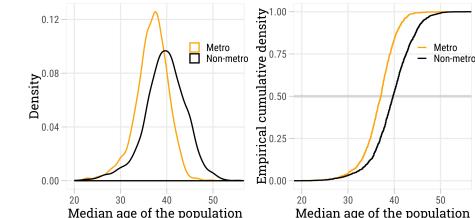
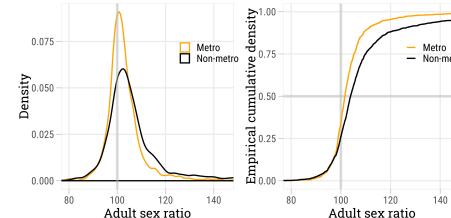
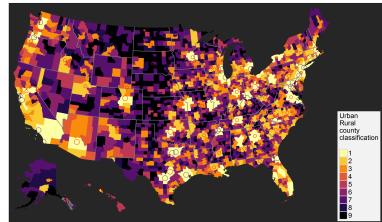
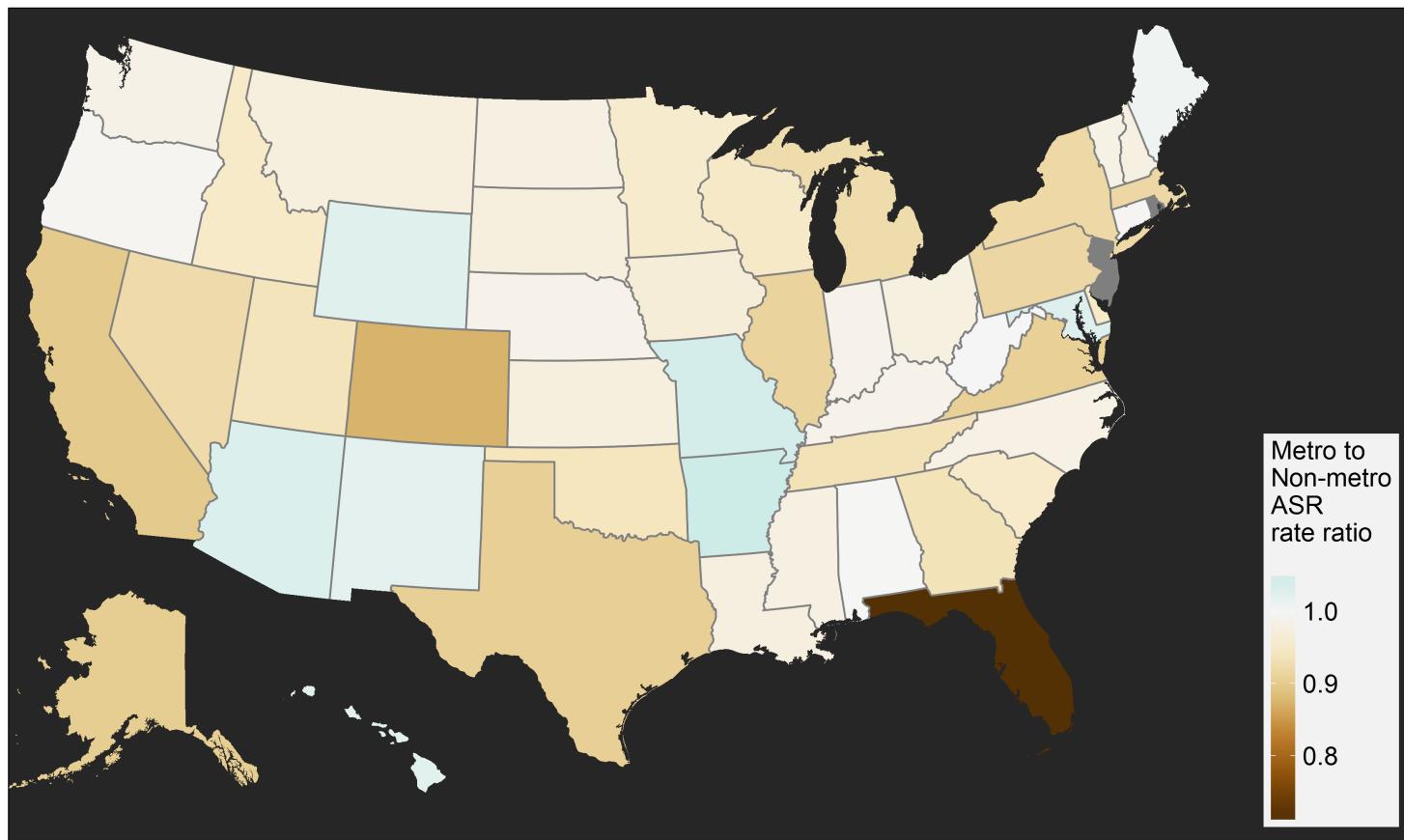
adult sex ratio (15-44)



median age of the population

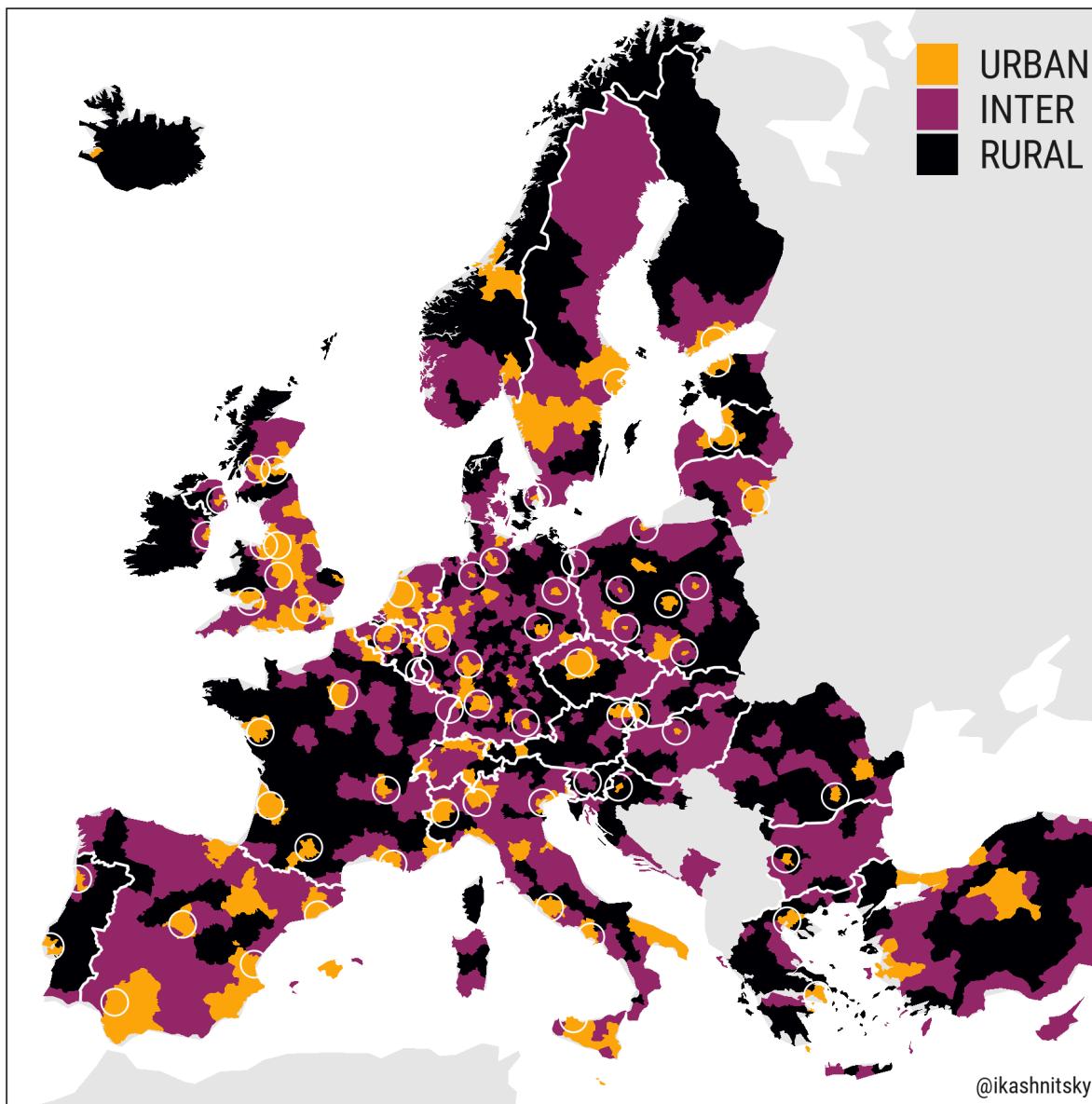


metro to non-metro ASR ratio



EU NUTS-3 regions

urban/rural classification



sex ratio by age group

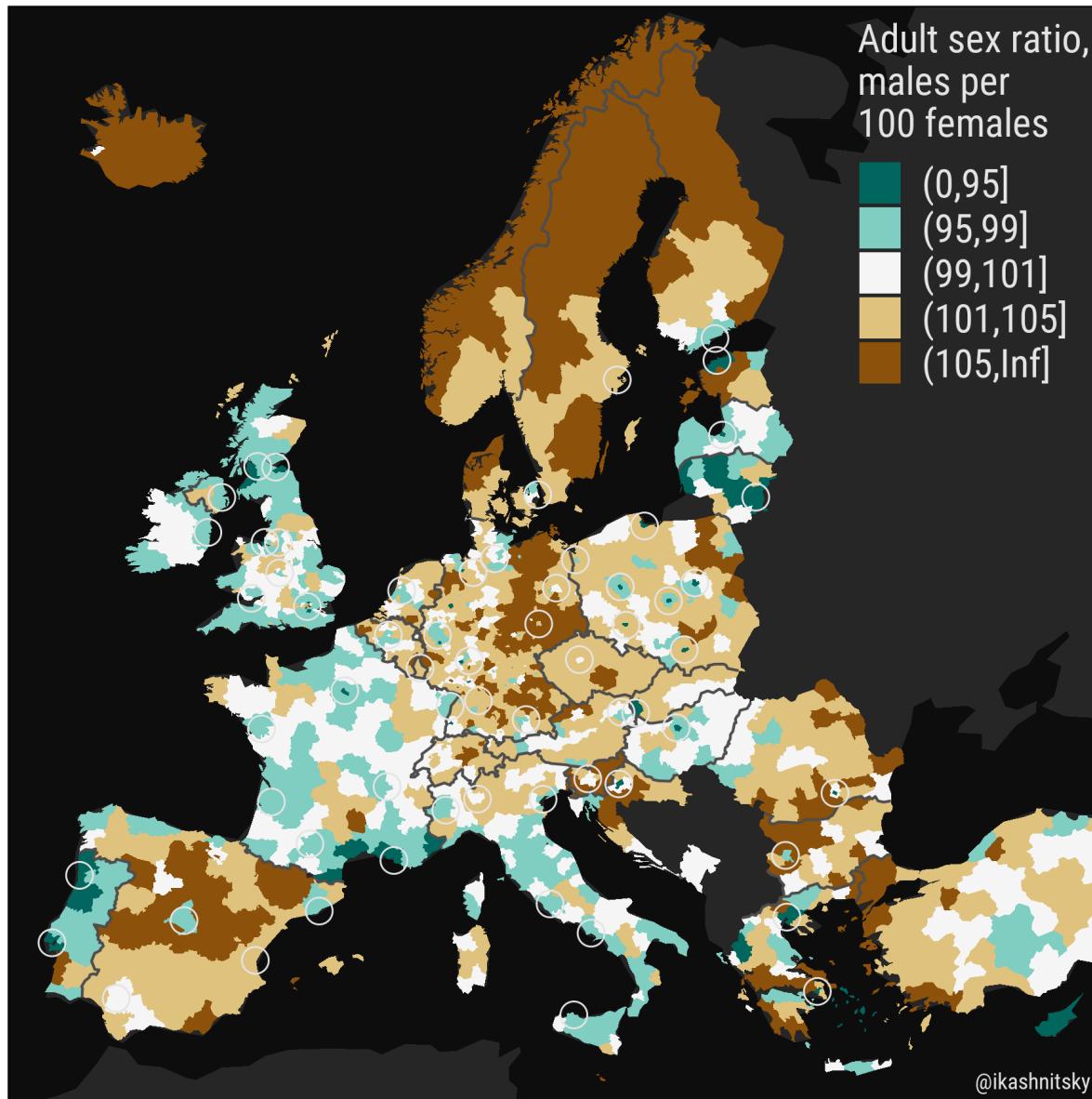
	0–14	15–64	65+	total
URBAN	105.4	98.8	75	95.3
INTER	105.4	100.9	74.8	96.3
RURAL	105.3	102.7	74.2	97.4

adult sex ratio

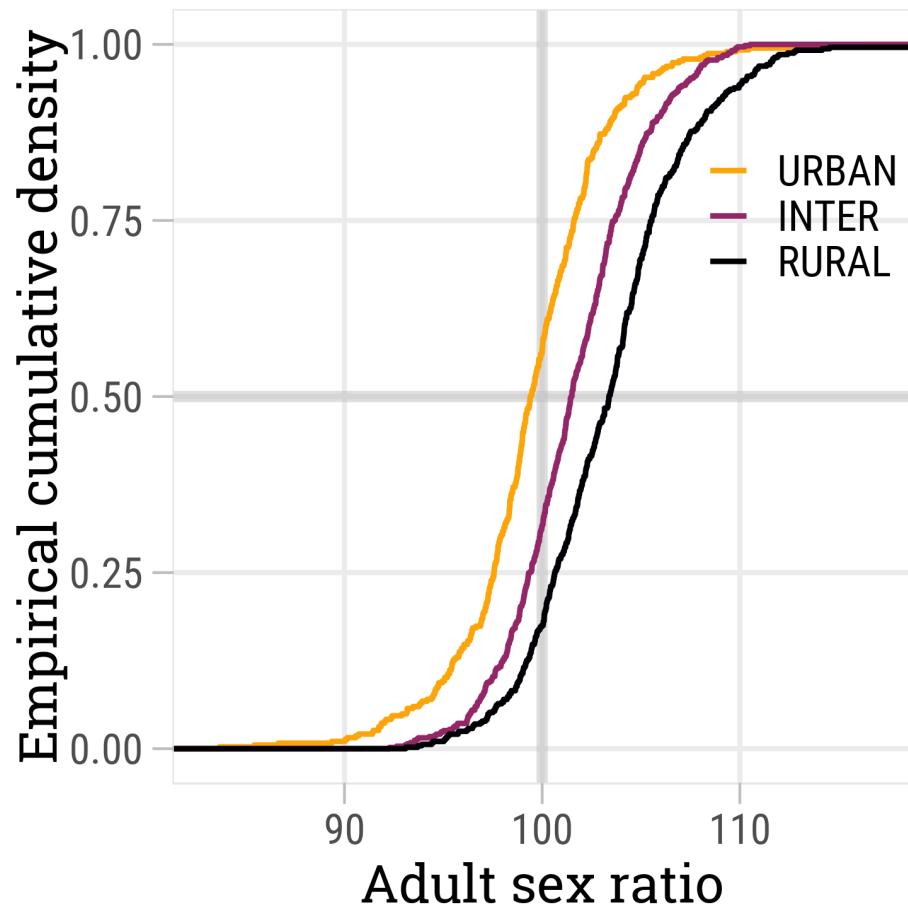
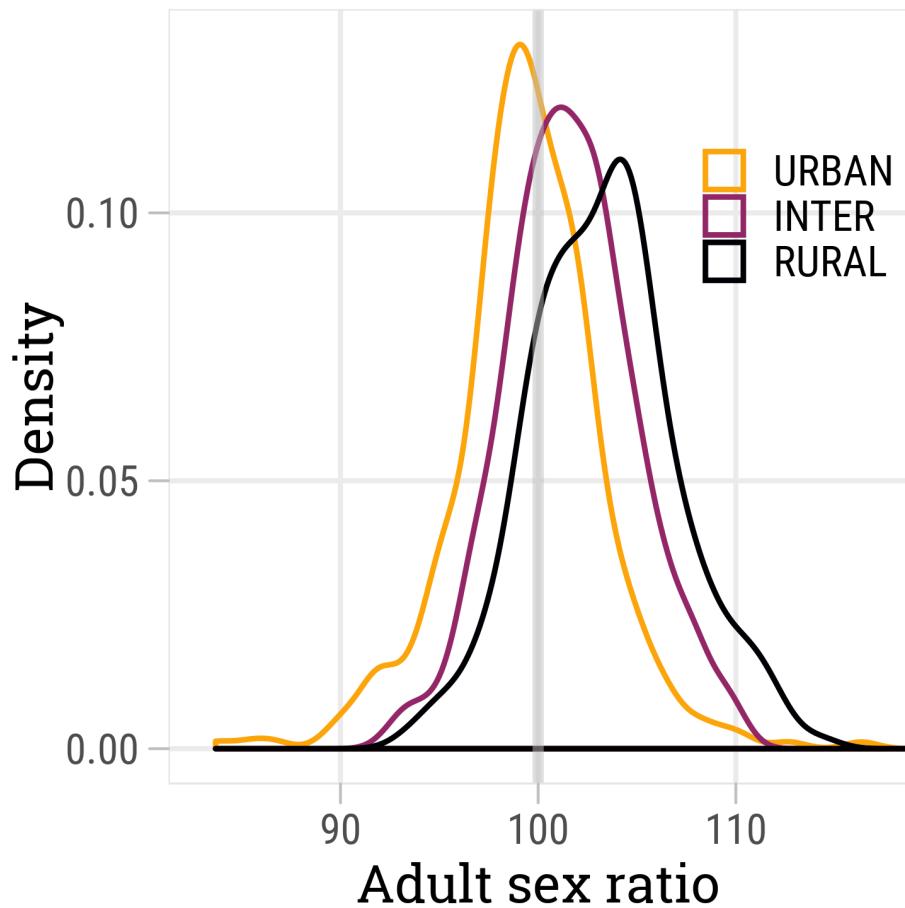
	0–14	15–64	65+	total
URBAN	105.4	98.8	75	95.3
INTER	105.4	100.9	74.8	96.3
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migration effect

adult sex ratio, NUTS-3

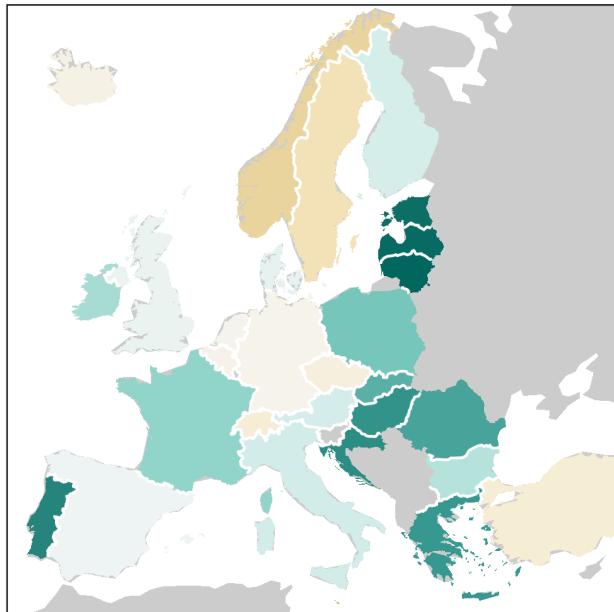


adult sex ratio, NUTS-3

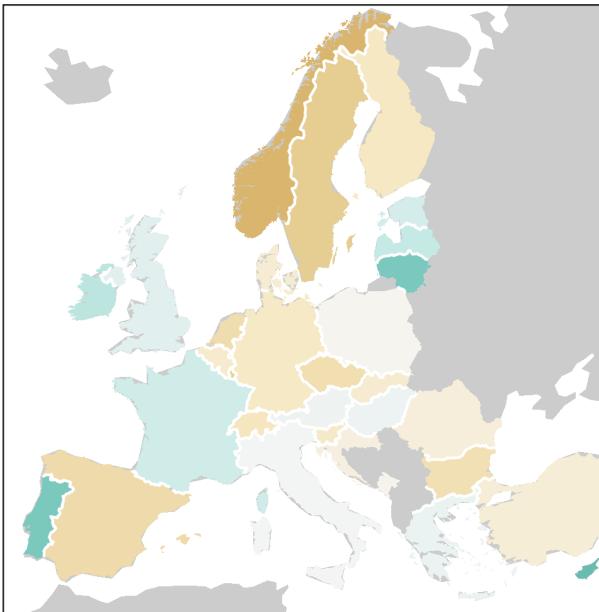


adult sex ratio, countries

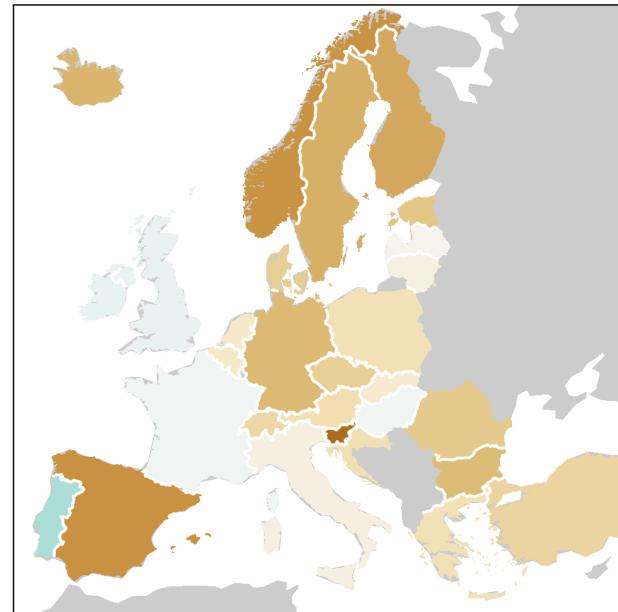
URBAN



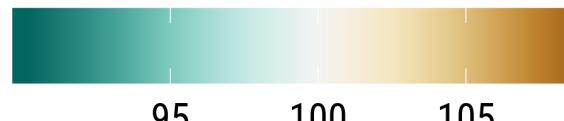
INTER



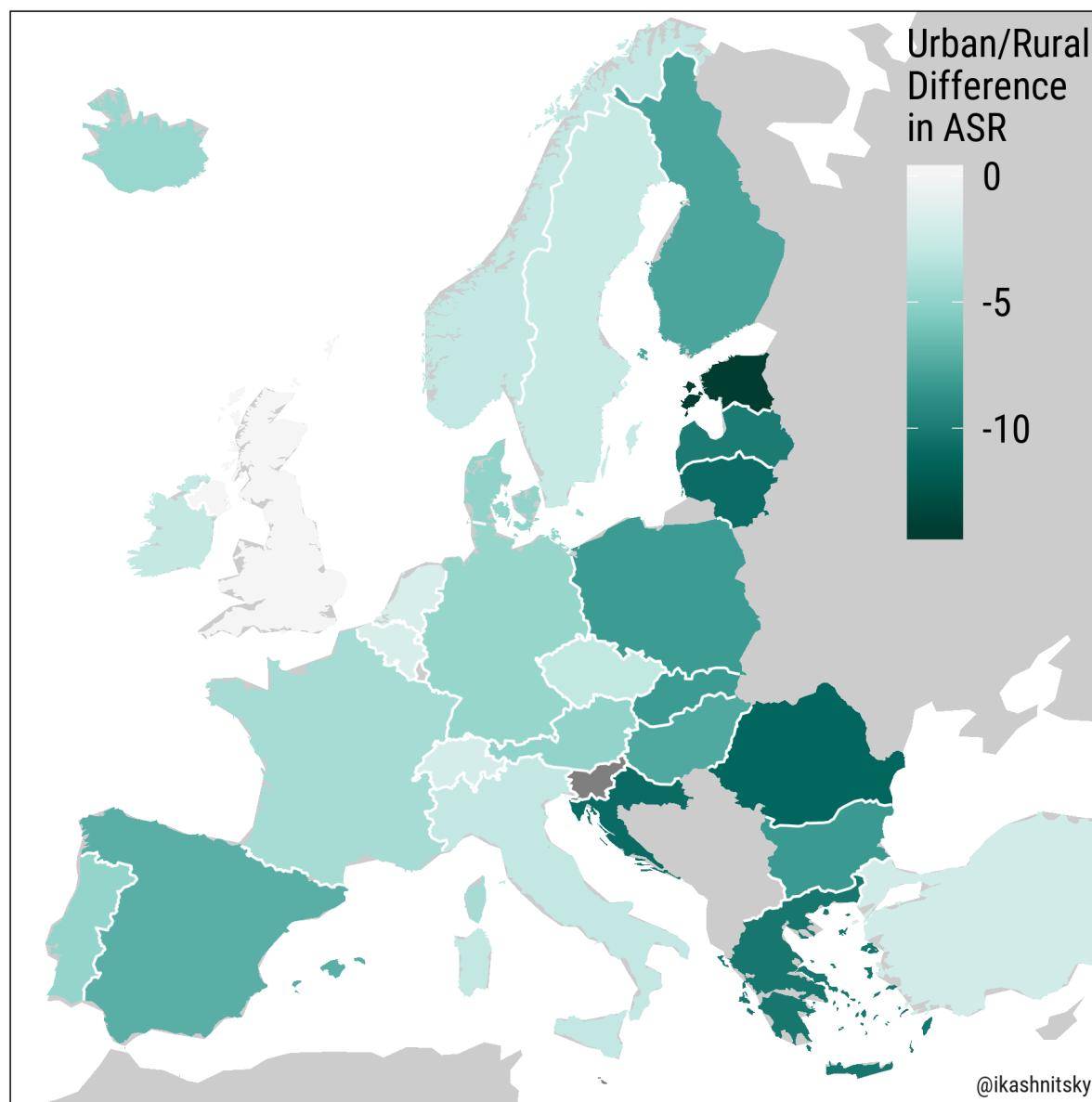
RURAL



Adult sex ratio,
males per 100 females



difference in ASR, URB – RUR



estimation strategy

counterfactual approach

Life tables by sex
Sex ratios at birth

Zero-migration sex ratios

Compare to actual sex ratios

small area life tables

TOPALS model

Relational model based on splines

De Beer, J. (2011). A new relational method for smoothing and projecting age-specific fertility rates: TOPALS. *Demographic Research*, 24, 409–454.
<https://doi.org/10.4054/DemRes.2011.24.18>

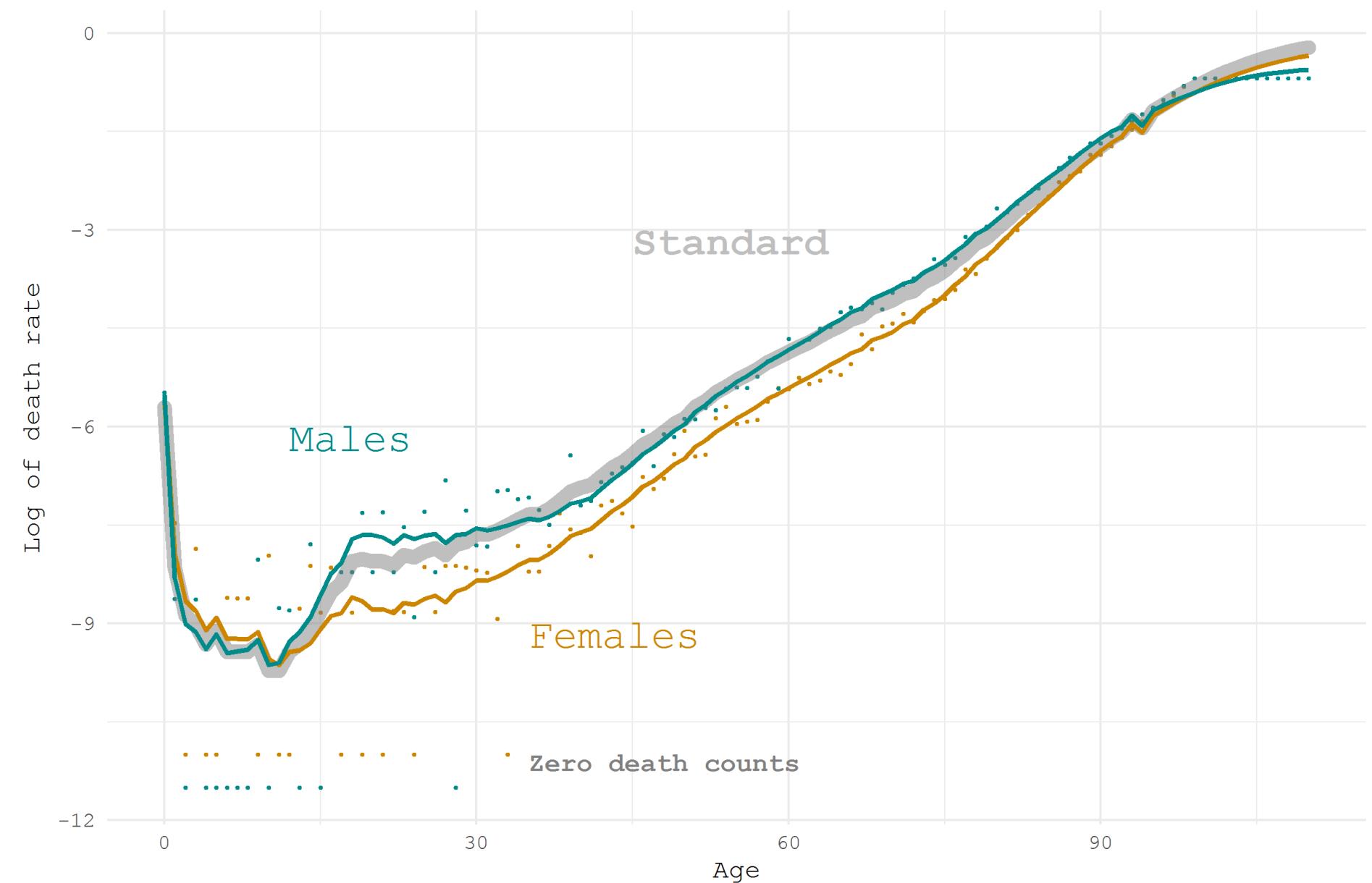
De Beer, J. (2012). Smoothing and projecting age-specific probabilities of death by TOPALS. *Demographic Research*, 27, 543–592.
<https://doi.org/10.4054/DemRes.2012.27.20>

Gonzaga, M. R., & Schmertmann, C. P. (2016). Estimating age-and sex-specific mortality rates for small areas with TOPALS regression: An application to Brazil in 2010. *Revista Brasileira de Estudos de População*, 33(3), 629–652.

<http://schmert.net/topals-mortality/>

Smoothing death rates using TOPALS

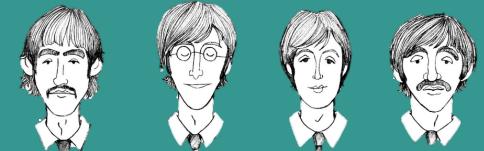
Karlsruhe municipality, Germany, pulled data for 2012-2014
Standard is the total population of Germany in 2013, HMD data



thank you



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