

# *MOBILE PHONE DATA FOR POLICY MAKERS: TRANSNATIONAL AND SEGREGATION STUDIES*

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NEW DATA = SAME RESULTS= NEW POLICY?







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# STUDY OF TRANSNATIONAL MIGRATION FROM ESTONIA



# TRANSNATIONAL: PERSON HAVING ACTIVITIES IN 2 OR MORE COUNTRIES.

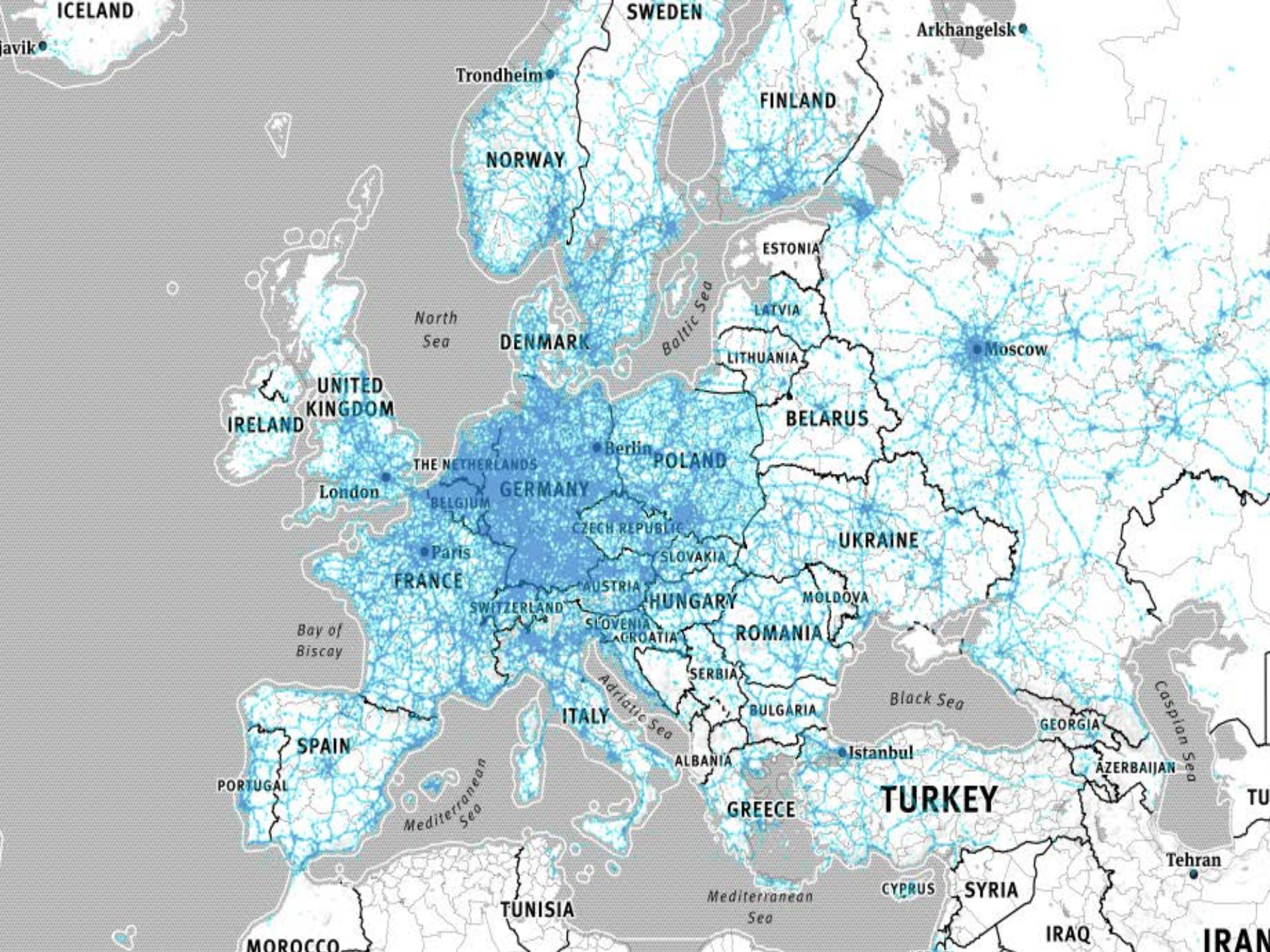
*(Nina Glick Schiller et al 1992; Martiniello et al 2010)*

- Not visitor or tourist
- Not cross border commuter
- Not permanent resident
- Often not listed in register, census, statistics...
- Problems with taxes, social security...
- **Hard to reach with questionnaires...**



Foto: Delfi.ee





# Outbound Roaming Data:

Estonian mobile  
phones in Europe

2 biggest Mobile  
Network Operators

2014, 2015, 2016



# DEFINING TRANSNATIONALS:

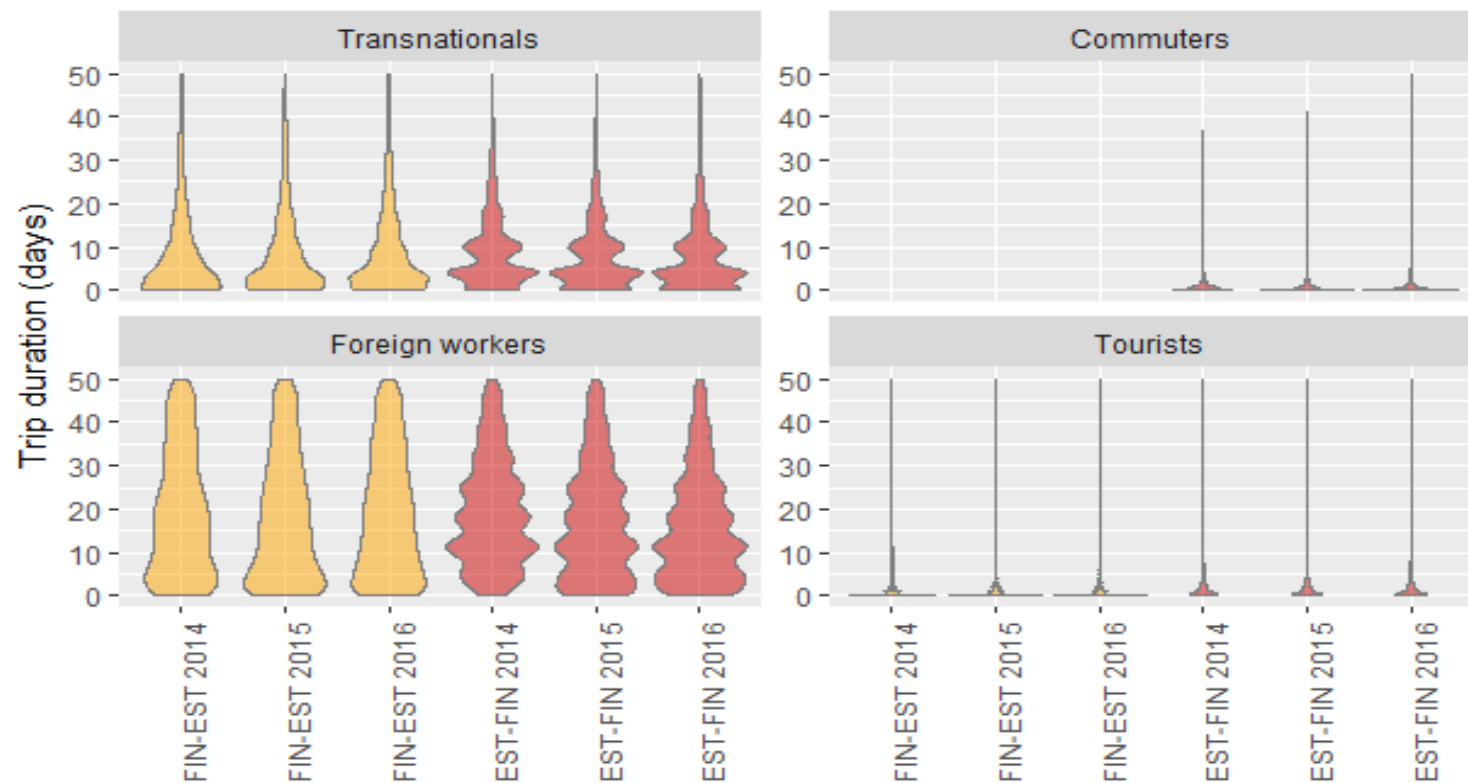
Segment	Number of trips to destination country	Number of days per year spent in destination country
<b>Tourist</b>	1 to 4 trips	1 to 182 days
<b>Commuter</b>	52 < trips	52 < days
<b>Transnational</b>	<b>5 to 52 trips</b>	<b>92 to 273 days</b>
<b>Foreign worker</b>	1 to 52 trips	182 < days

## SEGMENTING OUTBOUND TRAVEL

Segment	Persons	Share from all persons	Number of countries
Tourist	592 335	98,2%	200
Transnational	23 587	3,9%	101
Commuter	1518	0,3%	14
For. worker	4366	0,7%	61
Total	603 355		200

# TRAVEL BEHAVIOR OF TRANSNATIONALS (ANNUAL AVERAGE):

- **15,7 trips** to destination country
- **158,1 days** in destination country
- **13,3 days** of duration of trip

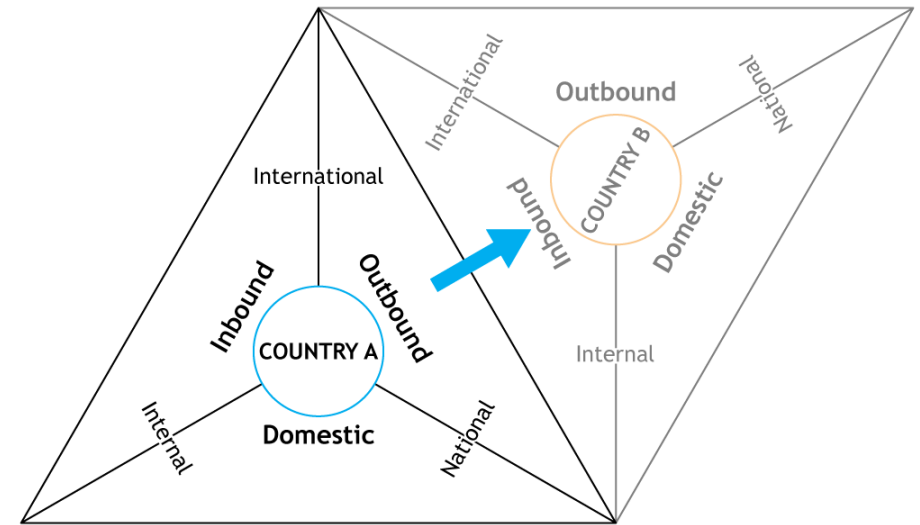


Ahas, R., Silm, S., Tiru, M. 2017. *Estonian Human Development Report 2017*.



# CONCLUSIONS:

- Roaming data as „one of the best“ sources to measure transnational populations ?
- Real- time monitoring
- How can we validate such data and calculation?



Information society:

Definition for transnationals – living & working abroad but keeping SIM card from home country active !?



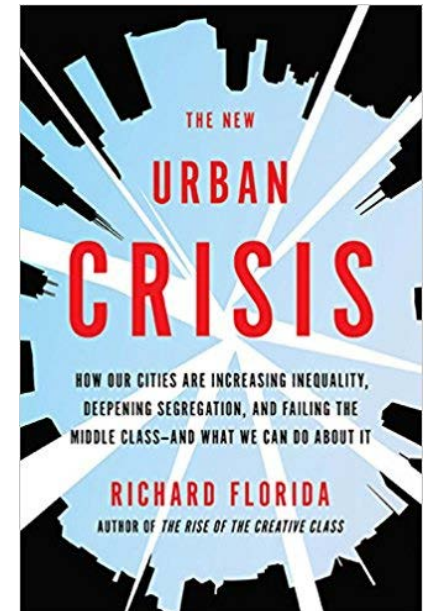
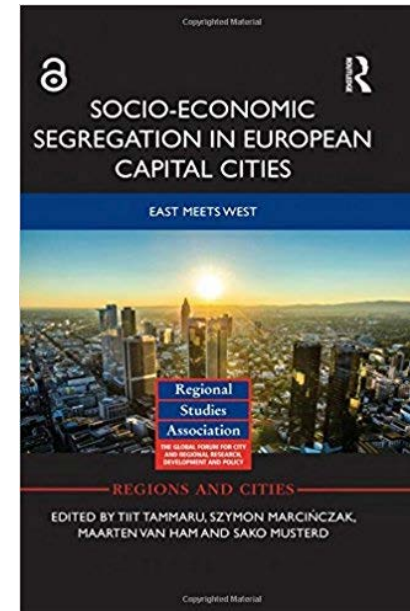
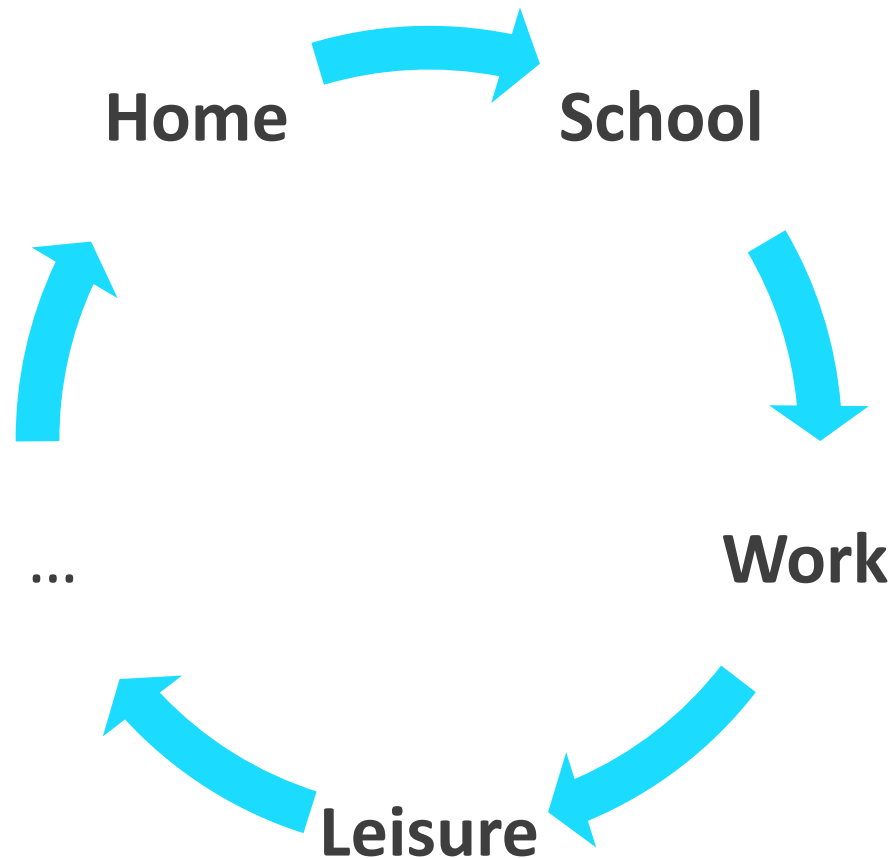
# MEASURING ETHNIC SEGREGATION



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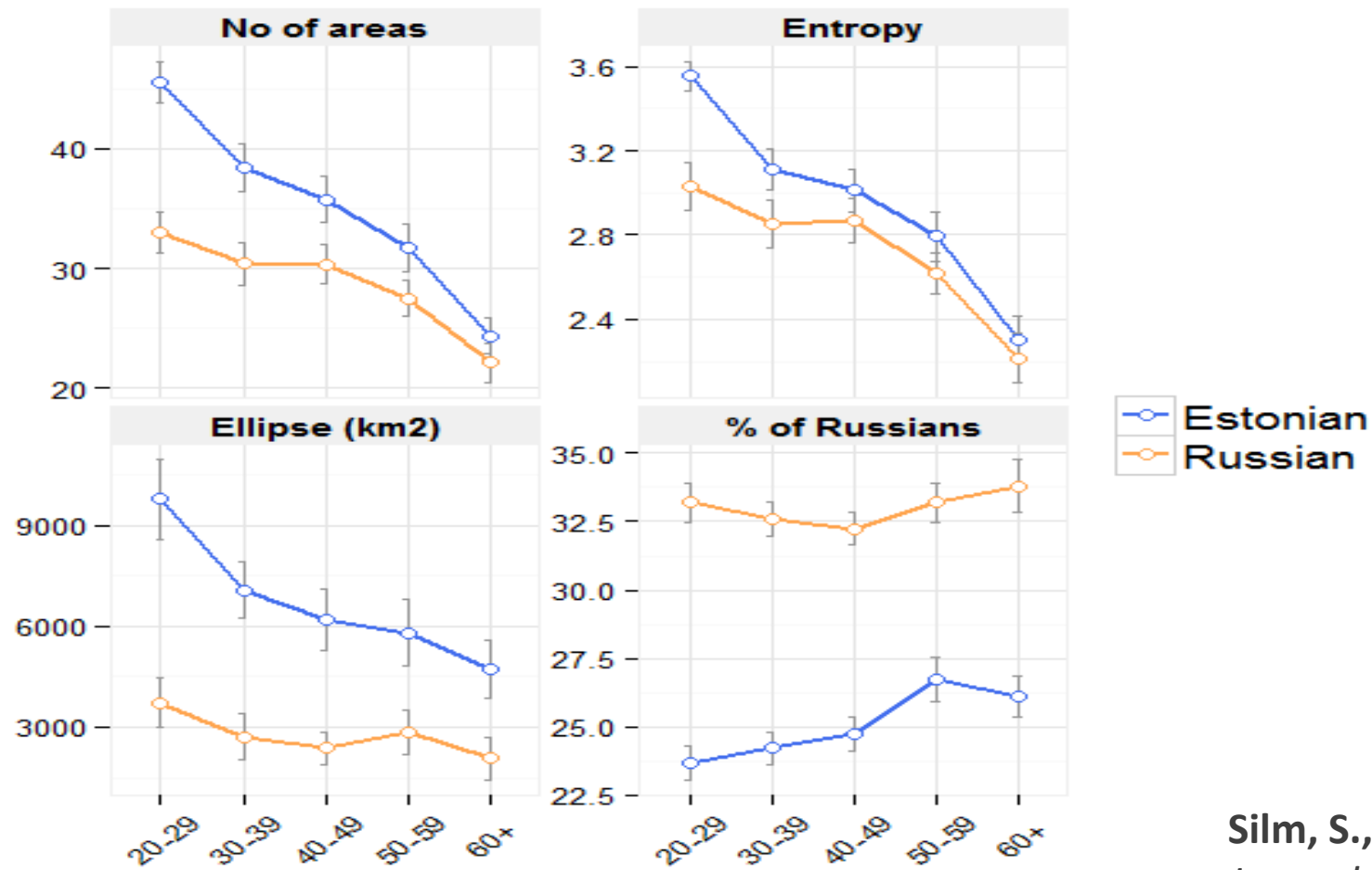
# SEGREGATION IS REPRODUCED IN „VICIOUS CIRCLE OF SEGREGATION“ (AHAS & TAMMARU 2017)



# RESULTS: SEGREGATION IN LEISURE TIME LOCATIONS

	Tallinn	Estonia (excluding Tallinn)	Foreign countries
Estonians	16.7	19.3	2.04
Russians	16.6	10.6	1.68
Difference with language only (ref. Estonian)	-0.189**	-8.707***	-0.362***
Difference with other characteristics (ref. Estonian)	0.021	-8.157***	-0.117**

# TALLINN, ESTONIA: YOUNGER POPULATION GROUPS – MORE SEGREGATED!



Silm, S., Ahas, R., Mooses, V., 2017  
*Journal of Ethnic and Migration Studies*



# CONCLUSIONS:

- Public spaces and business hours are less segregated
- **Vicious circle of segregation** - segregation transmission in residential-educational-leisure activities



# NEW DATA = „FAST FOOD“

- Timeliness of new data, real-time monitoring systems
- Theory is still needed for getting new knowledge
- Validation issues

15:07:47





# POLICY MAKING – „SLOW FOOD“

URBAN PLANNING, MIGRATION & TAX POLICY...

- New results = new policy?
- How can we benefit from fast data?
- Need to update also policy making, education...



<https://vinoestile.com>

# Mobile Tartu 2018

Mobile Data, Geography, LBS

<http://mobiletartu.ut.ee>



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## International Conference on 27-29<sup>th</sup> of June 2018 in Tartu, Estonia.

The aim of the event is to discuss theoretical, methodological and empirical aspects of research using mobility data – derived from mobile phone or crowd-sourced social media – and explore practical applications of this data in scientific research, planning, governance and location based services.

### Mobile Tartu 2018 proposes also special events:

- 1) PhD course “Mobile phone based data collection field experiment” on 27<sup>th</sup> of June
- 2) “Mobile phones, travel and transportation” organised by NECTAR (<http://www.nectar-eu.eu/>)
- 3) “Sensor Data for Smart City” organized by SmartEnCity project of EU H2020 (<http://smartencity.eu/>)

## Key dates

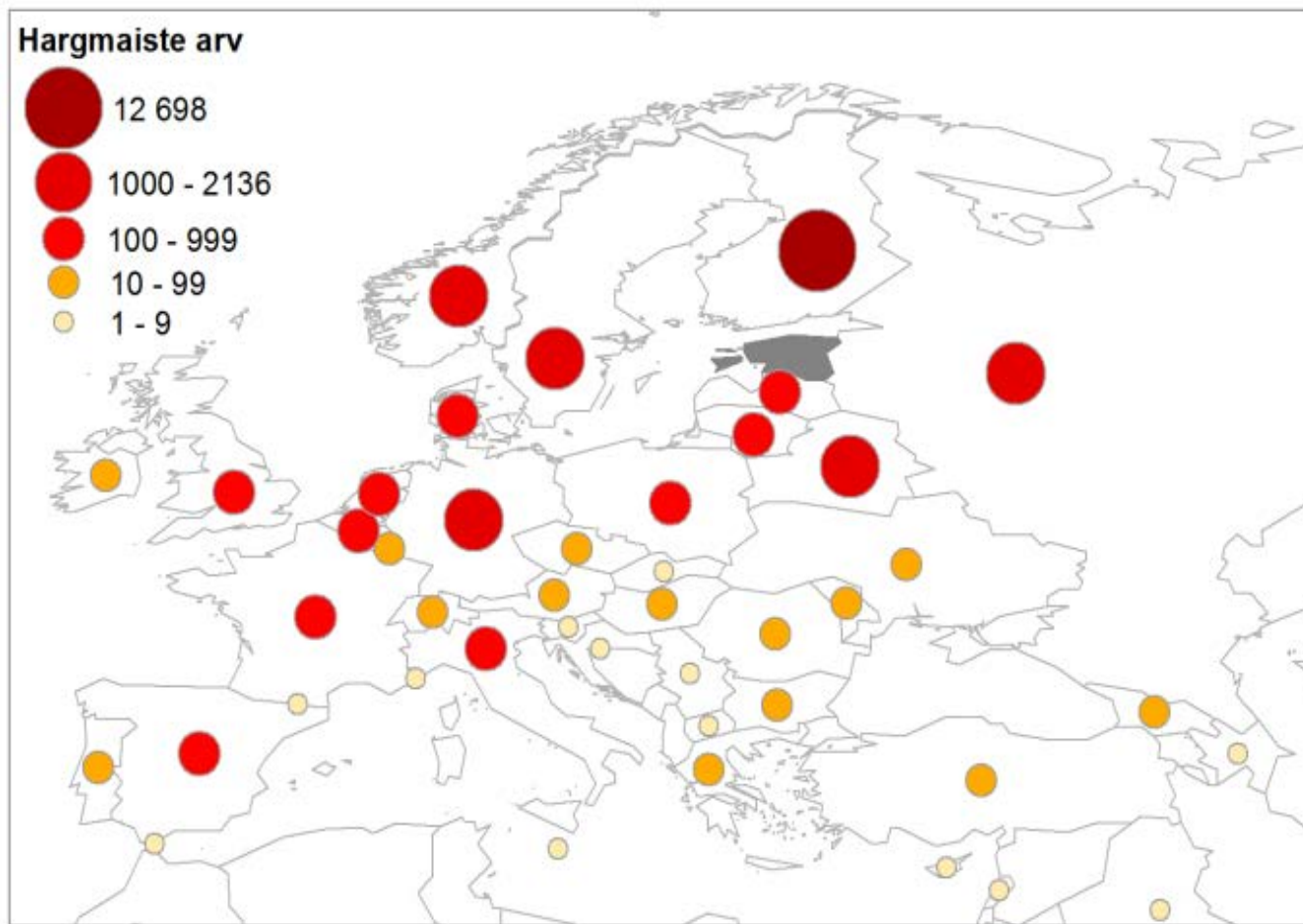
1 December 2017	Registration and abstract submission opens
31 January 2018	Abstract (max 200 words) submission
15 February 2018	Notification of abstract acceptance
31 March 2018	Early Bird registration deadline
13 June 2018	Late registration deadline
20 June 2018	Deadline for submitting a full paper

Thank you!

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# TRANSNATIONAL COMMUTERS FROM ESTONIA



Country	Number
FI	12 698
SE	2136
NO	1884
RU	1721
BY	1097
DE	1018
LV	527
GB	495