



HUNGARIAN
CENTRAL
STATISTICAL
OFFICE 

Reconciling administrative and survey data for measuring circular migration in Hungary

UNECE-Eurostat Work
Session on Migration
Statistics
Item 4.13

Zoltán Csányi
Anna Sára Ligeti

10.10.2019

CES definitions

A circular migrant is a person...

- who has crossed the national borders of the reporting country at least 3 times
- over a 10-year period
- each time with duration of stay (abroad or in the country) of at least
 - 12 months (GENERAL definition)
 - 90 days (EXTENDED definition)

Administrative data – Sources

- Hungarian citizens who suspended / reactivated their social insurance
 - National Health Insurance Fund (NHIF) data
 - Legal obligation
 - Current use: producing migration flows data of Hungarian citizens
- Hungarian citizens who deregistered / re-registered their Hungarian addresses
 - Population and address register of the Ministry of Interior
 - Permanently settled down abroad
- Data quality concerns:
 - Lack of (de)registrations → underestimation
 - Input data quality (e.g. lack of validation rules, technical background)

Administrative data – Restructuring

Original

ID	Case	Starting date	Closing date	Destination	Migratory event
56	1	04.09.2012	11.10.2013	Austria	Return migration
56	2	01.02.2015		Germany	Emigration



Restructured

ID	1. event			2. event			Status (last event)
	Starting date	Closing date	Destination	Starting date	Closing date	Destination	
56	04.09.2012	11.10.2013	Austria	01.02.2015	-	Germany	Emigrant

Administrative data – Cleaning (1)

1. Identifying and deleting duplicates

- Simple duplicates
- Assumed duplicates – specifying selection rules

Assumed duplicates – Example 1:

ID	Case	Starting date	Closing date	Destination	Status
207	1	01.02.2009		Italy	Duplicate
207	2	01.02.2009	14.10.2015	Italy	Valid

Assumed duplicates – Example 2:

ID	Case	Starting date	Closing date	Destination	Status
252	1	01.01.2004	28.02.2011	Slovakia	Duplicate
252	2	01.01.2004	31.12.2010	Slovakia	Valid

Administrative data – Cleaning (2)

2. Imputing/adjusting missing/contradictory values

- Missing data
- Inconsistances of dates
- Ill-defined cases and categories

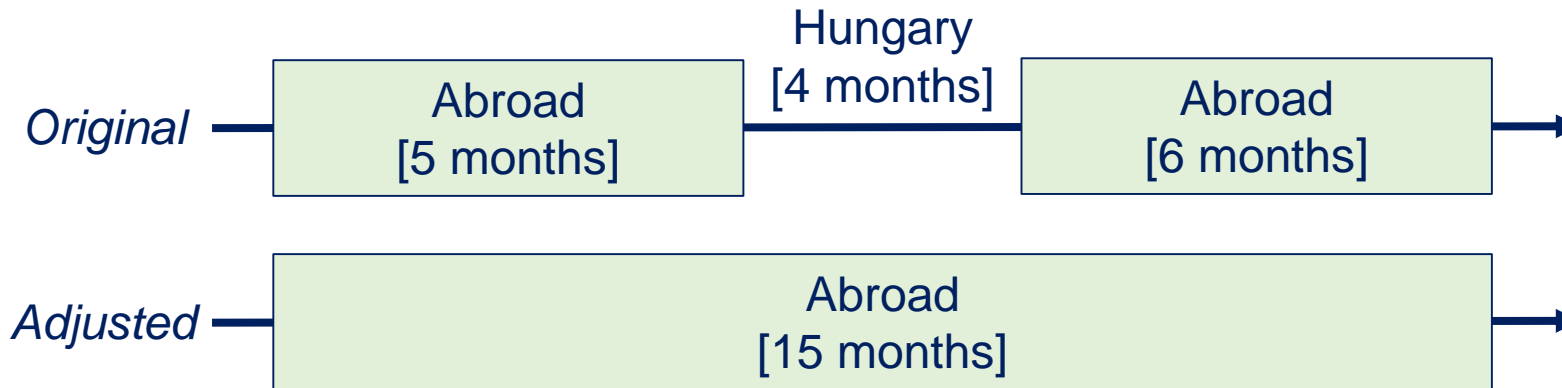
Administrative data – Cleaning (3)

3. Contrasting migratory events against definitions of circular migration

1.



2.



Survey data: Microcensus 2016

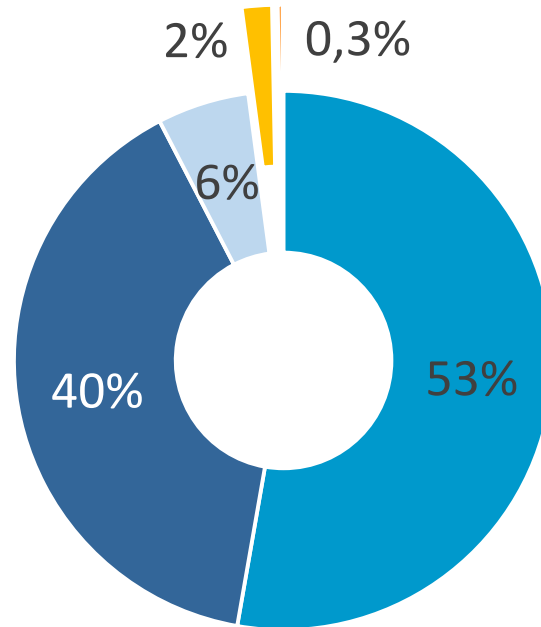


- 2016 October
- Basic questionnaire (~10%)
- International migration complementary questionnaire (N=41.367)
- Calculating circularity:
 - Actual place of residence
 - Max. 4 previous long-term + 4 previous short-term migration experiences abroad
 - Durations of staying abroad
- Imputing missing values
- Suitable for calculating:
 - Circular migrant stock
 - 2016 flows of immigrants (only migrations occurring until October!)

Circular migrants in Hungary (Microcensus stock)

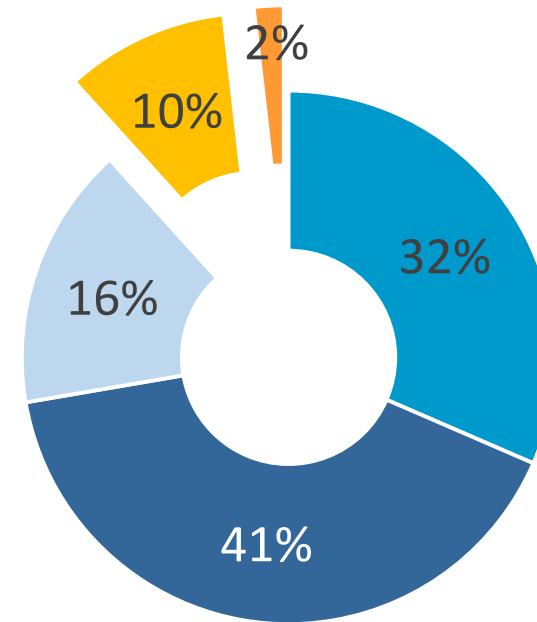
General definition

BE	FI	SE	NO	HU
1.6%	0.4%	0.4%	1.1%	2.1%



Extended definition

BE	NO	HU
4.1%	2.5%	11.7%



- 1 immigration only (immigrants)
- 1 emigration + 1 immigration only (return migrants)
- 2 and more immigrations but not more than one in the last 10 years
- 2 immigrations in the last 10 years
- 3 and more immigrations in the last 10 years

NON-CIRCULAR

CIRCULAR



Circular migrants in Hungary (Microcensus stock)

Based on the **general** definition



With family (56%)

Living in central Hungary (56%)



Diploma-holders (49%)

White-collar jobs (35%)

Speak multiple languages (86%)

Foreign born (46%)

Foreign citizens (29%)

Have lived in neighbouring countries (25%)

Have lived outside of the EU (37%)



Based on the **extended** definition



Without children (81%)

Male (59%)



Work at industry / construction (31%)

Commercial and services occupations (15%)



Remittances to Hungary (35%)



Have lived in Germany (28%)



Medium-level schooling (33%)

Skills-mismatch / overqualification (40%)

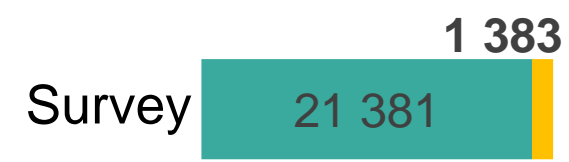
Comparing flows – data sources

	Administrative data	Survey data	Comparability
Source	National Health Insurance Fund, Population and address register	Microcensus 2016, International migration complementary survey (N=41.367)	
Stock/flow	Flows (2012-)	Stock, 2016 flow (without Oct-Dec)	2016 flow
Coverage	Hungarian citizens, Emigrants, Return migrants (immigrants)	Immigrants	Hungarian citizens, Return migrants (immigrants)
Timeframe	2012-2019	Migration history before 2016 Oct.	2012-2016 (5-year timeframe)

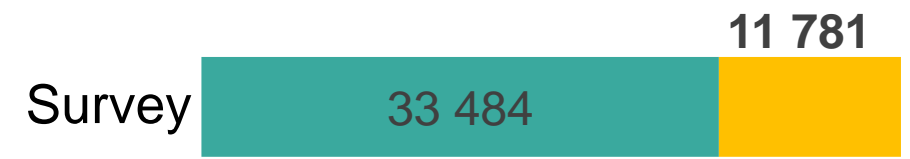
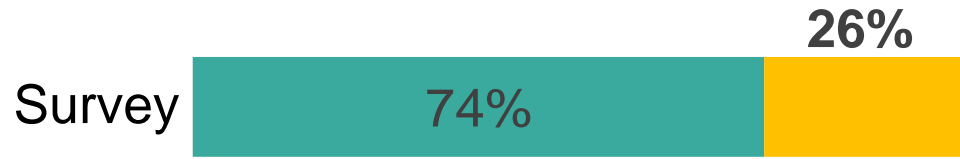
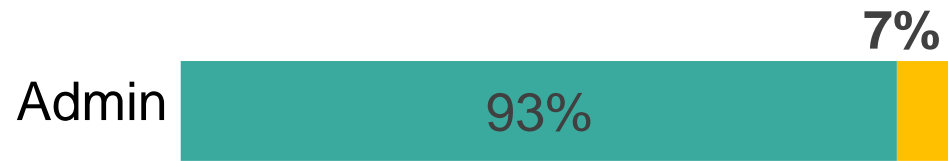


Comparing flows – numbers

GENERAL def



EXTENDED def

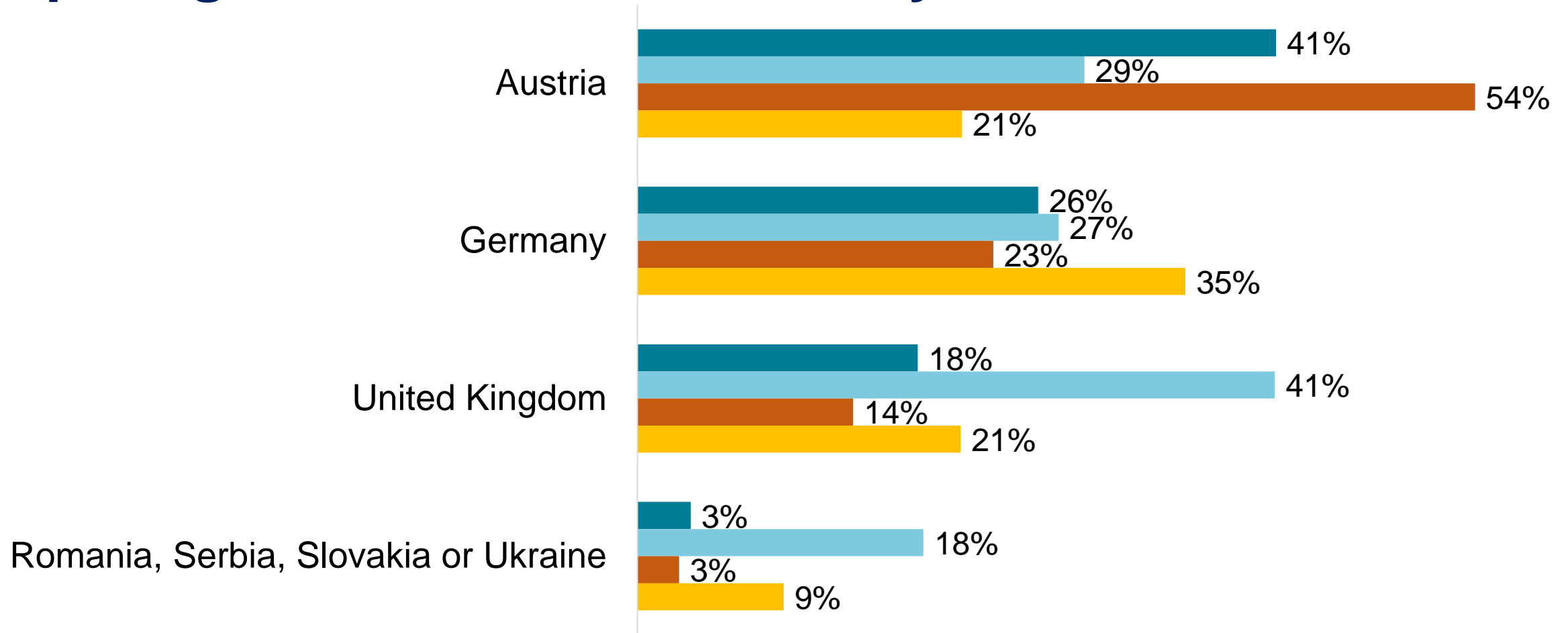


● Non-Circular (return)

● Circular

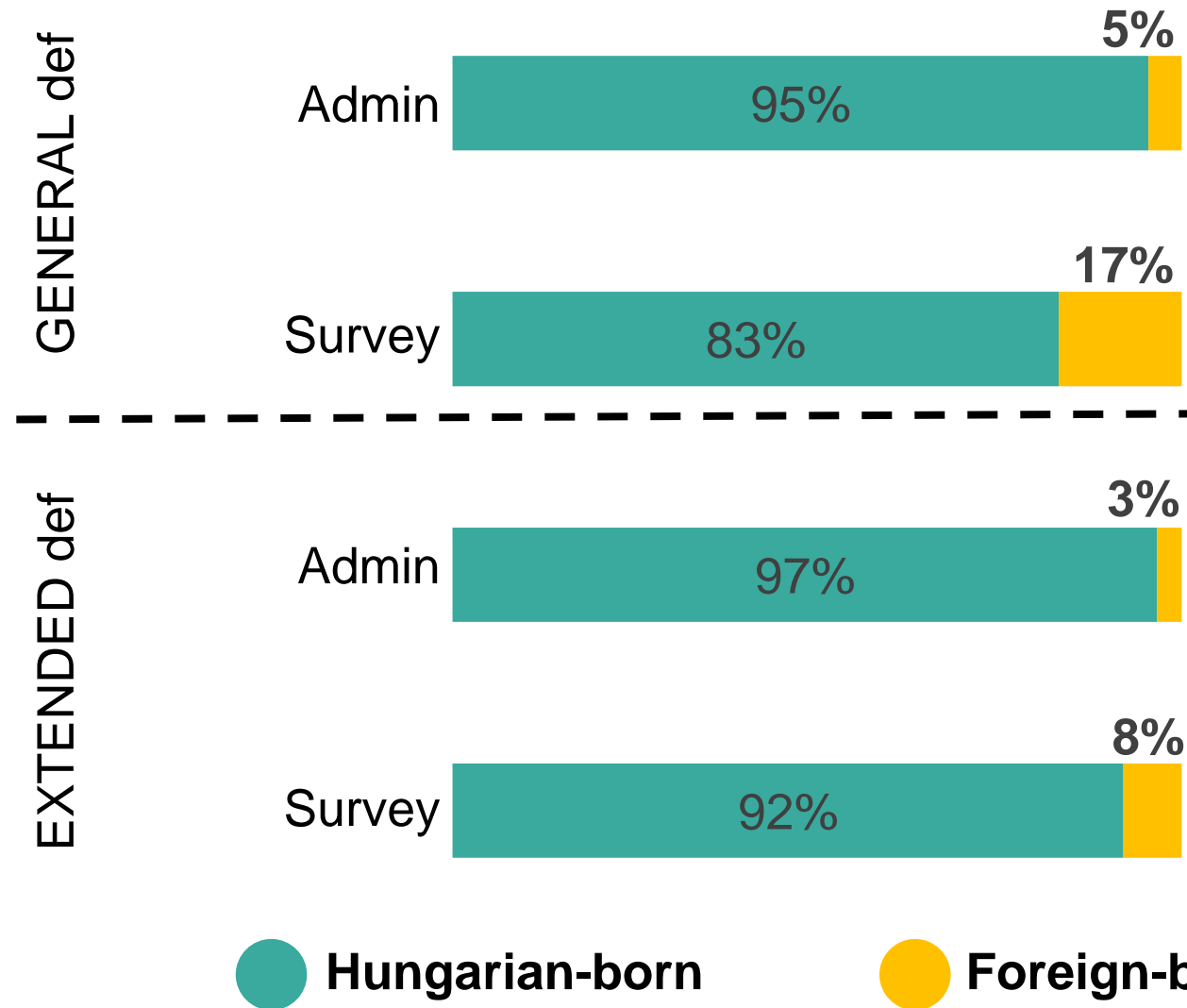


Comparing flows – Previous country of residence



GENERAL def. ● Administrative ● Survey
EXTENDED def. ● Administrative ● Survey

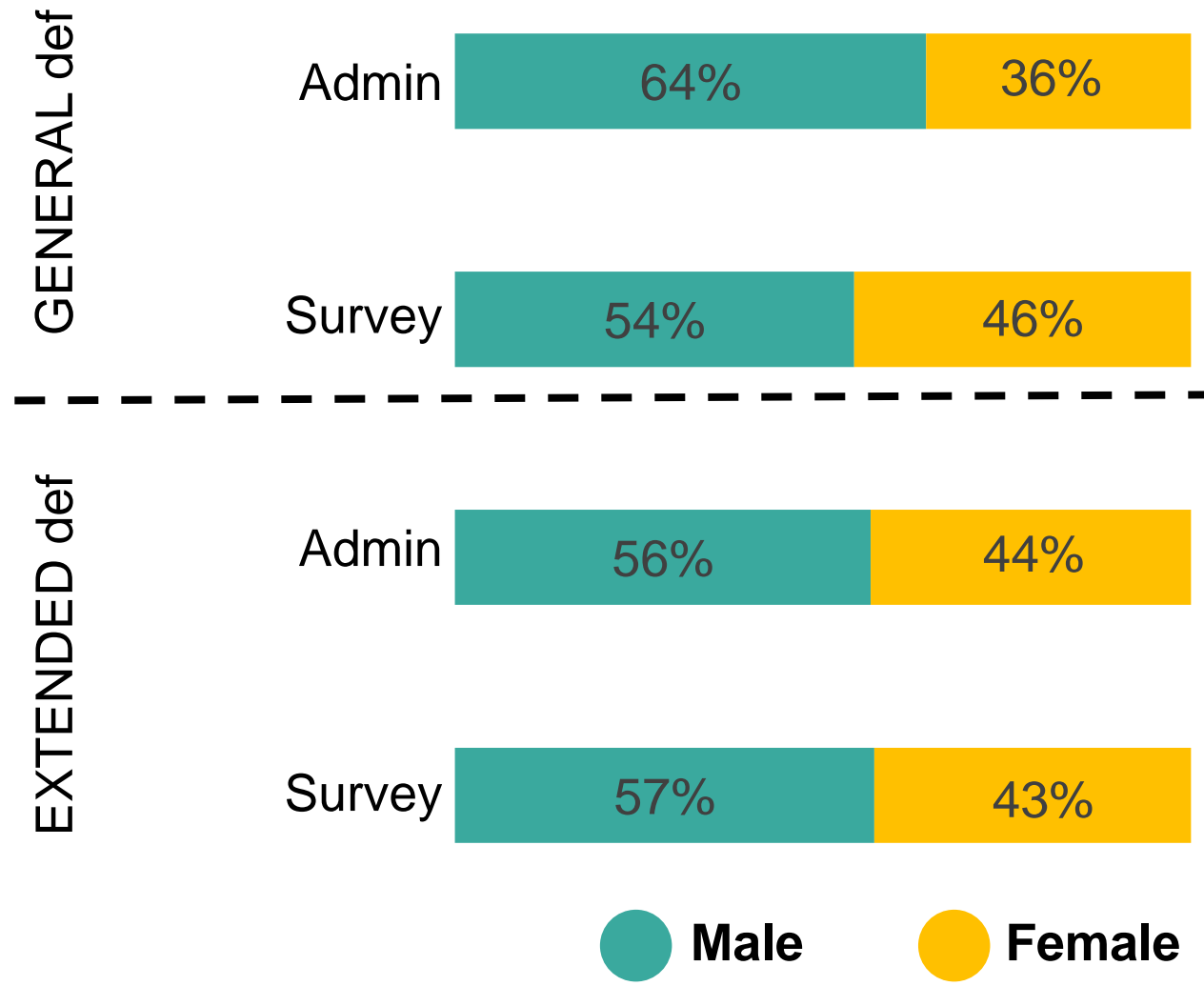
Comparing flows – Country of birth



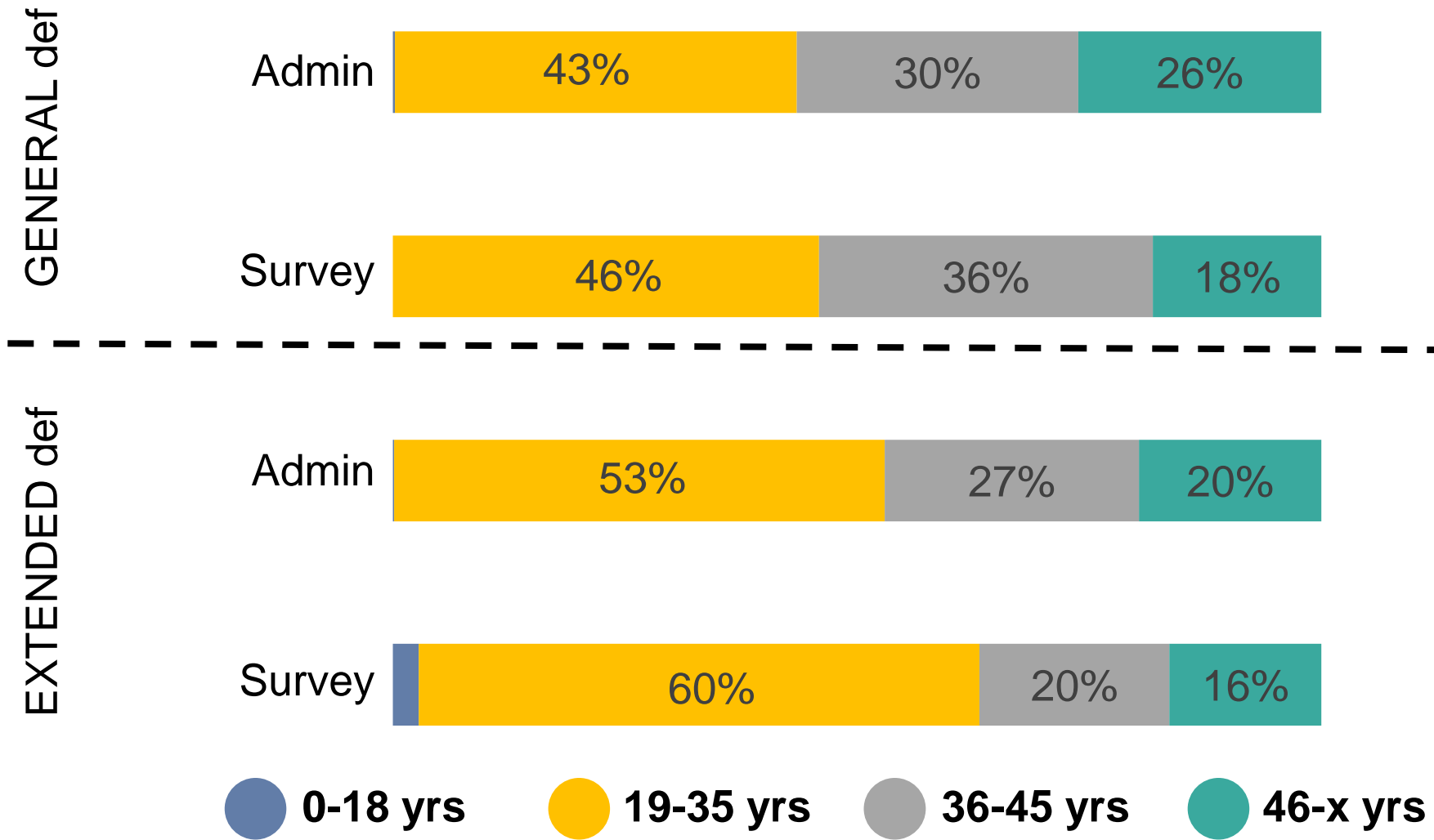
 Hungarian-born

 Foreign-born

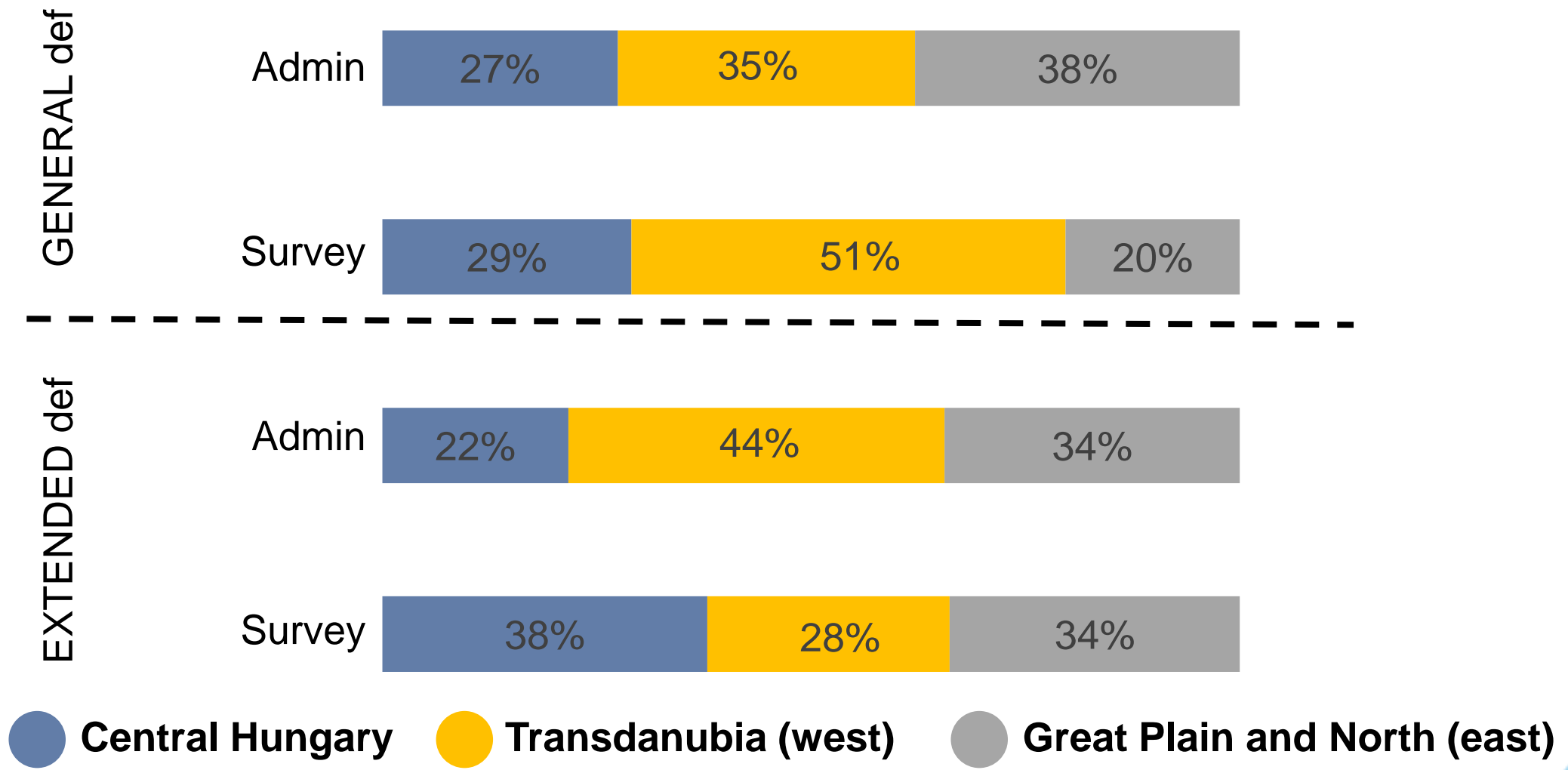
Comparing flows – Sex



Comparing flows – Age



Comparing flows – Region



Conclusions

How the international definitions can be applied in Hungary?

- The 2 different definitions grasp different social phenomena (differences in numbers, ratios and social composition)

What are the main weaknesses of the administrative sources?

- Underestimations – especially in the shares of circular migrants
- Overestimations in the proportion of circular migrants returning from Austria
- Do not capture foreign-born population properly



**HUNGARIAN
CENTRAL
STATISTICAL
OFFICE** 

Thank you!

Contact Information:

Anna Sára Ligeti

Hungarian Central Statistical Office

Population Census and Demographic Statistics Department

Anna.Ligeti@ksh.hu