

# The Network of International Student Mobility (working title)

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# Current research questions

1. Optimistic view on student mobility:  
**democratization** - do young persons migrate from less democratic to more democratic countries for educational purposes?  
→ social remittances / diffusion of values
2. What other factors impact on direction and degree of exchange relationship?
3. Which (additional) factors should be accounted for?

# Theoretical Framework

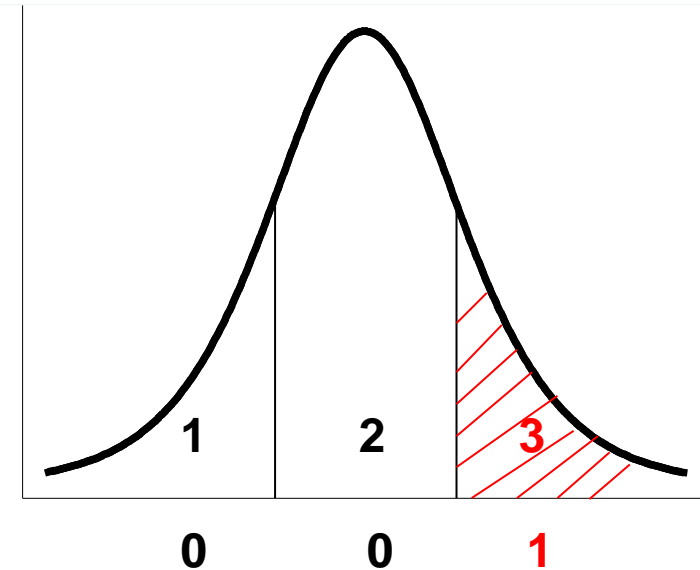
- ***homophily*** (McPherson et al. 2001), e.g. cultural similar
- ***Complementarity/ macro theories of migration***
  - migration from economically less developed to rich economically wealthy
  - migration from less democratically developed countries to democratically higher developed countries
- ***hegemony /preferential attachment:***
  - central position in the international system
  - using the *lingua franca* as teaching language in higher education

## (current) Sample & data

- Bologna participants and non-participating OECD members
- Period of ten years (2000, 2004, 2009)
- Outgoing long-term (whole degree cycle) student mobility
- Data base: UNESCO and OECD online- resources (dependent variable)

# Dependent variable

- ***outbound students in alter from ego divided by all students enrolled in ego***: number of students that *ego* sends to *alter*, divided by the number of students enrolled in higher education (same level) in *ego*
- This variable has been dichotomized by setting the highest quartile to one and the lower three to zero
- Loss of information by making continuous data discrete



# Independent variables: country specific and dyadic variables

## actor characteristics, similarity:

- structural similarity of higher education policies between countries (similarity in the **usage of ECTS** or a comparable system)
- **socio-economic similarity**: absolute difference in GDP per capita
- **cultural similarity**: common language branch and geographic proximity
- common membership in transnational institution, (increasing) similarity in higher education policies: **Bologna-Process membership**

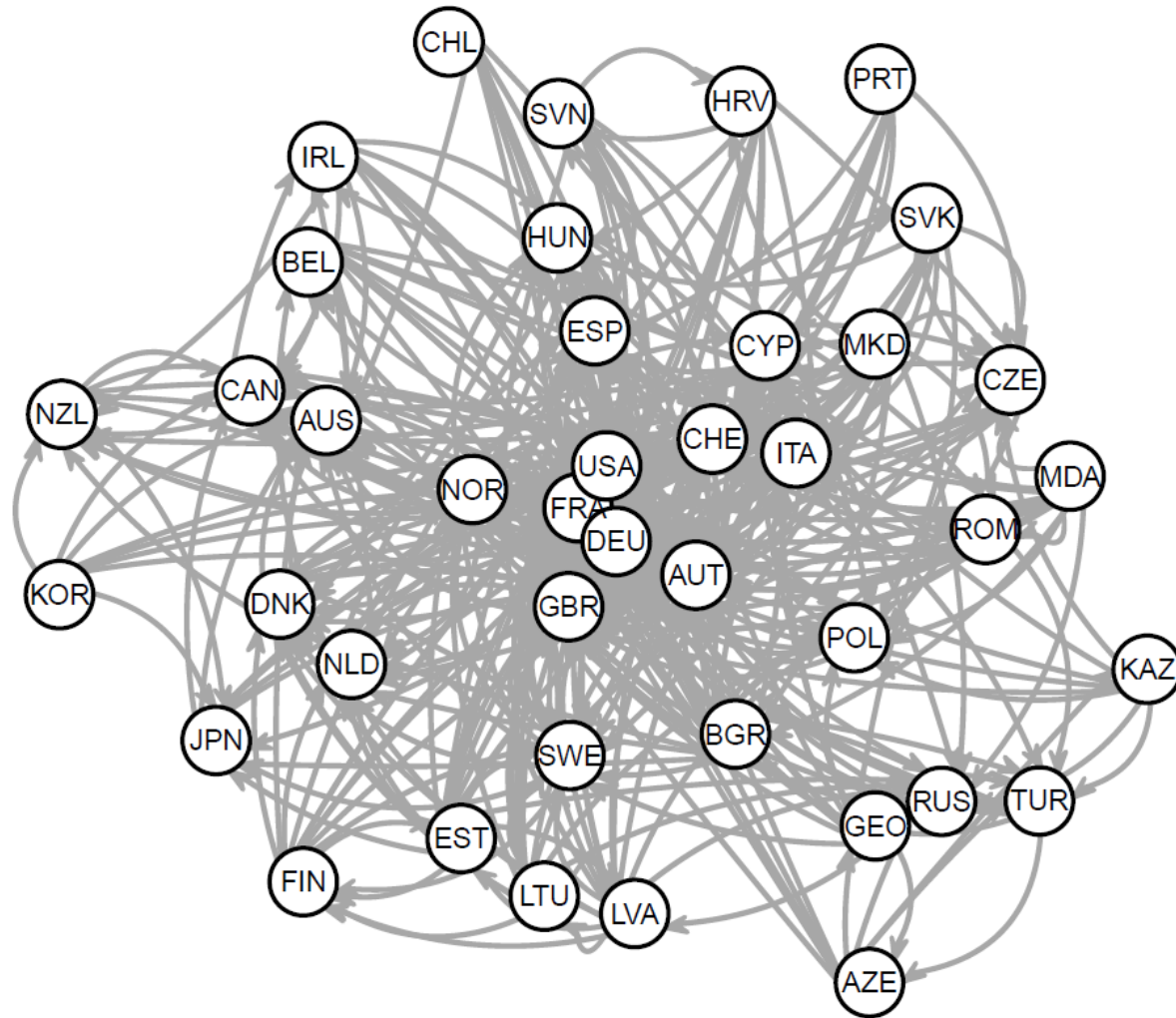
## actor characteristics:

- GDP per capita (in- and out-degree)
- English speaking country (in-degree), multi-lingual country (in- out-degree)
- democracy index (Economist intelligence unit): 1. full democracies, 2. flawed democracies, 3. hybrid regimes, 4. authoritarian regimes  
→ **authoritarian regimes** (in- out-degree)

# Analyses

- ***Social Network Analysis (SNA)***: to identify positions of countries in the network of cross-national student exchange
- ***Exponential Random Graph Models (ERGM)***: to test which factors determine patterns of transnational student mobility

## Descriptive presentation of the exchange relationships





**Table 1. Ties in the network of international student mobility 2000-2009, ERGMs**

	network tie								
	2000			2004			2009		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>edges</b>	-6.577***	-6.231***	-1.757*	-4.627***	-5.261***	-1.536*	-4.145***	-5.368***	-1.858*
<b>mutuality</b>	-0.030	-0.229	-0.298	0.696**	-0.021	-0.021	0.340	-0.466	-0.514
<b>GWESP (alpha=0.693)</b>	1.541***	1.487***	1.126***	1.639***	1.513***	1.242***	1.713***	1.652***	1.347***
<b>cyclic triplets</b>	-0.551***	-0.480***	-0.491***	-0.654***	-0.488***	-0.464***	-0.759***	-0.637***	-0.565***
<b>economic performance</b>									
<b>absolute difference(GDP per capita)</b>	-	-	-0.013	-	-	0.005	-	-	0.036***
<b>GDP per capita: indegree</b>	-	-	0.133***	-	-	0.123***	-	-	0.093***
<b>GDP per capita: outdegree</b>	-	-	0.050***	-	-	0.024	-	-	0.019
<b>democratization</b>									
<b>authoritarian regime: indegree</b>	0.292***	0.213***	-0.424***	0.143**	0.140**	-0.538***	0.080*	0.111*	-0.489***
<b>authoritarian regime: outdegree</b>	0.087	0.043	-0.156	-0.010	-0.018	-0.120	-0.030	0.013	-0.190*
<b>absolute difference (democracy index)</b>	-0.233***	-0.188**	-0.343***	-0.308***	-0.243***	-0.441***	-0.243***	-0.188***	-0.556***

**Table 1. Ties in the network of international student mobility 2000-2009, ERGMs (continued)**

	network tie								
	2000			2004			2009		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>hegemonic language</b>									
<b>english language: indegree</b>	-	0.693***	0.307*	-	1.114***	0.698***	-	0.961***	0.911***
<b>same language branch</b>	-	0.599***	0.636***	-	0.484**	0.565***	-	0.322*	0.532**
<b>mixed language: indegree</b>	-	0.335	-0.254	-	-0.025	-0.606**	-	-0.226	-0.881***
<b>mixed language: outdegree</b>	-	0.259	0.062	-	0.294	0.190	-	0.086	-0.031
<b>geographic proximity</b>									
<b>shared border</b>	2.283***	2.066***	2.231***	-	2.071***	2.202***	-	2.061***	2.091***
<b>Bologna process</b>									
<b>both apply ECTS or comparable system</b>	-	0.110	0.087	-	-0.026	-0.262	-	-0.192	-0.070
<b>both countries are Bologna participants</b>	-	0.532***	0.534***	-	0.534***	0.739***	-	0.689***	0.834***
<b>Akaike Information Criteria</b>	1,410.055	1,360.051	1,238.573	1,488.969	1,320.952	1,203.299	1,451.708	1,310.553	1,190.470
<b>Bayesian Information Criteria</b>	1,453.274	1,435.685	1,330.415	1,526.786	1,396.587	1,295.141	1,489.525	1,386.187	1,282.312
<b>Note:</b>	*p<0.05; **p<0.01; ***p<0.001								

# Results

- Patterns of cross-national student exchange are strongly influenced by the existence of a common border; these are the most relevant exchange relationships [but also the most imbalanced (Vögtle and Fulge 2013)] (**proximity**)
- English speaking countries attract the highest share of international students (**hegemony**)
- Countries with a high GDP per capita have greater chances to host students than less prosperous countries. The absolute difference in GDP has a positive effect (**complementarity**)
- Since 2004, students in authoritarian regimes became more mobile (in- and out-degree). But this is not due to migration into democracies, rather, higher differences in democracy scores reduce ties in the network (**homophily**, but needs to be further researched with larger sample)

# More research has to be done...

- increase sample size
  - include **non-OECD countries** with high outbound-mobility rates into sample (e.g. China and India)
  - That way more variety on independent variable such as democracy index and GDP per capita
- changes in the dependent variable
  - do the whole thing based with a dependent variable on **ISECD 2011**
  - include **gender aspects**, are there gender specific aspects of student mobility?
  - **valued relations**, based on four categories. How to model structural network effects?

# More research has to be done....

- extension and redefinition of explaining factors
  - search for better indicators for level and degree of similarity of **democracy**
  - **religious** similarities between countries: indicators, database?
  - **language** similarities: indicators, database?
  - include explaining factors like **visa policies** and bilateral visa agreements
- extend period of investigation

# Thanks for your attention!