



What about immigration?

An analysis of the closed-population assumption in research on intergenerational income mobility

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**August 10, 2020
American Sociological Association (ASA) Annual Meeting**



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Main question

- Is there an association of intergenerational mobility with immigration and emigration?
- When estimating intergenerational mobility
 - Several years of income during the middle-age of parents need to be linked to several years of income during the middle-age of their children
- Studies on intergenerational income mobility are underrepresenting 1st and 2nd generations and undocumented immigrants (Chetty et al. 2020; Corak 2006, 2013; Grusky, Smeeding, Snipp 2015)



Closed-population assumption

- Underrepresentation of foreign stock in studies of intergenerational mobility
 - Adequate data on income for parental generation of immigrants is more likely to be missing
 - Difficult to capture income of parents of immigrants around the world
- Ignoring foreign stock generates inaccurate estimates pertinent to public policy debates
 - Due to increases in U.S. immigration after 1965, 1st and 2nd generations of immigrants compose around 25% of the population in the country (Trevelyan et al. 2016)



Biased estimates

- Differentials in 2nd generation income mobility are significant across countries
 - 1.5th and 2nd generations have higher levels of intergenerational mobility in the U.S. (Chetty et al. 2020; Farley, Alba 2002; Glick, Hohmann-Marriott 2007)
 - High levels of socioeconomic attainment in Canada, Australia, and the U.K. (Imoagene 2012; Liu 2014; Ngyuen et al. 2020)
 - Opportunities are more limited in France (Simon 2003; Algan et al. 2010), Netherlands (Crul 2000), Germany (Worbs 2003; Schneider, Lang 2014), and Denmark (Rytter 2011)
- Underrepresentation of 2nd generation could bias the results of cross-national comparisons



Immigration and emigration

- Immigration may affect intergenerational mobility for 3+ generation workers to the extent that their wages and employment are impacted (Borjas 2014; Borjas, Grogger, Hanson 2010; Card, Peri 2016; Hunt, Gauthier-Loiselle 2010; Kim, Sakamoto 2013; Ottoviano, Peri 2012)
- Emigration might benefit mobility for workers who do not emigrate (Aydemir, Borjas 2007)

Exploratory OLS models

- Dependent variable: **mobility for 3+ generation**
 - Intergenerational income elasticity (IGE) from regressions of child income to parental income
 - **Higher IGE means less intergenerational mobility**
 - Data from publications for 20 countries after 2001
- Independent variables: **migration**
 - Proportion of immigrants (primary educated)
 - Proportion of emigrants (overall and tertiary educated)
 - Database on Immigrants in OECD and non-OECD Countries (DIOC) for 2000/2001 (<https://www.oecd.org/els/mig/dioc.htm>)
- Control for differences in data and methodology
 - Fixed effects for publications
 - Standard errors for intragroup correlation within publications



Countries	Sample size	Percent
1 Australia	12	9.23
2 Brazil	2	1.54
3 Canada	21	16.15
4 Chile	1	0.77
5 Denmark	18	13.85
6 Finland	4	3.08
7 France	3	2.31
8 Germany	4	3.08
9 Italy	3	2.31
10 Japan	1	0.77
11 New Zealand	1	0.77
12 Norway	4	3.08
13 Peru	1	0.77
14 Singapore	1	0.77
15 South Africa	2	1.54
16 Spain	9	6.92
17 Sweden	4	3.08
18 Switzerland	1	0.77
19 United Kingdom	13	10.00
20 United States	25	19.23
Total	130	100.00



Effects on intergenerational income elasticity (IGE)

Independent variables	Model 1	Model 1 (Beta)	Model 2	Model 2 (Beta)
Constant	0.379*** (0.023)		0.356*** (0.023)	
Proportion of immigrants (primary educated)	0.036 (0.174)	0.027	0.067 (0.171)	0.050
Proportion of emigrants	-1.847*** (0.522)	-0.323		
Proportion of emigrants (tertiary educated)			-1.014** (0.464)	-0.265
Fixed effects for publications	Yes	Yes	Yes	Yes
R ²	0.454		0.434	
Adjusted R ²	0.336		0.311	
Observations	130		130	

*** Significant at $p < 0.01$. ** Significant at $p < 0.05$. * Significant at $p < 0.1$.

Source: OECD and mobility measures from a series of publications.

Summary of findings

- Larger proportions of emigrants may free up employment opportunities for those who did not emigrate
- We are unaware of any study of the IGE that mentions migration as a substantive issue
- We highlight theoretical and methodological implications of the closed-population assumption
 - Ignoring foreign stock seems unrealistic to understand intergenerational mobility in countries with significant levels of migration
 - Cross-national comparisons are compromised, because of different openness to immigration
 - These studies should clarify that they are about the 3+ generation, not the whole population



Simulations

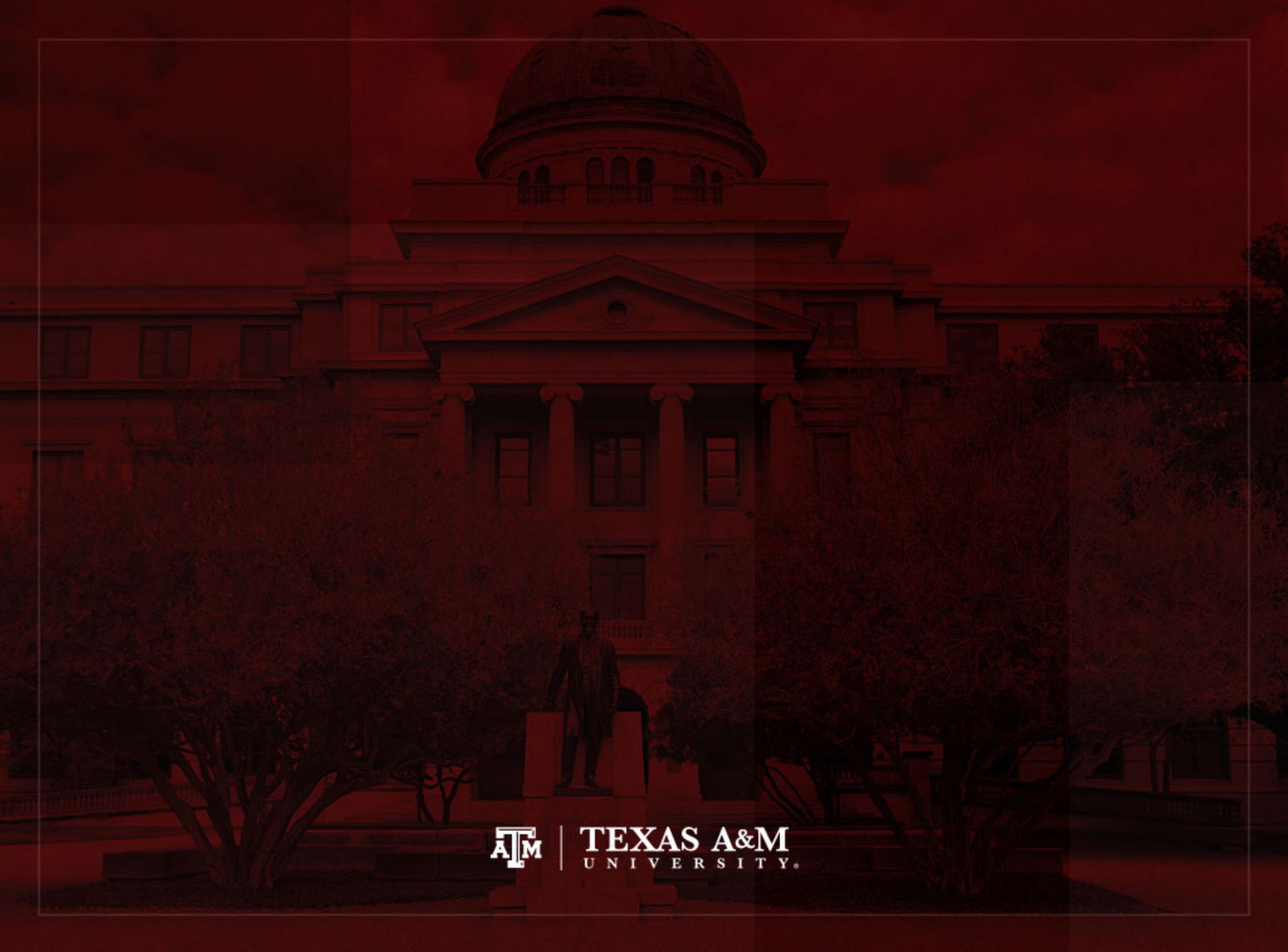
- Simulation methods could use census-level information about distribution of immigrant and native groups in a population
- Compute expected IGE estimates for the full population based on group-specific rates
- Compare these simulations with IGE values based on only the 3+ generation

Middle-age vs. childhood income

- Middle-age income has been used as the “permanent income” in intergenerational mobility
 - However, parental income at later years has smaller associations with offspring income than parental income when offspring was a child (Chen, Song 2019)
- Childhood income may overstate intergenerational mobility (Black, Devereux 2011; Mazumder 2005)
 - Incomes of 1st generation may be substantially higher than parental income when they were children (Kaestner, Malamud 2014; Kim, Sakamoto 2010; Massey, Redstone-Akresh 2006)
 - But childhood income permits inclusion of immigrants into the conceptualization of intergenerational mobility

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