



**Trinity College Dublin**

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

**Module:** Applied Statistics – II

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**Programme:** MSc. ASDS ('23-24)

## Replication:

Personal Economic Shocks and Public Opposition to  
Unauthorized Immigration

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# About the research

Aim, data used and key findings from the original research

**Aim:** To understand how negative economic shocks (both personal and labour market) heighten public opposition to immigration

- Literature suggests economic circumstances & levels of labour market competition have little bearing on citizens' immigration attitudes
- Personal economic shocks have potential to trigger the threatened, anti-immigration responses

**Data:** Panel study tracking a large, representative adult Americans from 2007-20. However, for analysis data from 2012 is considered ( $n = 2,149$ ).

## Key findings:

- Adverse personal economic shocks, especially job losses and income shock, spurred opposition to unauthorized immigration
- Effects more concentrated among white and male Americans



# Replication

Using the 7-point scale dependent variable and running a multinomial ordered logit model

## Key objectives of replication:

- Establish credibility to the researchers original work
- Learn how to perform various statistical analysis on primary data
- Add value to the research by making contributions

Research uses a binary dependent variable to map whether respondent support deportation of unauthorised immigrants or not.

Original variable captures responses on a 7-point scale ranging from 1 ('Return illegal immigrants to their native countries') to 7 ('Create a pathway to U.S. citizenship for illegal immigrants').

**Contribution:** Original 7-point scale variable used as the dependent variable in a multinomial ordered logit model to measure the effect.



# Descriptive summary

Checking that the broad demographic trends across the two rounds of survey remain the same

	Oct '12 - Jan '13		Oct '20	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Education (BA or more)	0.3563	0.4790	0.3838	0.4865
Female	0.5203	0.4997	0.5161	0.5000
Black'12	0.1244	0.3301	0.1212	0.3265
Hispanic'12	0.0993	0.2992	0.1056	0.3075
White'12	0.7116	0.4531	0.7062	0.4557
Union'07	0.1244	0.3301	0.1368	0.3438
Republican'07	0.4374	0.4962	0.4252	0.4946
Age (in years)	52.2998	14.9846	59.2094	13.8748
Income (in \$K)	63.7511	43.3514	80.1768	62.4847
	(N = 2,149)		(N = 1,055)	

- Respondents in the latest Oct'20 survey **demographically similar** to respondents in the Oct'12 survey: Panel remained consistent
  - **12%** Black, **11%** Hispanic, and **71%** White people, with **38%** reporting a college degree.

# Results (author 1/3)

**Model:** Unemployment and support for deportation of unauthorised migrants

	<i>Contemporaneous unemployment and support for deportation of unauthorized migrants</i>								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Nov'12	Oct'14	Jan'16	Sep'16	Oct'18	Jan'20	Oct'20	Pooled	Pooled
Unemployed	-0.0011 (0.0435)	-0.0753 (0.0704)	0.0347 (0.0652)	-0.0897 (0.0742)	-0.0568 (0.0862)	-0.0052 (0.1139)	-0.1870** (0.0682)	-0.0233 (0.0259)	-0.0312 (0.0258)
Year FE									Yes
Individual FE									Yes
Obs. (N)	2149	1589	1454	1148	951	1035	1055	9381	9381
Adjusted R-squared	0.145	0.145	0.116	0.128	0.165	0.152	0.159	0.143	0.160
RMSE	0.46	0.46	0.46	0.45	0.44	0.44	0.43	0.46	0.45
<u>Std.Errors</u>	HC2	HC2	HC2	HC2	HC2	HC2	HC2	HC2	HC2
+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001									

- We **find no evidence** to suggest that if respondent is unemployed, it is associated with them supporting deportation of unauthorised migrants (for the full model)

*N.B.: Outcome variable is a binary indicator that equals 1 if the respondent supports deporting unauthorized migrants, and 0 otherwise. All regressions control for respondents' age, race, gender, level of education, income employment status (retired, disabled or other), and partisanship (an indicator variable for Republicans). Robust standard errors in parentheses.*

# Results (author 2/3)

**Model:** Effect of economic shocks on support for deportation of unauthorized migrants

*Effect of economic shocks on voters' support for the deportation of unauthorized immigrants*

	(1)	(2)	(3)	(4)	(5)
Lost job	0.0673+ (0.0421)	0.0743+ (0.0412)	0.0685* (0.0417)	0.0756+ (0.0412)	0.0750+ (0.0413)
Income <u>drop</u>				0.0556** (0.0193)	0.0558** (0.0193)
Found job					-0.0207 (0.0416)
Individual FE		Yes	Yes	Yes	Yes
Year FE			Yes	Yes	Yes
Observations	9620	9620	9620	9620	9620
Adjusted R-squared	0.000	0.051	0.057	0.052	0.052
RMSE	0.49	0.48	0.48	0.48	0.48
<u>Std.Errors</u>	HC2	HC2	HC2	HC2	HC2

+ p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

- If respondent has lost job recently or experienced a drop in income (either personal or family), it **affects** opposition to unauthorized immigration (for all model specification)
  - Respondents who recently lost their job are **7.5 pp more** supportive of deporting
  - Major income drop (of at least 25%) associated with **5.5 pp increase** in support for deporting
- If respondents recently found a job, **negatively associated** with support for deporting (**not statistically reliable**)

# Results (author 3/3)

**Model:** Effect heterogeneity by respondent characteristics

<i>Effect heterogeneity by respondent characteristics</i>							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Lost job	0.0879* (0.0403)	0.0598 (0.0487)	0.0952* (0.0417)	0.1431+ (0.1333)	0.1598+ (0.1391)	-0.0181 (0.0660)	0.0188 (0.0571)
Lost job x Low-skilled		0.0876 (0.0852)					
Lost job x Union member			-0.1054 (0.1561)				
Lost job x High % of foreign-born				-0.0920 (0.0806)			
Lost job x High unemployment rate					-0.1124 (0.0823)		
Lost job x White						0.1676* (0.0826)	
Lost job x Male							0.1361+ (0.0797)
County FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8849	8849	8849	8849	8849	8849	8849
Adjusted R-squared	0.178	0.178	0.177	0.178	0.178	0.178	0.178
RMSE	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Std. Errors	HC2	HC2	HC2	HC2	HC2	HC2	HC2

+ p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

- **No evidence** of heterogeneous effects across respondents differentiated by skill level or union membership
- **No evidence** found in case of counties with higher % of foreign born or unemployment rate
- White respondents who have recently lost jobs: **16.76 pp more** opposed
- Also, male respondents: **13.61 pp more** opposed to unauthorised immigration

*N.B.: Outcome variable is a binary indicator that equals 1 if the respondent supports deporting unauthorized migrants, and 0 otherwise. The linear probability models in columns 2–7 interact with unemployment shocks with indicator variables denoting the different groups of respondents. All regressions control for the constitutive terms of the interaction with job loss and age, income, employment status (retired, disabled or other) and partisanship. Robust standard errors in parentheses.*

# Results (contribution 1/2)

**Model:** Unemployment and support for deportation of unauthorised migrants

Covariate	Value	Std. error	t value	p value
UNEMPLOYED	0.1969834	0.006209460	31.723114	0.0000
1 2	118.1841585	0.011244808	10510.10954	0.0000
2 3	118.6608454	0.019175913	6188.015281	0.0000
3 4	119.1131872	0.023271951	5118.315431	0.0000
4 5	119.9918159	0.028902471	4151.610931	0.0000
5 6	120.6035795	0.032354387	3727.580396	0.0000
6 7	121.2576560	0.036534422	3318.997560	0.0000

- One unit change in UNEMPLOYED variable that is moving from "unemployed" to "employed" is associated with an increase of **0.197 log odds** on average for a one step change of path variable which captures support for deportation on a 7-point scale ranging from 1 ('Return illegal immigrants to their native countries') to 7 ('Create a pathway to U.S. citizenship for illegal immigrants').
- So, we find sufficient evidence to say that unemployed respondents oppose the deportation of unauthorized immigrants.

*N.B.: All regressions control for respondents' age, race, gender, level of education, income employment status (retired, disabled or other), year and partisanship (an indicator variable for Republicans).*



# Results (contribution 2/2)

**Model:** Effect of economic shocks on support for deportation of unauthorized migrants

Covariate	Value	Std. error	t value	p value
LOST_JOB	-0.213567659	0.151907476	-1.4059062	0.1598
income_shock2	-0.207933736	0.069856838	-2.9765695	0.0029
FOUND_JOB	0.133809587	0.153516189	0.8716318	0.3834
1 2	-0.428223520	0.142333975	-3.0085826	0.0026
2 3	0.017343994	0.142232843	0.1219409	0.9029
3 4	0.426003191	0.142231108	2.9951478	0.0027
4 5	1.220687717	0.142668735	8.5560983	0.0000
5 6	1.778897021	0.143251141	12.4180304	0.0000
6 7	2.383304500	0.144104814	16.538688	0.0000

- One unit change in income\_shock2 variable that is experiencing a major income drop (of at least 25%) is associated with a **decrease of 0.207 log odds** on average for a one step change of path variable which captures support for deportation on a 7-point scale ranging from 1 ('Return illegal immigrants to their native countries') to 7 ('Create a pathway to U.S. citizenship').
- Coefficients for recent job lost and finding job is **not statistically reliable**.

*N.B.: All regressions control for respondents' age, race, gender, level of education, income employment status (retired, disabled or other), year and partisanship (an indicator variable for Republicans).*

# Conclusion

- The research findings were **successfully replicated**
- Research shows that labour market factors like unemployment rate and unemployed respondents and counties with high % of foreign-born **do not affect** opposition towards unauthorised immigrants
  - However personal economic factors like recent job loss or income shock (of at least 25%) is associated with **negative sentiment** towards unauthorised immigrants and support their deportation
- Furthermore, from the heterogeneity model we observe that white respondents and male respondents who have faced recent job loss are **more likely** to support deportation of unauthorized immigrants
- Contribution exercise shows mostly **similar** trends (as with authors work)
  - However, effects of unemployed respondents was found to be **different**





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# Thank You