National Immigration and GDP Rates as Predictors for States

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Introduction

Immigration rates tend to be fairly well correlated with GDP growth. We see that immigrants are more likely to move to the United States when the economy is doing well. When the economy is doing poorly, immigrants are less likely to do so. In addition, immigration policies vary as economic growth rises and falls, resulting in changing sentiments about the benefits of large-scale immigration.

Motivation and Past Scholarship

- Political climate around immigration at the national level
- Assess the relationship between higher levels of immigration and GDP growth
- Different relationships by state

Motivation and Past Scholarship

- [4] The most significant effects are the changes to demography that it causes. These changes can have significant effects on how individuals perceive the benefits of immigration.
- [1] High and low-skilled workers respond to changes in the economy in similar ways, so the key is to address sectors of the economy. Reasonably, states can be said to have strong and weak sectors.
- [3] Integration of immigrants into an economy can be very high cost, but seamless integration results in positive financial sustainability and GDP growth, generally speaking.
- [2] Low-skilled migrant workers have higher rates of labor participation than native born populations.
- [5] Short-run GDP trends act as pulls while long-run GDP trends act as pushes.

Research Question

- Can the relationship between national GDP and immigration rates be used to model state-level relationships?
- Are significant differences between the relationships at the national and state level associated with political leanings in those states?

Data Collection

[1] St. Louis FRED (GDP Data)

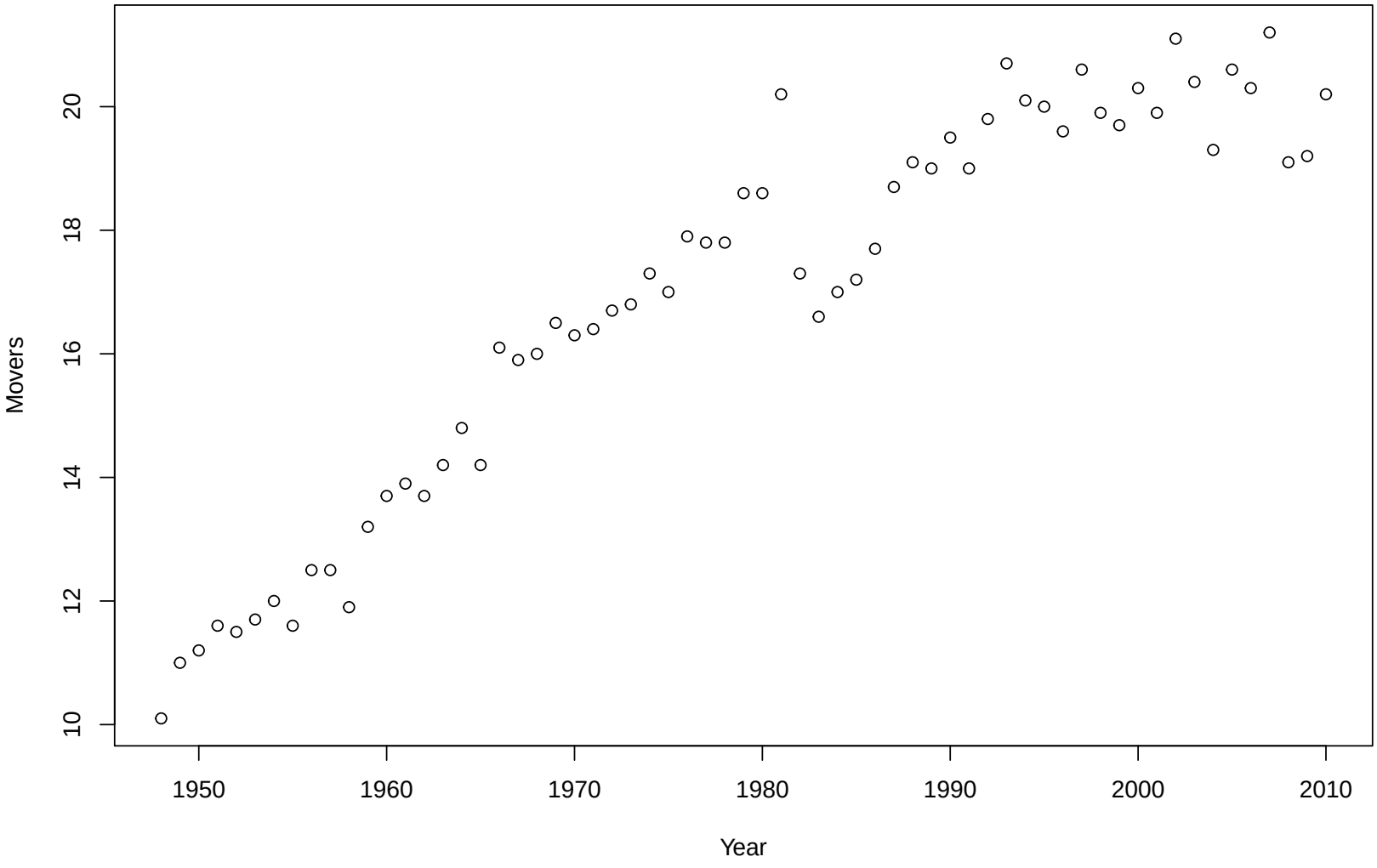
[2] U.S. Census Bureau (Immigration Data)

[3] PRRI (Immigration Sentiment)

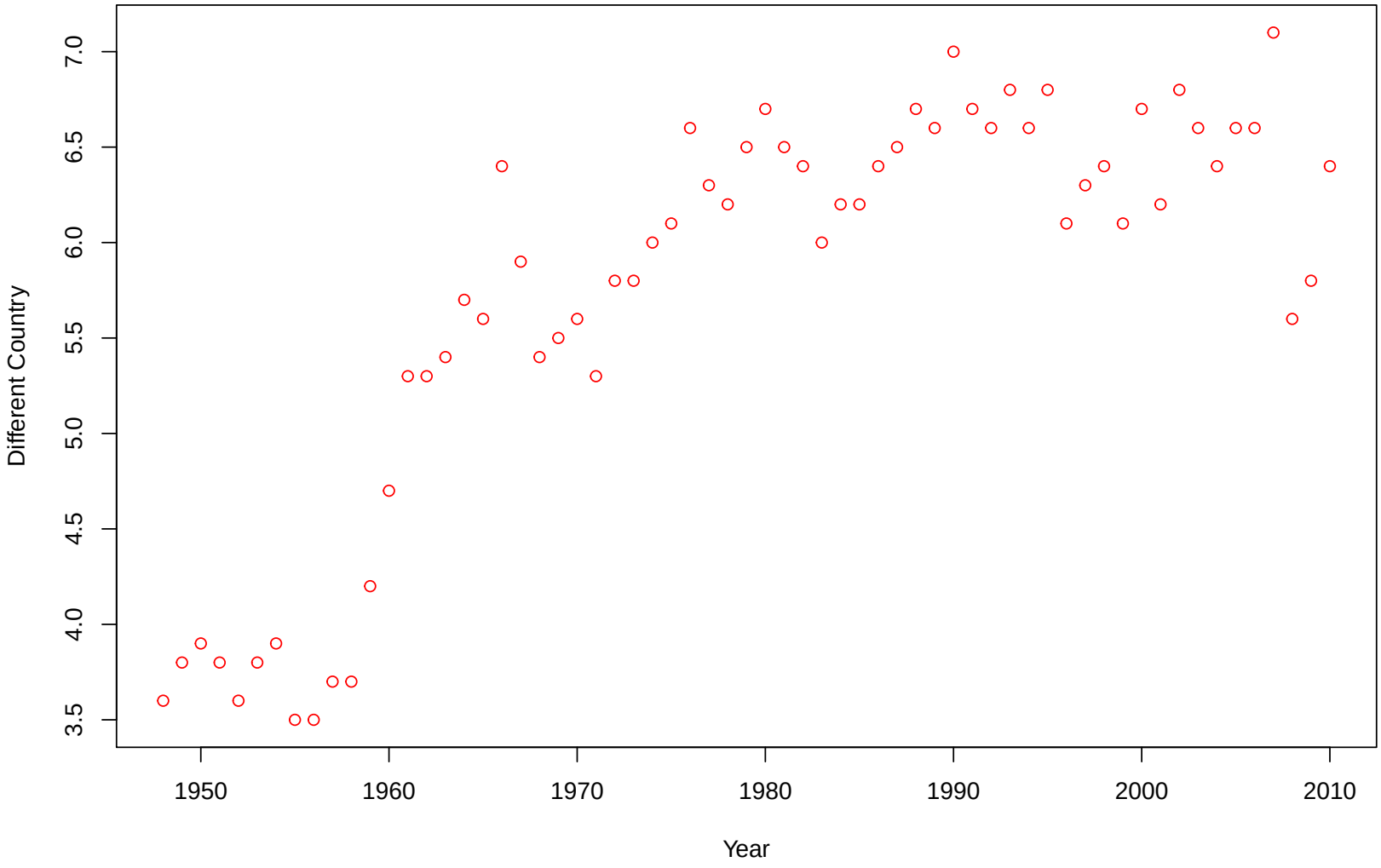
Summary Findings

```
##      Movers       DifferentCountry DifferentState
##  Min.   :10.10   Min.   :3.500    Min.   :1.400
##  1st Qu.:14.20   1st Qu.:5.350    1st Qu.:2.450
##  Median :17.30   Median :6.100    Median :2.900
##  Mean   :16.89   Mean   :5.727    Mean   :2.727
##  3rd Qu.:19.65   3rd Qu.:6.550    3rd Qu.:3.200
##  Max.   :21.20   Max.   :7.100    Max.   :3.600
```

Summary Findings



Summary Findings



Summary Findings

Summary Findings

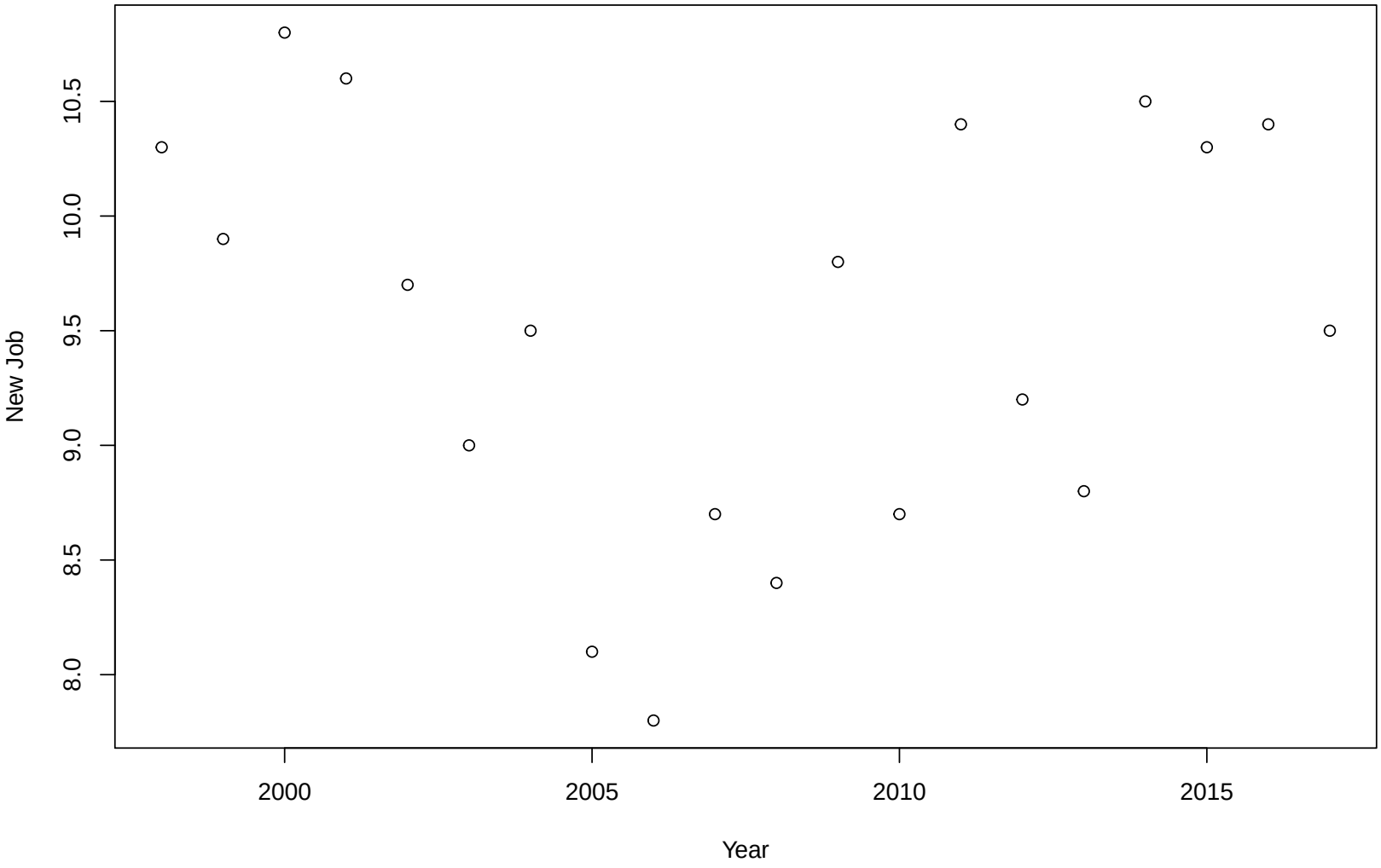
```
##      NewJob          LookWork
##  Min.   : 7.800   Min.   :1.300
##  1st Qu.: 8.775   1st Qu.:1.600
##  Median : 9.600   Median :1.900
##  Mean   : 9.520   Mean   :1.965
##  3rd Qu.:10.325   3rd Qu.:2.300
##  Max.   :10.800   Max.   :2.700
```

Methods

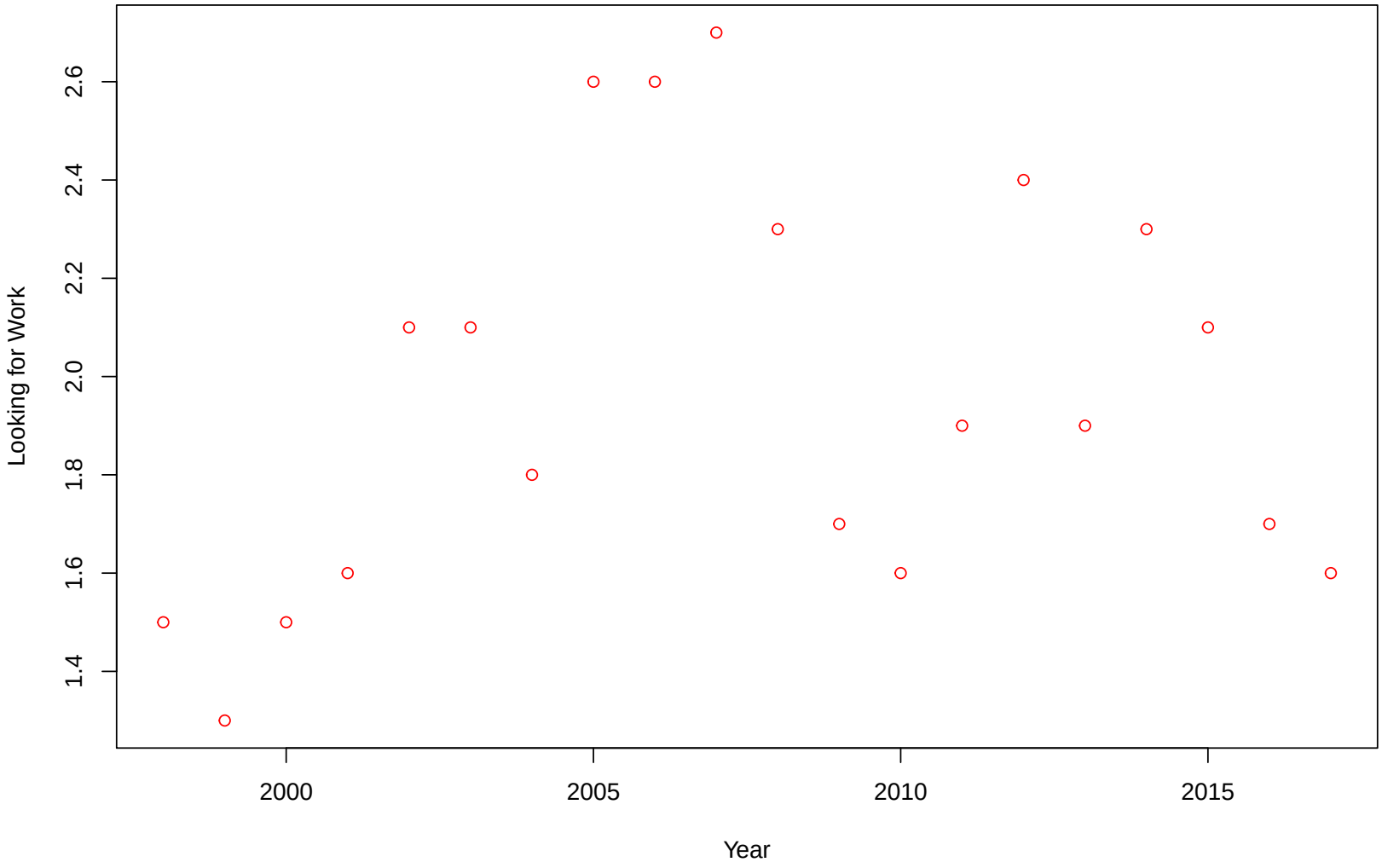
Equation:

$$Y_{GDP} = \beta_0 + \beta_1 * MigrationRate + \beta_2 * NewJob + \beta_3 * DifferentCountry + \epsilon$$

Findings



Findings



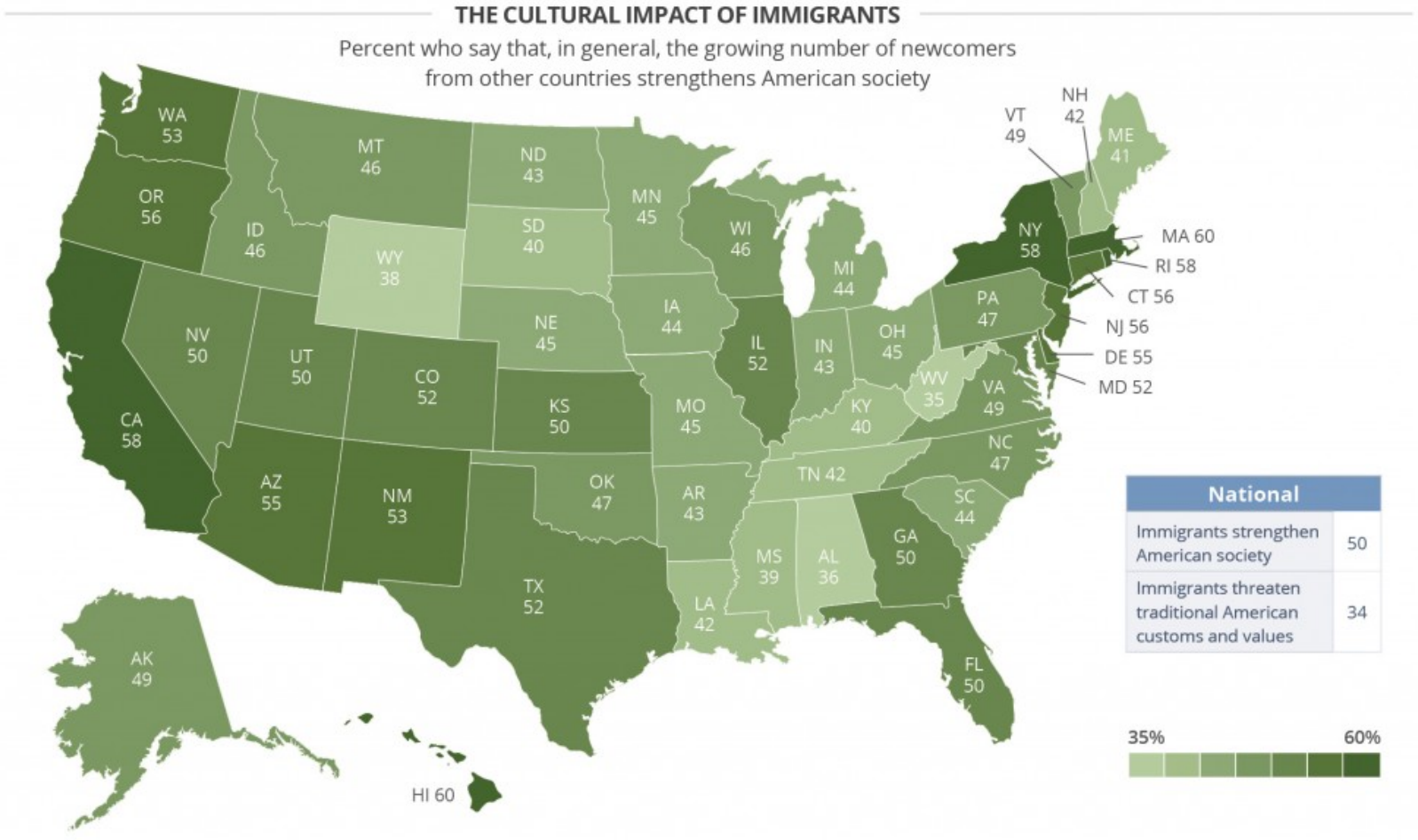
Model

```
##
## Call:
##
## nloptr(x0 = beta0, eval_f = objfun, eval_grad_f = gradie
##     y = y, X = X)
##
##
## Minimization using NLopt version 2.4.2
##
## NLopt solver status: 1 ( NLOPT_SUCCESS: Generic success
##
## Number of Iterations....: 9
## Termination conditions:  xtol_rel: 1e-06 maxeval: 1000
## Number of inequality constraints:  0
## Number of equality constraints:    0
## Optimal value of objective function:  246.327349194556
## Optimal value of controls: -1.203262 0.2548205
```

Model

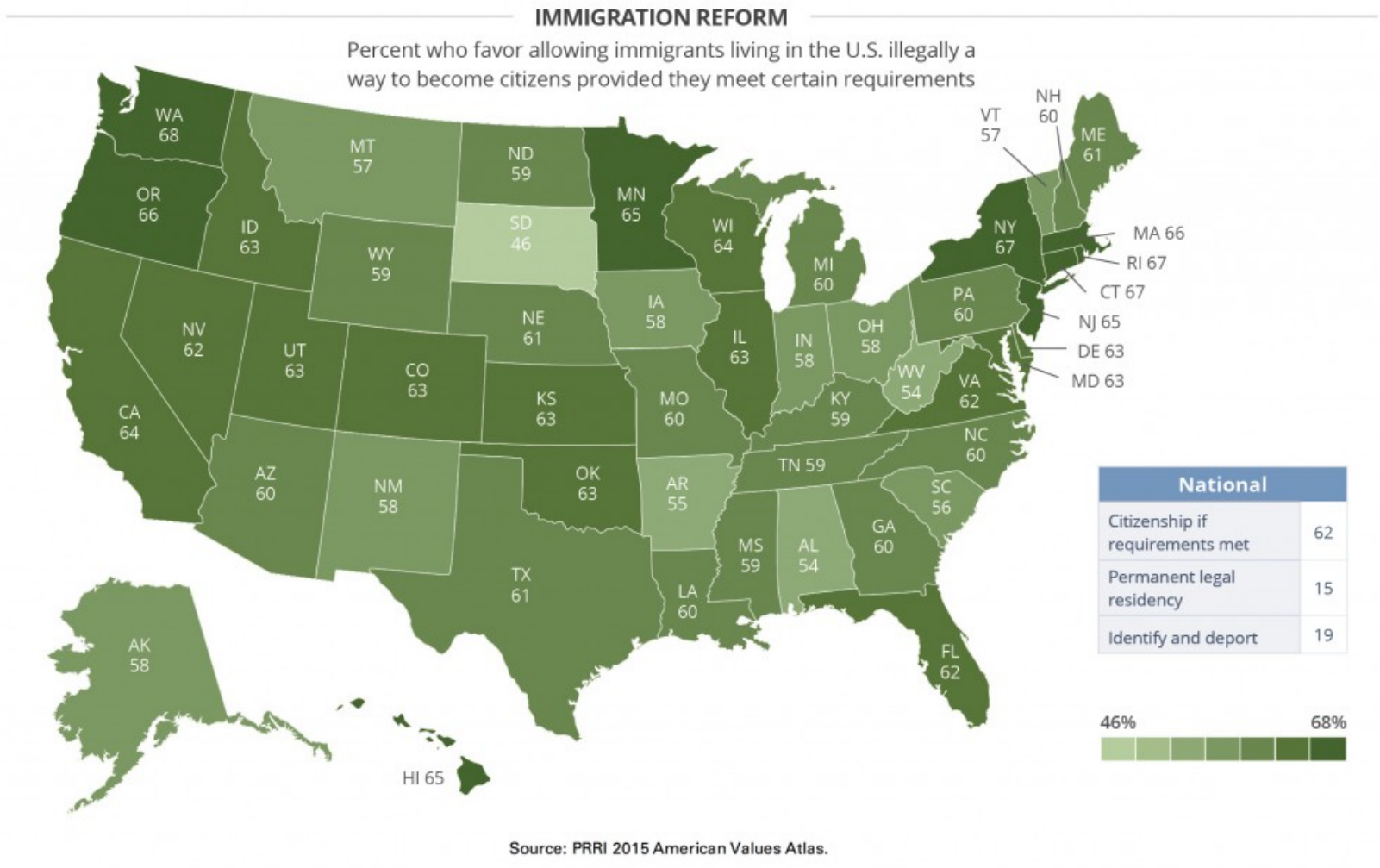
```
lm(FinalDataM$GDPRate~FinalDataM$PercentMovers
    + FinalDataS$NewJob
    + FinalDataM$DifferentCountry
    ,data=FinalDataM)))
#est <- lm(txgdp$changerate~StateGDPData$txmigration
                  #,data=FinalDataM)
#print(summary(est))
#deviance(est)
```

Why is this important?



Source: PRRI 2015 American Values Atlas.

Why is this important?



Source: PRRI 2015 American Values Atlas.

Next Steps

The next steps would be to gather data over a longer time period and begin breaking the employment data down into sectors and industries.

Sources

[1] Dancygier, Rafaela M., and Michael J. Donnelly. "Sectoral Economies, Economic Contexts, and Attitudes toward Immigration." The Journal of Politics, vol. 75, no. 1, 2013, pp. 17–35., doi:10.1017/s0022381612000849.

[2] Hanson, Gordon, et al. The Rise and Fall of U.S. Low-Skilled Immigration. National Bureau of Economic Research, 2017.

[3] Kolb, Holger, and Henrik Egbert. Migrants and Markets Perspectives from Economics and the Other Social Sciences. Amsterdam University Press, 2008.

[4] Schou, Poul. "Immigration, Integration and Fiscal Sustainability." Journal of Population Economics, vol. 19, no. 4, 2006, pp. 671–689., doi:10.1007/s00148-005-0027-x.

[5] Simpson, Nicole B., and Chad Sparber. The Short- and Long-Run Determinants of Less-Educated Immigration into U.S. States. IZA, 2012.