

## **Distribution Agreement**

In presenting this thesis as a partial fulfillment of the requirements for a degree from Emory University, I hereby grant to Emory University and its agents the non-exclusive license to archive, make accessible, and display my thesis in whole or in part in all forms of media, now or hereafter now, including display on the World Wide Web. I understand that I may select some access restrictions as part of the online submission of this thesis. I retain all ownership rights to the copyright of the thesis. I also retain the right to use in future works (such as articles or books) all or part of this thesis.

Alida Haworth

April 10, 2018

Sources of Discontent: Examining the Role of Information Provision, Race and Skill on U.S.  
Opinion Toward Immigration

by

Alida Haworth

Dr. Eric Reinhardt  
Adviser

Political Science

Dr. Eric Reinhardt  
Adviser

Dr. Beth Reingold  
Committee Member

Dr. Sam Cherribi  
Committee Member

2018

Sources of Discontent: Examining the Role of Information Provision, Race and Skill on U.S.  
Opinion Toward Immigration

By

Alida Haworth

Dr. Eric Reinhardt

Adviser

An abstract of  
a thesis submitted to the Faculty of Emory College of Arts and Sciences  
of Emory University in partial fulfillment  
of the requirements of the degree of  
Bachelor of Arts with Honors

Political Science

2018

## Abstract

### Sources of Discontent: Examining the Role of Information Provision, Race and Skill on U.S. Opinion Toward Immigration

By Alida Haworth

Despite a wealth of literature, the debate about the influence of economic and cultural concerns on public opinion regarding immigration remains inconclusive. This thesis provides the first experimental study of the relative influence of cultural and economic concern on opinion toward immigration, with a core emphasis on the role of information provision. The research design distinguishes between key immigrant characteristics, namely skill level and race, in both treatment and opinion questions. The results contribute to economic theory on anti-immigration sentiment and the role of information and policy priming, but find no significant results to support cultural concern theory.

Sources of Discontent: Examining the Role of Information Provision, Race and Skill on U.S.  
Opinion Toward Immigration

By

Alida Haworth

Dr. Eric Reinhardt

Adviser

A thesis submitted to the Faculty of Emory College of Arts and Sciences  
of Emory University in partial fulfillment  
of the requirements of the degree of  
Bachelor of Arts with Honors

Political Science

2018

## Acknowledgements

I am deeply grateful for the support of my professors and peers at Emory University. This thesis would not have been possible without the enthusiasm and patience of my thesis advisor, Dr. Eric Reinhardt. He has given his time on a weekly basis for the entirety of my senior year and has made the thesis experience a joy. I must also thank Dr. Beth Reingold for her support throughout the thesis process and for providing key motivation to pursue the experimental research method of this study. I am also grateful for Dr. Sam Cherribi for his thoughtful contributions. I thank the members of this committee for enhancing my critical judgement beyond what I imagined possible from an undergraduate degree. I would also like to thank the Emory Political Science Department for their generous research grant.

Finally, a special thanks to my family and friends for their constant support and positivity.

## Table of Contents

Introduction .....	1
Overview of Literature .....	4
Economic Concern .....	4
Cultural Concern .....	7
Political Messaging .....	10
Theory & Hypotheses .....	13
Research Design .....	15
Results .....	23
Discussion .....	33
Conclusion .....	37
Appendix:	
Appendix A: Qualtrics Survey Design .....	41
Appendix B: Tables & Figures .....	48
Table 1. Sample Demographic Data .....	48
Table 2. Multivariate Regression of Responses to “The U.S. accepts too many immigrants” for Respondents in the Low-Information Treatment .....	50
Table 3. T-Test of Means of Responses to “The U.S. accepts too many <i>low-skilled</i> immigrants” and “The U.S. accepts too many <i>high-skilled</i> immigrants” Across Information Treatment Groups .....	51
Table 4. Multivariate Regression: Hypothesis Four, Model 1 .....	51
Table 5. Multivariate Regression: Hypothesis Four, Model 2 .....	52
Table 6. Multivariate Regression: Hypothesis Four, Model 3 .....	53
Table 7. Calculations of Predicted Outcomes Relative to Constant (Model 3)...	54
Figure 1. Outline of Treatment Stages .....	55
Figure 2. Plot of Regression Coefficients for Demographic Variables for Responses to “The U.S. accepts too many immigrants” (Low-Information Treatment) .....	55

Figure 3. Hypothesis One: Mean of Responses to “The U.S. Accepts too many <i>low-skilled</i> immigrants” and “The U.S. accepts too many <i>high-skilled</i> immigrants” Across Both Information Treatments .....	56
Figure 4. Hypothesis Two: Mean of Responses to “The U.S. accepts too many <i>low-skilled</i> immigrants” and “The U.S. accepts too many <i>high-skilled</i> immigrants” Relative to Respondent Skill Level .....	56
Figure 5. Hypothesis Three: Mean of Responses to “The U.S. accepts too many <i>low-skilled</i> immigrants” and “The U.S. accepts too many <i>high-skilled</i> immigrants” Relative to Information Treatments .....	57
Figure 6. Hypothesis Three: Mean of Responses to “The U.S. accepts too many <i>low-skilled</i> immigrants” and “The U.S. accepts too many <i>high-skilled</i> immigrants” Relative to Respondent Skill Level & Information Treatments ....	57
Figure 7. Hypothesis Three: Plot of the Difference of Means for Immigration of Low and High-Skill, Relative to Respondent Skill Level & Information Treatments .....	58
Figure 8. “Big-Picture” Display of Responses to “The U.S. should accept more immigrants like the individual interviewed” .....	58
Figure 9. Hypothesis Four Regression Model 1 .....	59
Figure 10. Hypothesis Four Regression Model 2 – “Unlike” Race .....	59
Figure 11. Hypothesis Four Regression Model 3 .....	60
Appendix C: MTurk Batches .....	61
Appendix D: Variable & Command Codebook .....	62
References .....	68



## 1. Introduction

The question of why some support and others oppose immigration remains puzzling. Contemporary political rhetoric has played a role in equating immigration with issues such as job displacement, wage depression, public resource competition and cultural threat. Donald Trump's first televised presidential campaign advertisement of 2016 narrowed in on immigration and pushed the topic to the forefront of debate. The advertisement described how "the system [is] rigged against Americans" as immigrants "collect social security benefits, skipping the line."<sup>1</sup> Following a similar line of rhetoric, Theresa May repeatedly focused on immigration in her 2015 party leadership campaign. May touched upon a similar rhetoric of concern regarding public fiscal resources as "it is difficult for schools and hospitals and core infrastructure like housing and transport to cope." Further, May appealed to individual labor market concerns: "for the people in low paid jobs, wages are forced down even further and some people are forced out of work altogether."<sup>2</sup> Cues from political elites appeal to the concerns and discontent among the electorate and frame immigration as the cause of existing socio-political issues. The risk of such a prevalence of biased anti-immigration rhetoric is the distortion of policy perception from reality. This paper examines the role of more ideologically neutral information exposure and framing on public opinion through research design.

The current debate among contemporary scholars of immigration predominantly centers on the tension between economic and cultural theory. Economic theory traditionally focuses on individual labor market competition but has more recently expanded to encompass additional concerns, such as public finance and firm level interests (e.g. Gerber et. al. 2017;

---

<sup>1</sup> Montanaro, Domenico. 2016. "Watch: Donald Trump Releases First Campaign Ad, To Air in Four States." *NPR*, August 19. <https://www.npr.org/2016/08/19/490609443/watch-donald-trump-releases-first-campaign-ad-to-air-in-4-states>

<sup>2</sup> Stone, Jon. 2016. "What Theresa May said about immigration in her infamous speech to Tory conference." *The Independent*, August 25. <http://www.independent.co.uk/news/uk/politics/theresa-may-immigration-policies-speech-conference-2015-tory-conservative-party-views-a7209931.html>

Hainmueller & Hiscox 2010; Hanson, Scheve & Slaughter 2007; Kerr, Kerr & Lincoln 2015). Cultural theory on immigration focuses on the division between out-group and in-group mentality, in which individuals oppose those who are culturally “unlike” them and support those who are culturally similar. Additionally, cultural theory emphasizes the role of cultural bias and stereotyping in shaping opinion towards certain immigrant groups (e.g. Brader, Valentino & Suhay 2008; Citrin et. al. 1997).

Despite the wealth of literature on immigration and public opinion formation, the debate on the influence of economic and cultural concern remains inconclusive. Thus, the following research question emerges: what is the relative influence of cultural and economic concern on citizens’ opinion toward immigration? A principal cause for the lack of consensus is ill-suited research design. Much of the existing research has relied upon indirect survey data which do not test, but rather assume, how specific key immigrant characteristics affect opinion formation. As a result, respondents are left to infer the missing information which may result in responses shaped by entirely different assumptions of the immigration in question (Hainmueller & Hiscox 2010). This paper utilizes a randomized survey experiment and the provision of explicit cues on immigrant characteristics to address the limitations of previous studies. Specifically, cues on the race and skill level of immigrants are employed to test for cultural and economic concern respectively.

Anti-immigration sentiment forms part of a growing backlash against globalization in general (Margalit 2012). A focus on public opinion is both timely and vital for positioning policy in the future. This study attempts to further understanding of the determinants of public opinion and provide insight on the influence of political messaging, relative to additional sources of influence, such as cultural and economic concern (Brader, Valentino & Suhay 2008; Gerber et. al. 2017; Rho & Tomz 2017). Consideration for the role of cultural concern within a context of increasing policy knowledge is lacking. An interesting question

arises from this gap in research; if a respondent became more informed, would they then care more about their economic self-interest than cultural concern? This paper aims to utilize an experimental design to tease apart the way in which manipulating economic *and* cultural information exposure may produce variation in opinion formation.

In this paper, I report four main findings that further the theory and debates on the determinants of public opinion toward immigration. First, I provide strong evidence for opposition toward low-skilled immigrants and the public finance theory of economic concern. Second, I find evidence to suggest that individuals do take their individual labor market standing into consideration when forming policy opinion. However, the degree of opposition resulting from individual labor market concern differs depending on whether the individual is a member of the low-skilled labor force or high-skilled. Third, results indicate that the provision of varying degrees of policy information alters attitudes toward immigration. Finally, results lack support for cultural concern theory as the race of the treatment immigrant produced no statistically significant difference in opinion outcomes. Taken together, these findings suggest that economic concern is a significant determinant of opposition towards immigration and that information provision can play a role in priming the salience of certain concerns.

The remainder of this paper proceeds as follows. The second section provides an overview of the relevant literature on economic concern, cultural concern and political messaging regarding immigration. The third section derives several hypotheses that serve as tests for the sources of discontent and the role of information provision. The fourth section, outlines the research design, followed by a presentation of results in section five. Finally, sections six and seven conclude the study with a discussion of the implications of the research findings and potential areas for future studies.

## 2. Overview of Literature

### I. Economic Concern

Theory on immigration policy opinion formation has predominantly focused on international political economy (IPE) and the role of individual economic self-interest. The Heckscher-Ohlin (H-O) model (1991) of factor proportions argues that the skill level of an individual determines opinion towards immigration. The model highlights the impact of immigration on the factors of production in the recipient country. When the skill level of an immigrant mirrors that of a domestic worker, the direct threat to wage level and employment stability increases. Alternatively, when the skill levels differ from one another, the immigrant presents a potential benefit. For example, a low-skilled immigrant increases the supply of low-skilled labor in the recipient country. This applies negative pressure on wage rates and employability of domestic low-skilled workers. Yet, productive output that occurs as a result of a larger low-skilled workforce leads to beneficial outcomes for high-skilled domestic labor. An individual with a skill type that experiences a greater influx of supply due to immigration is more likely to express anti-immigration sentiment according to this line of theory (Hainmueller & Hiscox 2010; Iyengar et. al. 2013; Malhotra, Margalit & Mo 2013; Mayda 2006). The implications of the H-O factor proportions model in regards to immigration are commonly referred to as labor market concerns (LMC). Such a theoretical lens presents an opinion formation process that is entirely dependent on the skill level of the immigrant, relative to the respondent.

It is important to acknowledge that research applying the traditional IPE theory tends to find limited empirical support for the relationship between a respondent's skill level and opinion towards immigration (Citrin et. al. 1997; Hainmueller, Hiscox & Margalit 2017). As a result, research has since expanded the operationalization of economic concern to account

for factors such as public finance and firm level considerations. These areas of economic concern, discussed below, appear more influential for immigration policy opinion formation.

Firm level theory also accounts for the concern of individual level economic interests but shifts the dominant focus away from LMC to the position and performance of the firm (Kerr, Kerr & Lincoln 2015). Within the context of international market competition, it is in the best interest of an individual for their firm to experience success. Immigration presents a potential source of advantage as firms can diversify and enhance their workforce by hiring individuals with skills the domestic labor market may lack. Research analyzing firm data on immigration and domestic labor employment rates has found a positive relationship; an increase in high-skilled immigrant employment tends to increase the total employment of high-skilled domestic labor by a firm (Kerr, Kerr & Lincoln 2015). This relationship between labor of high-skilled sectors counters traditional IPE theory as immigrants of like-skill to domestic labor present potential opportunity as opposed to threat. Acknowledgement of firm level theory has been overwhelmingly neglected from existing literature on immigration policy opinion. As a result, it is unclear whether a similar relationship is observable in lower-skilled sectors.

An alternative candidate of theory on economic concern focuses on the significance of public finance. Public finance concerns arise from both individual and sociotropic considerations. The individual level focuses on issues such as the impact of immigration on tax rates and personal access to public resources. The sociotropic scope considers the condition of the wider national economy (Citrin et. al. 1997; Gerber et. al. 2017; Hanson, Scheve & Slaughter 2007). The relationship between public finance concern and opposition to immigration was initially identified through analysis of existing observational data sets such as the American National Election Study (Citrin et. al. 1997; Hanson, Scheve & Slaughter 2007). The research outcomes confirmed the apparent lack of influence of

individual LMC but provided evidence for the significance of concern for the state of the national economy, tax rates and government funded services (i.e. public finance). More recent research has shifted from analysis of observational data to an experimental research design to tease out these additional layers of economic concern. Gerber et. al. (2017) utilize a survey experiment to study how public finance concern shifts depending on whether the immigrant is of low-skill or high-skill. The study found greatest opposition to low-skilled immigrants due to the association with lower tax contribution and greater demand for government funded services (Gerber et. al. 2017; Hainmueller & Hiscox 2010). Such results support the argument that an operationalization of economic concern that incorporates public finance is found to be significant for immigration opinion formation (Hanson, Scheve & Slaughter 2007). Both sides of the public finance concern, the individual and the sociotropic, stem from a perception of immigration as a policy that “drains” public finances and resources.

An additional component of economic theory focuses on the apparent lack of policy understanding among the electorate and the significance of this on economic concern. The argument suggests that economic concerns appear insignificant in former studies only because respondents lack adequate information. The existence of “economic ignorance” causes a disconnect between economic preference and policy (Guisinger 2017; Rho & Tomz 2017). Previous studies have acknowledged this as a potential research design flaw as survey questions probe for opinion without knowing if the respondent has adequate information on the consequences of policy (Hainmueller & Hiscox 2010). Experimental research has found that exposing an individual to greater policy information increases the correlation between personal economic interest and policy preference (Rho & Tomz 2017). Exposure to information provisions allows a respondent to better understand what they may gain or lose from certain policies. An increase in policy understanding is, therefore, likely to produce

opinion outcomes that better align with an individual's labor market standing and skill level (Rho & Tomz 2017). However, consideration for the role of cultural concern within a context of increasing policy knowledge is lacking. An interesting question arises from this gap in research; if a respondent became more informed, would they then care more about their economic self-interest than cultural concern? This paper aims to utilize an experimental design to tease apart the way in which manipulating economic *and* cultural information exposure may produce variation in opinion formation.

## II. Cultural Concern

The debate on how to best operationalize economic concern concludes that a study must account for more than the traditional IPE consideration of individual LMC. Research that has applied this broader focus has found a stronger relationship. However, in fixating on the nuances of economic concern, researchers frequently fail to account for cultural concern in their design. Immigration as the core research topic requires an understanding of the way in which *both* economic and cultural concerns may influence opinion formation.

It is important to recognize the direct counter debate, which argues for the insignificance of economic concern. Literature provides numerous examples where individual economic circumstances appear to lack significant effect on opinion towards immigration (Citrin et. al. 1997; Hainmueller, Hiscox & Margalit 2017). Further, a growing consensus supports the argument that policy preferences in general do not reflect economic self-interest (Mansfield, Mutz & Silver 2015). Research with this focus acknowledges that individuals and the process of opinion formation do not follow expectations of economic rationality and are more complex than economic theory allows. This points to the significance of non-economic cultural concerns, such as the impact of immigration on education, religion, language, societal norms and race relations (Hainmueller & Hopkins

2014; Margalit 2012). There is no existing consensus on which cultural concern appears most influential, which may be due to the reinforcing nature of many cultural factors.

One significant component of the cultural concern argument is the race of the immigrant. Immigration differs from other foreign policies, such as trade, as it is directly associated with group identity and culture (Hainmueller & Hopkins 2014). As a result, race remains a highly contentious component of the discussion on immigration in the United States, as well as internationally (Guisinger 2017; Hansen 2017). One of the key mechanisms at work between race and immigration opinion formation is that of in-group and out-group sentiment. The impact of the race of an immigrant on a citizen respondent differs depending on whether the race reflects the in-group of the respondent (Brader, Valentino & Suhay 2008; Guisinger 2017). Support for immigration is likely to be higher (lower) when the immigrant presented is racially similar (different) to the respondent. Therefore, the influence of cultural concern is heightened when the race of the immigrant is perceived to be “unlike” the race with which the respondent identifies. Such a finding has been explained by respondents’ self-perceived loss, anxiety and threat when the race of the individual presented is not of in-group (Brader, Valentino & Suhay 2008; Card, Dustmann & Preston 2005; Guisinger 2017; Margalit 2012).

In conjunction, race remains heavily associated with specific stereotypes and prejudice, which dictate perception. Existing research finds that prejudice towards certain immigrant groups frequently stems from the existing stereotypes attached to their race. Such stereotypes include an assumption of skill level and education, threat to security, dependence on public welfare and concern for national language (Citrin et. al. 1997; Brader, Valentino & Suhay 2008; Hainmueller & Hopkins 2014; Hansen 2017). As a result, opinion towards an immigrant may differ depending on the underlying stereotype attached to the perceived race. For example, in the context of the United States, Latin American immigrants are repeatedly



stereotyped as low-skill and high-threat to language and cultural norms. Comparatively, white European immigrants are stereotyped as higher-skill and more aligned with Anglo-American cultural norms. Both immigrant groups face a degree of stereotyping, which is applied with no factual information or knowledge of the economic or socio-cultural position of an immigrant specifically (Brader, Valentino & Suhay 2008; Hansen 2017; Haynes, Merolla & Ramakrishnan 2016). One of the key intentions behind applying an experimental design in this study is to provide greater insight on concerns that respondents may be less willing to directly reveal, such as racial bias. Utilizing a representative sample and random treatment assignment in which the only difference between prompts is the race of the immigrant should provide clarity on the cause if variation in opinion is observed. This is because respondents are unaware of the differences in prompts or that they are being tested for racial attitudes. Existing observational studies that attempt to identify the significance of race suffer from issues such as social desirability bias. Subsequently, such studies cannot be as certain of the significance of race as the causal concern in opposition or support of certain immigrant groups.

Additionally, the influence of cultural and racial cues is more observable among respondents with low levels of educational attainment (Hainmueller & Hiscox 2007). A higher degree of education is associated with stronger preferences for and exposure to cultural diversity, as well as greater ethnic and racial tolerance (Citrin et. al. 1997; Margalit 2012). An issue lies within the way previous literature has repeatedly operationalized education and skill level. There has been a tendency for education to be equated with skill level and for the two to be used interchangeably (e.g. Hainmueller & Hiscox 2010; Hanson, Scheve & Slaughter 2007). However, the two characteristics produce different outcomes depending on whether the focus is on cultural or economic concern. The education level of an individual is a strong indicator sensitivity to cultural cues, whereas skill level is better suited

for discerning the degree and type of economic concern; the two should not be applied as if synonymous (Hainmueller & Hiscox 2007; Hainmueller & Hiscox 2010; Mayda 2006; Rho & Tomz 2017). It is vital to conduct a study that acknowledges the way in which both the skill *and* education level of a respondent may produce responses that vary in sensitivity to economic or cultural cues.

### III. Political Messaging

It is widely recognized that the average member of the electorate is uninformed on the implications of policy, both on the individual and nation. This is particularly pertinent to the debate on immigration policy (Guisinger 2017; Facchini, Margalit & Nakata 2016). Public opinion towards immigration tends to be overwhelmingly negative, which suggests underlying mechanisms are at work in shaping opinion towards opposition (Bearce & Hart 2017; Hanson, Scheve & Slaughter 2017). Existing research has explored several potential explanations but a consensus is lacking. This presents a puzzle as opposition to immigration persists despite - or potentially because of - a lack of adequate policy understanding.

One potential argument explores channels of information and focuses on the role of political messaging. Political messaging becomes a forum to present policy in a particular way through a careful selection of cues (Brader, Valentino & Suhay 2008; Guisinger & Saunders 2017). The degree to which observers of political messaging are influenced also remains heavily contested within existing literature. This is due to the question of information absorption and subsequent political action (Huber & Arceneaux 2007). The research design of existing studies suffers from issues of endogeneity as data is predominantly drawn from national opinion surveys. For example, researchers cannot be certain that survey responses are the direct product of the messaging of focus. Many important explanatory variables in political messaging research (e.g. level of education or political knowledge, the saliency of

political issues in a region, exposure to alternative messaging and degree of peer persuasion) are somewhat determined or influenced by the individual respondents in the study. As a result, the outcome observed may in fact be the result of an unmeasured confounding variable or reverse causality. It is challenging for observational studies to control for all possible confounding variables and bias. Research designs regarding questions of information exposure and public opinion have more recently shifted to a randomized experimental design (Brader, Valentino & Suhay 2008; Guisinger 2017; Harell et. al. 2017; Rho & Tomz 2017). Such a method allows for greater control over important survey design features such as question and treatment order. An experimental design has proven more successful at isolating the way in which altering informational cues within messaging may alter opinion outcomes.

The discussion on political messaging signals the importance of considering the influence of policy framing on policy opinion. Theory on framing describes how an emphasis on select information increases the saliency of such information (Cacciatore, Scheufele & Iyengar 2016; Rho & Tomz 2017). This is particularly significant as frames used in immigration messaging create a context that may shape subsequent understanding and opinion formation on immigration policy. Modifying messaging to focus on certain ideas of immigration dilutes the complexity of the topic as immigrants do not fall into one uniform definition. This presents a risk as public opinion is susceptible to manipulation and error when framing differs from the reality of immigration and its impact (Brader, Valentino & Suhay 2008; Haynes, Merolla & Ramakrishnan 2016). As a result, the framing of immigration within political messaging shapes public opinion in the direction of support or opposition. It is also important to acknowledge that research design has been prone to oversimplify the conceptualization of immigration. A number of studies fail to distinguish between key characteristics, such as high-skill or low-skill, but instead present a uniform

“immigrant” (Hainmueller & Hiscox 2010). There is, therefore, a responsibility of the researcher to reflect a more representative frame of immigration through research design.

Existing literature provides a strong foundation from which to build a study that looks at the influence of economic and cultural concern. Findings that conclude the insignificance of an individual’s economic interests have been too quick to conflate this with the insignificance of economic concern in general (Hainmueller, Hiscox & Margalit 2017; Margalit 2012). The discussion then applies such a finding as evidence for cultural concern as the dominant influencing factor. However, as discussed earlier, research that expands the operationalization of economic concern has found a stronger relationship with immigration opinion (Gerber et. al. 2017; Hanson, Scheve & Slaughter 2007). It is important to account for the multiple layers of economic concern. Too much of literature focuses on economic and cultural concern as an either – or – question which neglects the potential of interactive effects; this study aims to focus on both potential sources of discontent.

Additionally, an overarching issue with existing research is that questions are asked of respondents without providing adequate information on immigration. The current approach leaves respondents to make causal connections, such as the skill level of an immigrant and their subsequent impact on labor market competition or fiscal burden. This study aims to make this more explicit and examine the effects of information framing and exposure. The recent research by Rho & Tomz (2017) provides one of the few studies that examines how varying information exposure produces variation in opinion outcome. The study utilizes an experimental design to identify the influence of individual economic concern on policy preference. Such a design is significant as it addresses the shortcomings of previous observational survey data studies that are less able to address the role of political messaging. This is because observational studies cannot ensure an individual has been exposed to a

certain cue or whether the influence of one type of message varies from another regarding opinion outcomes. It is important to note that Rho & Tomz (2017) focus on trade policy, not immigration. This difference in primary topics provides an interesting study to build from and appropriately adapt. Further, as Rho & Tomz (2017) only test for the results of increasing information on the economic implications of policy, this study applies an additional cultural component. Guisinger (2017) shows that a cultural cue, specifically out-group race, shifts white respondents away from economic self-interest policy preferences. However, Guisinger's (2017) focus was also on trade policy. The design of this research paper combines economic information provision (Rho & Tomz 2017) with an additional cultural cue component (Guisinger 2017) and applies both to the context of immigration policy.

### 3. Theory

The strengths and weaknesses of existing immigration literature provide some key hypotheses to address in this study:

*H1: Respondents express greater opposition to immigration of low-skill than immigration of high-skill.*

This hypothesis focuses on opposition to low-skilled immigrants without contingency on the respondent characteristics. It also extends the scope of economic concern beyond traditional LMC. Opposition to low-skilled immigrants has been a finding of an overwhelming number of existing studies (Citrin et. al. 1997; Gerber et. al. 2017; Hainmueller & Hiscox 2007; Hainmueller & Hiscox 2010; Hanson, Scheve & Slaughter 2007 etc.). The dominant theory provided for such findings is public finance concern. A low-skilled immigrant is both less likely to contribute in the form of taxes and more likely to require public welfare assistance. This contributes to opposition to immigration as a result of individual and sociotropic concern for an "economic drain" on public finance.

*H2: Respondents express greater opposition to immigration of like-skill than immigration of unlike-skill*

The dominant support for this hypothesis stems from traditional IPE theory (Hainmueller & Hiscox 2010; Iyengar et. a. 2013; Malhotra, Margalit & Mo 2013; Mayda 2006). The hypothesis focuses on LMC concerns of the individual when facing a like-like threat to employment and wage stability. However, this hypothesis might not hold true among high-skilled respondents if the firm level theory proves more influential.

*H3: Exposure to a prompt containing information on the causal link between an immigrant's skill level and their economic implication strengthens the relationship between respondents' economic interest and policy preference.*

This hypothesis examines the theory focusing on the significance of increased policy implication information (Rho & Tomz 2017). If this theory holds true in the context of immigration policy, then an individual's response should align *more* with their economic interests (outlined in H1 and H2) when exposed to a high-information prompt. This hypothesis addresses the interactive effect of information provision and economic concern on opinion towards immigration policy.

*H4: Exposure to a prompt containing a cultural cue on the race of an immigrant produces greater opposition when the race of the immigrant differs from the race of the respondent.*

This hypothesis ties together theory on information provision with the theory on cultural concern. The influence of cultural concern is likely to be greater when the race presented is perceived to be “unlike” or out-group to the race with which the respondent identifies (Brader, Valentino & Suhay 2008; Guisinger 2017). If the cultural theory holds, this hypothesis is likely to be observable regardless of the respondent's skill or education level. This is due to reasons such as racial bias, perceived cultural threat and anxiety (Brader,

Valentino & Suhay 2008). However, the degree of opposition due to “unlike” cultural concern is likely to be higher among respondents with lower education levels (Guisinger 2017; Hainmueller & Hiscox 2007; Margalit 2012). This hypothesis addresses the interactive effect of information provision and cultural concern on opinion towards immigration policy.

#### 4. Research Design

A randomized experimental survey design was utilized to test the hypotheses of the paper. The survey was closed-answer, meaning respondents selected one of the provided options. This created a standardized set of responses to allow for comparison across treatments and demographics (Hainmueller & Hiscox 2010). The unit of analysis was the individual survey respondent taken from a sample of U.S. citizens. The survey was distributed via the online platform Amazon Mechanical Turk (MTurk) as this provided access to a large pool of respondents. The sample size was a significant factor to consider in study design due to the use of treatment groups which naturally divide the total sample into smaller subgroup samples. Power calculations were conducted to determine a minimum required sample size of 2,000 respondents. The survey was distributed in periodical batches as the rate of MTurk response tends to be negatively associated with the amount of time the batch is live (see Appendix C for a summary of batches). Each batch varied in the number of respondents requested and the payment offered. This was based upon trial and error to determine the day, time and price level at which respondents seemed most active without exhausting department funding before the necessary sample size was reached<sup>3</sup>.

Several studies have validated the suitability of MTurk for academic research purposes. The studies examine standards of validity such as whether the wider MTurk sample

---

<sup>3</sup> Payment ranged between \$0.15 - \$0.20 (based on MTurk Requester recommendations)  
Survey batches start & end date: 02/15/2018 - 02/26/2018

pool is demographically representative (e.g. age, education, race and party identification) or whether repeat participation occurs if an individual makes multiple accounts. Validity assessments of MTurk indicate that the platform is often more representative of the U.S. population and less expensive than alternative sampling methods such as random digit dialing sampling (Berinsky, Huber & Lenz 2012; Guisinger 2017; Rho & Tomz 2017). However, there are some limitations. The sample tends to be younger and more ideologically liberal than the U.S. population (Berinsky, Huber & Lenz 2012). Additionally, using an online survey platform means the sample is unlikely to be representative of the U.S. population as a whole. With such cautions in mind, this study conducted additional analysis to examine the degree of sample representativeness. This was done by collecting respondent information through basic demographic questions at the beginning of the survey. The wording of the questions was based on the Pew Research Center guidelines for demographic surveys<sup>4</sup>. The Pew Research Center provides highly reliable sources of survey data and questions specifically developed for a context of respondents in the United States.

Additional precaution was taken while using MTurk to ensure appropriate research conduct and study accuracy. Each respondent was shown an IRB information page followed by a question on consent for participation; further, all respondents were informed that they could exit the survey at any time. An email address was created to allow participants to share any comments or concerns, while keeping the identity of the researcher anonymous<sup>5</sup>. The survey itself was conducted via Qualtrics but participants had to find the study and submit their work through the MTurk site. In order to ensure participants completed the Qualtrics

---

<sup>4</sup> Pew Research Center Demographic Questions, 2015

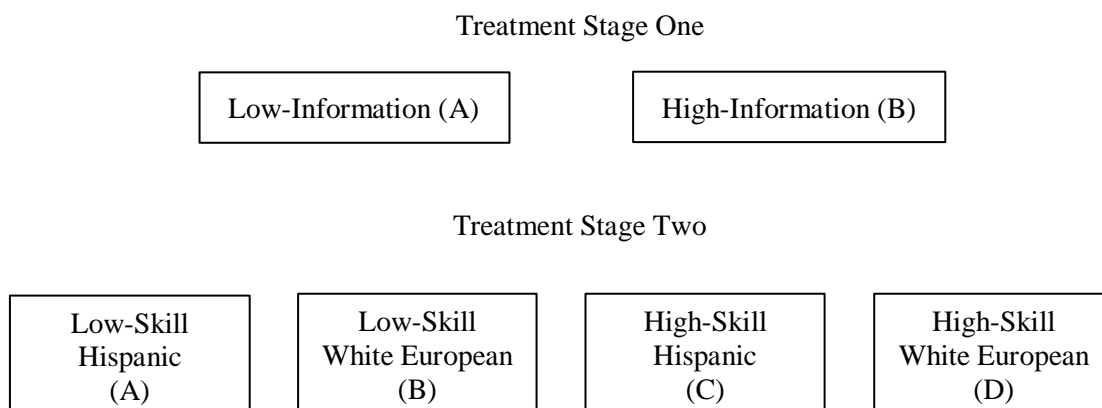
<sup>5</sup> For example, an email was received from a respondent who expressed frustration at “studies with a clear agenda, not distinguishing between legal and illegal immigrants” as the respondent was “a naturalized U.S. citizen who’d taken the legal route and gone through hoops” and “really doesn’t care for illegals just showing up here and being handed everything paid by our tax dollars”. I include this as there was no mention of legal or illegal immigration anywhere in the survey design. I checked the treatment the respondent was exposed to - the low-skilled Hispanic - which may indicate the respondents’ own stereotyping and prejudice. This type of reflection would not have been possible without a research email.



survey and did not attempt to submit a blank MTurk form to get payment, each participant was given a unique randomly generated code on Qualtrics to submit on MTurk. These codes were then cross-checked across the two sites before payment was approved. Additionally, the Qualtrics survey was set to “Prevent Ballot Stuffing” to ensure no repeat participation from the same IP address.

The experiment component of the survey was formed of two test stages outlined in Figure 1 (see Appendix A for survey questions, stages and treatments). Each stage included excerpts from a mock-article structured around the design used previous experimental survey experiments (see Guisinger 2017 for an example). The first stage was made up of two treatments but each participant was only exposed to one. The first treatment described immigration as a general topic while the second treatment provided information on high-skilled and low-skilled immigration specifically. Neither treatments in the first stage included any details on individual immigrants as the aim was to gauge opinion in general. The first stage was designed to explore the hypotheses examining economic concern and information provision. The follow up survey questions prompted respondents for their opinion towards immigration in general, low-skilled immigration and high-skilled immigration.

**Figure 1. Outline of Treatment Stages**



The second stage of the experiment shifted the focus of the mock-article to an individual immigrant. This stage was made up of four treatments but, again, each participant was only exposed to one<sup>6</sup>. The treatments were designed as an interview feature within the wider mock-article. Two of the treatments featured identical wording on a *low-skilled* immigrant but differed in racial assignment<sup>7</sup>. The other two treatments in this stage featured identical wording on a *high-skilled* immigrant but differed in racial assignment<sup>8</sup>. The survey question immediately following prompted respondents for their opinion towards the immigrant specifically. Employing four treatments in this stage allowed the study to gauge both the independent and interactive effects of immigrant skill level and race. The experimental design with random assignment ensured the only difference between the low-skill and high-skill treatments in the second stage was the racial assignment within each. Therefore, any potential differences between treatment responses can be attributed to this racial manipulation (Domke et. al. 2000; Guisinger 2017; Iyengar et. al. 2013). The second stage was designed to explore the hypotheses examining cultural concern (relative to economic concern) and information provision.

The questions following each of the treatment stages probed respondents to select from a range between strongly agree to strongly disagree. The range included five response options in total to ensure respondents could select an option that reflected their degree of support or opposition to the question. The question wording and closed-response design mirrored similar surveys used in existing studies (Guisinger 2017; Hainmueller & Hiscox 2010; Iyengar et. al. 2013). An additional feature of the study's design was the inclusion of a question testing respondent engagement with treatment information at the end of each

---

<sup>6</sup> Each participant saw a total of two treatments across the two experiment stages

<sup>7</sup> i.e. low-skill Hispanic or low-skill white European

<sup>8</sup> i.e. high-skill Hispanic or high-skill white European

treatment stage. Respondents who incorrectly answered these information recall questions were omitted from analysis as it was highly unlikely they read the treatments.

The dependent variable of the study was opinion towards immigration policy. This was measured by the questions directly following each treatment stage<sup>9</sup>. Responses to question twelve on immigration in general in the low-information treatment provided a control and insight on baseline U.S. opinion on immigration.

The independent variables of the study were cultural concern, economic concern and information provision. Each of the independent variables were operationalized through the design of the stages and treatments. Economic concern was operationalized through the skill level of the immigrant presented. The strength of using skill level as the marker of economic consideration was that it allowed for insight on the multiple components of economic concern (Gerber et. al. 2017; Hainmueller & Hiscox 2010; Hainmueller, Hiscox & Margalit 2017; Kerr, Kerr & Lincoln 2015). Alternative economic indicators, such as income level, do not allow such a direct association with components such as LMC or firm level consideration (Harell et. al. 2012). To measure the effect of an individual's economic concern, responses to survey questions twelve and thirteen prompting opinion on low-skill and high-skill immigration specifically were collected relative to the skill level of the respondent. Additionally, if the degree of opposition appears to differ between the two questions, then it is possible to discern additional economic concern. For example, if opposition towards immigrants of low-skill is generally higher than immigrants of high-skill then this may signal support for the public finance theory of economic concern.

Cultural concern was operationalized through the race of the immigrant presented. Existing studies have explored the best way to present race in experimental prompts and have found using a name to be most effective. An application of name, as opposed to or in

---

<sup>9</sup> Questions 11, 12, 13 & 15 (See Appendix A)

combination with an image, has been found to reduce issues associated with respondents' varying perceptions of race and racial features (Domke et. al. 2000; Guisinger 2017; Harell et. al. 2017). The study focused on two race categorizations specifically, white European and Hispanic with the names Peter Miller and Victor Rodriguez assigned respectively. The names were selected from tabulated responses to the 2010 U.S. Census, as this has proven to be an effective and reliable method for drawing racial inference (Comenetz 2016; Harris 2015). The two races were selected due to their relevance in a U.S. context and the high degree of racial bias attached to both (Brader, Valentino & Suhay 2008; Citrin et. al. 1997; Hainmueller & Hopkins 2014). Survey question fifteen regarding opinion towards the specific treatment immigrant allowed for study of the effect of the racial cue and immigrant race. As the second stage prompts contained identical information and varied only in race and skill-level, the results of each prompt provided direct comparison for the others. There should be no difference between responses to a prompt presenting Victor Rodriguez or Peter Miller if cultural concern is insignificant for immigration opinion formation.

A number of demographic characteristics were significant for constructing the independent variables. The first was the skill level of the respondent which was determined by the occupation category a respondent selected<sup>10</sup>. Each occupation was sorted into a pre-determined classification of high-skill or low-skill, but the respondent did not know this. The idea behind a respondent selecting their occupation as opposed to skill level directly was that response was likely to be more accurate. A low-skilled individual may have been deterred by a question that required them to identify their skill level from a dichotomous choice between high-skill or low-skill. The second was the education level of the respondent, which was

---

<sup>10</sup> The occupation list given to respondents to select from was sourced from the International Labor Organization's International Standard Classification of Occupations. High-Skill: Manager; Professional; Technician or Associate Professional. Low-Skill: Clerical Support; Service or Sales; Agricultural, Forestry & Fishery; Craft & Related Trades; Plant & Machine Operators, or Assemblers; Elementary Occupation; Armed Forces

determined by asking the respondent to select the highest level of education attained from a provided list. Similarly, the responses were sorted into a pre-determined classification of four-year college or below to indicate high-education and low-education respectively. The race the respondent most identified as was also collected from a provided list and afterwards grouped into white and non-white respondent for analysis (Guisinger 2017). The reason for grouping race was because of the tendency for MTurk samples to be overwhelmingly white. Without grouping, the sample size of non-white respondents would have been too small to determine significance. These demographic traits were necessary to determine the like-ness, economic and cultural, of the respondent relative to the immigrant presented.

The experimental design with randomization of treatments and sample negated the need to control during the experiment. However, it was important to “control” for some key respondent characteristics beyond those listed above when analyzing the data. This was because there were additional variables of importance to the core research question, but not of primary interest. One key variable was the political ideology of the respondent<sup>11</sup>. This was significant as certain degrees of ideology are associated with greater pre-existing opposition to immigration (Card, Dustmann & Preston 2005; Citrin et. al. 1997; Hainmueller & Hiscox 2007). An additional variable of interest was pre-existing political engagement and policy knowledge of respondents. This was measured by asking how frequently respondents read political news. Including a measure of political knowledge was important as it alluded to the level of political understanding a respondent may already have prior to the study. Existing research finds that respondents with limited political knowledge are more susceptible to persuasion from information provisions (Rho & Tomz 2017). Finally, information on the respondent’s citizenship status was necessary for determining whether they qualify for the “citizen” component of the research question and population of focus. Respondents who

---

<sup>11</sup> Ideology options sourced from Pew Research Center

selected an option other than “Native Born U.S. Citizen” or “Naturalized U.S. Citizen” were omitted during analysis. The quality of the research method and survey design underwent pre-test through an experiment on the Emory population in Fall 2017. Analysis of the pre-test results allowed for any necessary revisions to be made.

The design of this study builds on the strengths and limitations of existing literature. Gerber et. al. (2017) importantly note that existing research has not tested, but rather assumed, how manipulation of immigrant characteristic affects opinion formation. To address this limitation, this study utilizes explicit and informational prompts to manipulate cultural and economic causal links (Gerber et. al. 2017; Hainmueller & Hiscox 2017). This design also amends the tendency for studies examining immigration policy opinion to fail to differentiate between key immigrant characteristics such as high or low-skill. It is vital that prompt and survey design makes this distinction to ensure that the respondent is not left to assume the missing information (Gerber et. al. 2017; Hainmueller & Hiscox 2017). Lack of clarification in prior studies has produced responses and data that may be based on entirely different assumptions of an immigrant, which undermines analysis and comparison. Further, this study presents a unique design as it is the first to test the significance of economic information provision within the context of immigration policy. It is also the first, to my best understanding, to extend this provision of information and introduce a racial manipulation within the context of immigration policy.

The results of this study are important to a context beyond the United States. Despite the sample focus on one geographic region, the concerns tested are common among developed countries. Economic concern regarding labor market competition, public finance stability and firm level success is not unique to one country (Mayda 2006). Similarly, cultural concern regarding in-group and out-group mentality is a rhetoric applied frequently to immigration beyond the United States (Card, Dustmann & Preston 2005; Hansen 2017). The

racial trait selection of this study may be specific to the context but results on the relative influence of cultural and economic concern are generalizable.

## 5. Results

The total number of survey respondents recorded was 2,491. However, after cleaning the data to meet the criteria for analysis, the number of participants reduced to 2,067<sup>12</sup>. The sample was checked for demographic distribution across the total study sample, treatment stage one subgroup samples and treatment stage two subgroup samples. As illustrated in Table 1, the sample appears representative and evenly distributed across treatments (see Appendix B for Tables & Figures). To ensure the reliability and representativeness of samples, a chi-squared analysis was conducted on all sample and subgroup demographic variables and no significant difference in distribution was detected meaning treatment groups were balanced. As expected, the sample was made up of predominantly white, educated and liberal individuals but no more than noted by previous studies using MTurk (Huber & Lenz 2012; Guisinger 2017; Rho & Tomz 2017). Interestingly, the question asking respondents to estimate the number of foreign born (see “Immigration Statistic”, Table 1) yielded results that signaled respondents across all sample groups overestimated the proportion of immigrants in the United States<sup>13</sup>. This follows existing findings in which public opinion trends tend to be misguided on the reality of immigration (Bearce & Hart 2017; Facchini, Margalit & Nakata 2016; Hanson, Scheve & Slaughter 2017).

It was necessary to modify and create new variables in order to analyze the data in regards to the hypotheses. It was also necessary to invert the scale for responses to “The U.S.

---

<sup>12</sup> Reasons for omitting observations: non-U.S. citizen, omitted questions, incorrect response to treatment check questions and “bot” respondents. Total omit: 424.

<sup>13</sup> The correct statistic (13%) was taken from Pew research on U.S. Foreign Born Population Trends <http://www.pewhispanic.org/2015/09/28/chapter-5-u-s-foreign-born-population-trends/>

accepts too many immigrants”, “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” to ensure a uniform scale of opinion across questions; the higher the sample mean, the higher the degree of opposition. A list of variables and code commands is included in the codebook of this study in Appendix D.

In order to gauge the sample’s general opinion toward immigration in the United States, a multivariate regression was conducted on responses to “The U.S. accepts too many immigrants”. The sample was reduced to only those who were exposed to the low-information treatment to ensure results were not influenced by the high-information treatment. This allowed for analysis of trends among certain demographic groups to identify whether this study sample mirrors previous immigration policy study findings. Table 2 summarizes the results of this regression and Figure 2 provides a visual plot of the coefficients<sup>14</sup>. Respondents expressed greater opposition as the age category selected increased, with the highest degree of opposition in the 45 - 54 age range<sup>15</sup>. Female respondents tended to be slightly more opposed to immigration, as did less-educated, low-skilled and white respondents but none opposed to a significant degree. As expected, as respondents shifted from a conservative to liberal ideology, the degree of support for immigration increased. Interestingly, the political engagement indicator (measured by the amount of political news a respondent engages with) also appeared to significantly influence opinion towards general U.S. immigration. The more political news respondents engaged with, the more supportive of immigration they answered. This could be indicative of the role of political information and policy knowledge on policy opinion.

---

<sup>14</sup> For all results of this study: the higher the coefficient, the greater the opposition to immigration

<sup>15</sup> However, it appears that the 65 – 74 and 75+ age categories expressed less opposition but not to a significant degree as the sample size of these age groups was small



### Hypothesis One:

The first hypothesis focused on opposition towards low-skilled immigrants without contingency on respondent characteristics. A paired t-test was conducted on responses to “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” among both first stage treatment groups. This was used to determine whether there was a statistically significant difference in means between responses to the question on low-skilled immigrants compared to high-skilled immigrants. A difference would reflect potential public finance economic concern among respondents. The values of the t-test results are listed in column one of Table 3. Results indicate that opposition to low-skill ( $2.82 \pm 0.03$ ) was significantly higher than high-skill ( $2.11 \pm 0.02$ ) by 0.70 points (95% CI: 0.65, 0.76)<sup>16</sup>. The results of this t-test are displayed in Figure 3 with a visibly significant difference in degree of opposition between the two skill levels (\*\*p<0.01).

### Hypothesis Two:

Hypothesis two examines whether a respondent opposes immigrants of like-skill to a higher degree than immigrants of unlike-skill. To study this theory of like-skill comparison, it was necessary to account for the skill-level of respondents relative to the skill-level of immigration in question. Responses to “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” within the first experiment stage were analyzed according to this criterion. The results reflected a similar finding to hypothesis one as low-skilled immigrants received greater opposition. An additional detail became evident through this analysis as opposition was evident across both respondent skill-level groups, not just low-skilled respondents. Figure 4 illustrates the outcomes of this analysis.

---

<sup>16</sup> (Mean±SE). Points within a 1-5 point scale ranging from strongly disagree to strongly agree response options

Low-skilled respondents opposed immigration of like-skill ( $2.80 \pm 0.04$ ) to a greater degree than immigration of high-skill ( $2.11 \pm 0.03$ ). Similarly, high-skilled respondents also expressed a lower degree of opposition towards immigration of high-skill ( $2.11 \pm 0.04$ ), the like-skill for this respondent group, than immigration of low-skill ( $2.84 \pm 0.04$ ). The greater degree of opposition toward immigration of low-skill compared to high-skill remained statistically significant among both respondent skill level groups ( $***p < 0.01$ ). However, the difference *between* the degree of opposition expressed by low-skilled and high-skilled respondents respectively was not statistically significant, suggesting a like-skill comparison was evident among low-skilled respondents in this experiment stage but not high-skilled.

#### Hypothesis Three:

The third hypothesis also focuses on the potential skill evaluation of a respondent toward an immigrant but extends this to examine whether information provision on skill level and immigration strengthens the relationship between a respondent's economic interest and policy preference. This stage of analysis is an extension of the two analyses conducted above for hypothesis one and two to account for the potential role of information provision on economic interests.

First, an analysis of responses to low-skill and high-skill immigration was conducted on respondents in the low-information treatment and high-information treatment separately. This was done to determine whether the degree of information exposure shifted immigration opinion compared to the results of hypothesis one which analyzed general sample opinion, not information treatment sample specific opinion. A paired t-test was conducted on responses to "The U.S. accepts too many *low-skilled* immigrants" and "The U.S. accepts too many *high-skilled* immigrants" for each information treatment sample. The trends observed in this analysis mirrored those in analysis of hypothesis one (see Table 3. column two and

three for t-test outcomes). In the low-information treatment, respondents opposed immigration of low-skill ( $2.77 \pm 0.04$ ) to a greater degree than immigration of high-skill ( $2.07 \pm 0.03$ ). Similarly, in the high-information treatment, respondents opposed immigration of low-skill ( $2.87 \pm 0.04$ ) to a greater degree than immigration of high-skill ( $2.16 \pm 0.03$ ). The difference in means was  $0.70 (\pm 0.04)$  and  $0.71 (\pm 0.04)$  for low-information and high-information respondents respectively. This difference in the mean of responses to low and high-skilled immigrants remained statistically significant across the information treatments ( $***p < 0.01$ ). However, the difference of means *between* low-information treatment responses was not statistically different from high-information treatment responses. This suggests that opposition towards low-skilled immigrants in this experiment stage remains prevalent regardless of the amount of information provided. Figure 5 illustrates the lack of difference in the trend of responses across the two information treatments.

Second, an analysis of the means between “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” was conducted in relation to information provision, as well as like-skill comparison of respondents. This analysis was conducted for each respondent skill group (i.e. high vs. low) and each information treatment group (i.e. high vs. low). Figure 6 illustrates the multiple layers of this stage of analysis. The overall trend illustrated by the bars in Figure 6 appears to follow the trend identified thus far, as opposition toward immigration of low-skill is evidently higher than high-skill across each condition. However, as the focus for this component of hypothesis three is on whether information provision increases *like-skill* comparison, it was necessary to delve further into the data to analyze whether the difference in the bars was significant. As a result, Figure 7 was constructed to analyze the difference of means between “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” for each respondent skill level group according to the level of information

provision; the higher the difference of means, the larger the relative opposition to low-skilled immigrants.

Under the low-information treatment, respondents of low-skill expressed higher opposition to low-skilled immigrants than high-skilled and this increased slightly under the high-information treatment. Under the low-information treatment, respondents of high-skill also expressed greatest opposition to low-skilled immigrants with less opposition to high-skilled immigrants than the low-skilled respondents. This discontent towards low-skilled immigrants remained evident among respondents of high-skill and low-skill under the high-information treatment. The shifts in responses between the two information treatments were not statistically significant (as illustrated by the overlapping error bars in Figure 7) which indicates that a high-information provision did not influence like-skill comparison any more than low-information. A regression was used to confirm the insignificance of the differences of responses between the two information treatments at this experiment stage<sup>17</sup>. However, the opposition to low-skilled immigrants and the direction of shifts outlined above is still important to note. The high-information results of Figure 7 seem to illustrate that a high-information provision somewhat equalized the differences observed between low-skilled and high-skilled respondents in the low-information results. Both respondent skill level groups became equally unfavorable toward low-skilled immigrants.

#### Hypothesis Four:

Hypothesis four ties together theory on information provision with theory on racial bias and out-group cultural concern. Analysis of the hypothesis focuses on whether providing

---

<sup>17</sup> A regression was conducted on diff, test2 and test3 using T1\_HighInfo R\_HighSkill and the interaction term R\_Hi\_T1\_Hi

a racial cultural cue strengthens the presence of cultural concern when the race of the immigrant presented is “unlike” that with which the respondent identifies.

To address this hypothesis, analysis focused on the second stage of the survey experiment, in which respondents read a mock-interview with a specific immigrant. They were then asked to respond to the statement: “The U.S. should accept more immigrants like the individual interviewed”. However, it was important to remain cognizant of the fact that respondents were exposed to different degrees of information provisions in the first stage. As a result, a number of interactive variables were created to account for the multiple layers of treatment exposure and can be reviewed in the study codebook (Appendix D). Figure 8 was created to provide a “big-picture” overview of responses to the specific immigrant without testing for specific respondent characteristics. The graph is categorized by treatment immigrant skill level, treatment immigrant race and the level of information exposure respondents received in the first stage. It was important to start with this “big-picture” in order to see general trends across the different treatment groups in the second experiment stage.

A number of multivariate regressions were conducted using variables of core interest to study the potential significance of any shifts in responses to the specific treatment immigrant observable in Figure 8. The regression coefficient outputs were then used to calculate predicted outcomes for variables in combinations of interest. The first regression model studied the interaction between information provision in the first stage with the skill and race of the immigrant in the second stage<sup>18</sup>. The results of the regression are listed in Table 4 and illustrated in Figure 9. The race of the immigrant presented had no significant effect on responses to the specific immigrant under this model. Instead, a significant shift was

---

<sup>18</sup> A regression (Model 1) was conducted on ImmigrationSpecific using T1\_HighInfo T2\_Hisp T2\_HighSkill T1\_High\_T2\_HighSkill

identifiable between responses to an immigrant of high versus low-skill. Under high-information, respondents exposed to a high-skilled immigrant *supported* the individual 0.05 (CI 95%: -0.17, 0.08) more than the constant. Conversely, when the high-information respondents were exposed to a low-skilled immigrant, responses shifted to *opposition* of 0.18 (95% CI: 0.58, 0.30) more than the constant. The difference between the two predicted outcomes was calculated to be -0.22 (95% CI: -0.35, -0.10) and highly significant (\*\*p<0.01). This difference was not observable among respondents from the low-information treatment, suggesting the skill level of an immigrant is a significant determinant of opinion, but only under a high-information condition.

The second and third regression models introduced key respondent variables to study potential tension between respondents and the immigrant presented<sup>19</sup>. The regression models examined whether the significance of immigrant specific characteristics depends upon them being “unlike” or of out-group to the respondent. Two new variables were created to interact the race and skill level of the respondent with the immigrant presented to focus on the theory of like-comparison<sup>20</sup>.

Regression model two focused on “unlike” race specifically to address the theory of cultural concern of hypothesis four. The results of regression model two are listed in Table 5 and illustrated in Figure 10. Again, calculations of predicted outcomes were used to compare any significant differences between respondent characteristics and responses to the specific immigrant. The race of the immigrant produced a slight difference in response but not one of significance. A white respondent exposed to a Hispanic immigrant expressed opposition of 0.14 (95% CI: -0.06, 0.28) more than the constant. Conversely, a non-white respondent

---

<sup>19</sup> A regression (Model 2) was conducted on ImmigrationSpecific using T1\_HighInfo T2\_HighSkill T2\_Hisp T1\_HighT2\_HighSkill i.Age i.Ideology R\_Female R\_Other R\_College R\_Employed R\_HighSkill R\_White T2\_UnlikeRace

<sup>20</sup> Variables:

T2\_UnlikeRace: Like-Race (n=1,053), Unlike-Race (n=1,014)

T2\_UnlikeSkill: Like-Skill: (n=1,044), Unlike-Skill (n=1,020)

exposed to a Hispanic immigrant expressed opposition to a lesser extent of 0.02 (95% CI: -0.08, 0.12) more than the constant. The difference between responses to the Hispanic immigrant between white and non-white respondents was calculated to be 0.12 (95% CI: -0.03, 0.27) and not statistically significant. There was no difference in response outcome towards the white immigrant, regardless of whether the respondent was non-white or white. Therefore, being racially “unlike” the Hispanic immigrant appeared to somewhat increase opposition but the results are not significant enough to draw a conclusive inference.

Despite the cultural focus of hypothesis four, the regression results from this stage evidently offered valuable insight on the potential sources of economic discontent regarding immigration. As discussed earlier, the results of this second experiment stage indicate the significance of the interaction between the degree of opposition toward immigrants of certain skill level and the degree of information exposure. Regression model three was created to test whether this outcome occurred because of a like-skill comparison or consideration of absolute skill level of the immigrant<sup>21</sup>. The results of regression model three are listed in Table 6 and illustrated in Figure 11. Again, the regression coefficients were used to calculate predicted outcomes, which are displayed below in Table 7, and provide an overview of the interaction between information exposure, respondent skill level and immigrant skill level. The highest degree of opposition occurred among low-skilled respondents of the high-information treatment toward low-skilled immigrants (0.13; 95% CI: 0.01, 0.25). The highest degree of support occurred among high-skilled respondents of the low-information treatment toward high-skilled immigrants (-0.21; 95% CI: -0.35, -0.08).

---

<sup>21</sup> A regression (Model 3) was conducted on ImmigrationSpecific using T1\_HighInfo T2\_HighSkill T2\_Hisp T1\_High\_T2\_UnlikeSkill T2\_UnlikeRace T2\_UnlikeSkill R\_White i.Age i.Ideology R\_Female R\_Other R\_College R\_Employed R\_HighSkill

**Table 7. Calculation of Predicted Outcomes Relative to Constant (Model 3)**

	Low-Information Treatment		High-Information Treatment	
	Immigrant Low-Skill	Immigrant High-Skill	Immigrant Low-Skill	Immigrant High-Skill
Respondent Low-Skill	Const.	-0.10 [-0.24, 0.05]	<b>0.13</b> [0.01, 0.25]	-0.10 [-0.24, 0.04]
Respondent High-Skill	-0.03 [-0.19, 0.12]	<b>-0.21</b> [-0.35, -0.08]	-0.03 [-0.19, 0.13]	-0.08 [-0.27, 0.10]

However, it is important to account for such results within the wider context of Table 7. Responses toward low-skilled immigrants consistently produced greater levels of opposition across both information treatments compared to the immigrants of high-skill, which follows the findings of the wider paper. Interestingly, respondents of both skill levels shifted opinion for immigrants of like-skill between the low and high-information treatments, but no similar shift was identifiable for immigrants of unlike-skill. For example, respondents of high-skill in the low-information treatment supported immigrants of high-skill 0.21 (95% CI: -0.35, -0.08) more than the constant. In the high-information treatment, support toward immigrants of high-skill decreased to just 0.08 (95% CI: -0.27, 0.10) more than the constant. This was a shift of -0.13 (95% CI: -0.25, -0.01) and statistically significant at  $**p < 0.05$ . Similarly, the shift in responses of respondents of low-skill toward immigrants of low-skill between the low and high-information treatments was -0.13 (95% CI: -0.25, -0.01) and statistically significant at  $**p < 0.05$ . However, it is important to note that despite a similar directional shift by respondents of low and high-skill across the two information treatments, the degree of opposition toward the immigrants of like-skill was not the same. Within the high-information treatment, low-skilled respondents opposed low-skilled immigrants 0.13 (95% CI: 0.01, 0.25) *more* than the constant; high-skilled respondents opposed high-skilled immigrants 0.08 (95% CI: -0.27, 0.10) *less* than the constant. The difference between the two



responses to like-skill was 0.21 (95% CI: 0.08, 0.35) and statistically significant at \*\*\* $p < 0.01$ , suggesting low-skilled respondents oppose immigrants of like-skill to a greater degree than high-skilled respondents.

## 6. Discussion

A number of significant results are important to apply to the context of the wider study. The discussion is divided between the two experimental treatment stages as the results for each stage have evidently differing implications and relevance for the hypotheses.

### I. Treatment Stage One:

The first stage prompted respondents for their opinions on immigration in general, immigration of low-skill and immigration of high-skill. Results from the first stage of the survey experiment provide clear evidence for opposition toward low-skilled immigrants compared to high-skilled and, thus, support for hypothesis one. This indicates that opposition towards low-skilled immigration is a firmly held U.S. public opinion and provides support for the public finance theory of economic concern. Respondents appear to formulate their opinion based on the potential fiscal implications of accepting more low-skilled immigrants.

The next stage of analysis focused on the potential significance of immigration of a specific skill level, relative to respondent skill level. The results of this stage reflected a similar finding as above, as opposition was greatest toward low-skilled immigration. This finding held across both respondent skill levels. For low-skilled respondents, this may reflect a direct like-skill comparison and, therefore, individual labor market consideration. It may also be influenced in part by sensitivity to public finance concern as low-skilled immigrants present a direct source of competition for government funded services. For high-skilled

respondents, the lack of evidence for like-skill opposition toward high-skilled immigration in this experiment stage may support firm level theory in which high-skilled domestic labor may benefit from immigration of high-skill (Kerr, Kerr & Lincoln 2015). The significance of opposition toward low-skilled immigration among high-skilled respondents suggests further presence of public finance concern. High-skilled respondents may, therefore, place greater emphasis on the public finance “burden” of immigration than individual labor market competition when given questions on immigration in general. Hypothesis two, regarding like-skill comparison, appears to hold for low-skilled respondents but not high-skilled respondents in this experiment stage, which was speculated as a potential study outcome earlier in the Theory section of this paper.

Hypothesis three extends the findings above to address the potential influence of information provision on economic interests. The first stage experiment results suggest that the high-information treatment did not influence opinion towards immigration of low or high-skill any more than the low-information treatment. This lack of influence of a high-information treatment on economic interests held for the degree of low-skill opposition and like-skill comparison. Therefore, the results of this experiment stage provide insufficient support for hypothesis three. However, the shifts in the direction of the bars between the two information treatments in Figure 7 are important to note, despite not being statistically significant. The high-information treatment appears to somewhat equalize the variation between low and high-skilled respondent opinion observable in the low-information treatment. Perhaps providing greater policy information encourages respondents to consider the implications of immigration for others and, thus, shift opinion to a more sociotropic middle-ground.

## II. Treatment Stage Two:

The second stage was designed with the intention of testing for the significance of cultural concern on opinion toward immigration. The second stage prompted respondents for their opinion on a specific treatment immigrant, who differed in race and skill assignment. The regression models aimed to address some of the more nuanced components of cultural immigration theory, such as racial bias and stereotyping, as well as opposition to unlike-culture. Interestingly, the results offered less insight on cultural concern than they did economic concern, which was somewhat unexpected. In fact, responses to the immigrant specific question in this experiment stage produced findings that differed from responses to the more general immigration questions in the first treatment stage.

Hypothesis four explored the influence of “unlike” race between a respondent and immigrant. The results suggest that an “unlikeness” between respondent and treatment immigrant race caused no significant shift in respondent opinion outcomes. There was some noticeable opposition of white respondents toward the Hispanic treatment immigrants, which was not identifiable among responses to white European treatment immigrants; a degree of racial bias may be evident among this study’s sample. However, the difference was not statistically significant so hypothesis four, regarding cultural concern, appears insignificant. It is possible to argue that when faced with information on both immigrant skill and race, respondents place a greater emphasis on their economic interests than cultural.

The analysis of the potential influence of “unlike” was then applied to the skill level of treatment immigrants within the second experiment stage, which provided additional insight on the relationship between information provision and economic concern. Immigrants of low-skill continued to receive the highest degree of opposition across information treatment subgroups and respondent skill level subgroups. Subsequently, support for hypothesis one regarding low-skill opposition holds. It is important to note that despite a

uniform trend in low-skill opposition, respondents exposed to the high-information treatment in the first stage expressed significantly higher opposition to immigrants of low-skill in the second stage. This suggests that a high-information treatment *does* influence the presence of economic interests as it hardens attitudes toward low-skilled immigrants specifically. Such results support hypothesis three regarding information provision and low-skill economic concern, and thus, provides further support for the significance of public finance concern.

Similarly, the results of this stage provide an alternative evaluation of the influence like-skill economic concern (hypothesis two) and information provision (hypothesis three) than the results of the first experiment stage. Respondents of both low and high-skill expressed greater opposition towards a like-skill treatment immigrant under high-information than low-information. This suggests that hypothesis two is evident among both respondent skill groups, not just low-skill as suggested by the results of stage one. However, the degree of like-skill opposition among low-skilled respondents was significantly greater than high-skilled. This indicates that like-skill labor market competition may be of greater concern to members of the low-skilled labor force than high-skilled. The shifts evident across information treatment subgroups provides further support for hypothesis three and the influence of information provision on economic concern and opinion outcomes.

It is important to address the potential influence of the research design on the results discussed above. The prevalence of economic concern over cultural concern may be partially due to the fact that the high-information treatment in the first stage only focused on economic policy implications and information. Subsequently, assessment of the specific immigrant in the second stage may have been influenced by this emphasis of immigrant skill, as opposed to immigrant race. This draws the study focus back to the question of political messaging and framing as the study design may have made economic interest the salient topic. This raises an important question for future research: if the information treatment in the first stage focused

on the potential cultural implications of immigrant groups, would the results provide evidence for cultural concern over economic concern?

## 7. Conclusion

This thesis provides the first experimental study of the relative influence of cultural and economic concern on opinion toward immigration, with a core emphasis on the role of information provision. The research design is the first to distinguish between key immigrant characteristics, namely skill level and race, in both treatment and survey questions. This level of detail allows for a comprehensive study of public opinion with results that reflect informed opinions, not those based on differing assumptions of immigration. Hainmueller & Hiscox (2010) comment on the need for such a design in their concluding remarks as “the current test leaves it up to the respondent to make the connection” between immigrant characteristics and consequence. Thus, “future tests could make this connection more explicit and examine the effects of issue framing or priming” (Hainmueller & Hiscox 2010, 80). This study highlights the significance of the role of information and policy framing on immigration opinion formation. Several suggestions for future study on policy information and priming are presented later in the conclusion.

The findings of the study further economic theory on anti-immigration sentiment. Significant opposition towards low-skilled immigration was evident throughout analysis, especially under high-information provision, which signals the influence of public finance concern for respondents of all skill levels. Immigration appears to be a policy that heavily appeals to sociotropic considerations for the wider economy. Analysis of results across the two stages of experiments reveals the existence of concern for immigrants of like-skill for both respondent skill level groups. A high-information provision appears to increase the like-

skill evaluation of specific immigrants, suggesting respondents may become more aware of the potential for labor market competition. However, the higher degree of opposition for immigrants of like-skill from respondents of low-skill signifies a higher consideration for labor market competition and concern. Conversely, the lower degree of opposition for immigrants of like-skill from respondents of high-skill signifies a lower consideration for labor market concern, and perhaps some consideration for firm level theory. The insignificance of cultural concern was surprising; perhaps the study design was ill-suited to test this due to the lack of emphasis on cultural information within the treatments. It is possible to argue that when faced with information on both immigrant skill level and race, respondents place greater emphasis on their economic interests than cultural.

The trend of opposition towards low-skilled immigrants is prevalent within existing literature (Citrin et. al. 1997; Gerber et. al. 2017; Hainmueller & Hiscox 2007; Hainmueller & Hiscox 2010; Hanson, Scheve & Slaughter 2007 etc.). However, discussion on the implications of this finding is deficient, which is problematic. Most conclusions skip over adequate discussion of the potential issues of this trend in public opinion, as if such a finding is expected and, therefore, not worth exploring further. Low-skilled immigration is evidently undervalued. It is vital to challenge such trends as most developed countries, the United States being just one example, are heavily reliant upon low-skilled labor. Political rhetoric frequently fails to acknowledge this reality but instead presents immigration of low-skill as an unnecessary burden. The results of this study suggest that more needs to be done to change the way low-skilled immigration is framed in policy discussion.

It is important to acknowledge an underlying limitation of relying on online platforms, such as Amazon's MTurk, for public opinion research. The tendency for the proportion of MTurk samples to be skewed towards the white, younger and the more ideologically liberal may have produced biased results. It is possible to argue that the results

of this study may have differed had the sample included a more diverse pool. However, considering the resources and time constraints of this study, Amazon's MTurk provided a suitable and interesting starting point for such a study to build from.

The outcomes of this study present several potential areas for future research on immigration policy opinion formation. As mentioned in the discussion, it would be interesting to conduct an almost identical study but adapt the information treatment stage to deliver cultural implications, as opposed to economic. Results from the second stage of the experiment under this adapted format may mirror this study's findings on the role of information provision and issue priming but for cultural concern.

An additional area of interest for future research is a closer examination of contemporary political rhetoric on immigration. The introduction of this study alluded to some recent examples, which focused heavily on sociotropic and public finance related concerns. A wider examination of the content of political messaging, such as speeches, party manifestos and campaign advertisements, would be valuable. For example, a potential study might create a randomized experiment in which the ideology of the treatment content is manipulated. It would be interesting to examine whether a representative sample shifts their opinion on immigration in general depending on which treatment they were exposed to. Analysis could then delve further into respondent characteristics, such as education, political engagement and ideology, to determine if certain subsets of the population are more persuadable than others. With regards to ideology, it may also be interesting to examine whether respondents of conservative ideology display more liberal opinions after exposure to a liberal prompt and vice versa.

Additionally, as the content and experiments of this study were designed for respondents within the United States, future studies should appropriately modify the details for alternative country contexts.

From the outset, the inspiration and intention behind the focus of this thesis was to provide insight on the significance of political messaging and priming on opinion outcomes. However, as literature lacked evidence of the role of information provision within the context of immigration policy, it was important to take a step back and begin at this stage. Moving forward, adapting and improving upon the content of treatments presents an exciting method through which to study opinion outcomes further.

Considering the evolution of research tools available to political scientists, specifically those studying public opinion, it is vital to maintain a research agenda that produces behaviorally informed results that measure the beliefs people actually hold. This study forms one of several examples of a growing body of literature employing randomized survey experiments with the intention of furthering the existing debate on public opinion trends.



## Appendix

### Appendix A: Qualtrics Survey Design

#### IRB Disclaimer

##### Introduction and Study Overview:

Thank you for your interest in our political research study. Use the following information to decide if you want to participate in the study. Whether you participate is entirely your choice. This study forms part of a college student's senior thesis research. The results will be used for academic purposes only. Please participate only if you are 18 years of age or older and a United States citizen. If you decide to take part, you may withdraw from the survey at any time by closing this Qualtrics window.

- 1) The purpose of this study is to explore the topic of immigration and public opinion towards immigration policy.
- 2) This study will take approximately three to five minutes to complete.
- 3) If you join, you will be asked to answer general demographic questions to ensure a representative sample and some more specific questions on immigration to study the research question. All questions are multiple choice.
- 4) Your privacy is very important to us. This study is confidential. Your name will not be requested anywhere on the survey. The survey analysts will have no way to link your answers to your identity. Study findings will only be reported in group form.
- 5) There are no known serious risks associated with this survey. We are interested in your opinion, but you are free to exit the survey at any time. Because this study is using Internet-based data collection tools such as Amazon's Mechanical Turk and Qualtrics, the study analysts cannot eliminate the small risks of a breach of confidentiality that apply for any use of the Internet. However, we will take the appropriate steps to protect your identity by collecting no specific identifying information. We will also store all data collected securely.
- 6) This research study was not designed to provide direct benefit to participants (other than the Amazon's Mechanical Turk participation payment). We hope that you will find the survey interesting and that the study findings contribute to our understanding of public opinion.
- 7) If you have any questions about this study or wish to discuss any part of the project, you may contact the researchers at [emorythesisresearch@gmail.com](mailto:emorythesisresearch@gmail.com). Call the Emory University Institutional Review Board if you have any questions about your rights as a participant in this research study. You can call toll-free at 1-800-503-9797 or (404) 712-0720; email [irb@emory.edu](mailto:irb@emory.edu); or write to the office at 1599 Clifton Road, Atlanta, GA, 30322.

##### Question:

Do you agree to take part in this study?

- Yes (1)
- No (2)

If "Yes" → [Begin Survey](#)

If "No" → [show "Thank you for your time" message](#)

##### [Begin Survey:](#)

1. What gender do you identify as?
  1. Male (1)
  2. Female (2)
  3. Other (3)

2. What racial or ethnic group best describes you?
  1. White (1)
  2. Black or African American (2)
  3. Hispanic or Latino (3)
  4. Asian or Asian American (4)
  5. Native American (5)
  6. Middle Eastern (6)
  7. Mixed Race (7)
3. How old are you?
  1. 15 – 24 (1)
  2. 25 – 34 (2)
  3. 35 – 44 (3)
  4. 45 – 54 (4)
  5. 55 – 64 (5)
  6. 65 – 74 (6)
  7. 75+ (7)
4. What is your citizenship status?
  1. Native-born U.S. Citizen (1)
  2. Naturalized U.S. Citizen (2)
  3. U.S. Visa Holder (e.g. F-1, J-1, H-1B, H-2B) (3)
  4. Refugee or Asylee (4)
5. What is the highest level of education you have attained?
  1. Middle School (1)
  2. High-School Degree or GED (2)
  3. Post-High-School Education/Training (e.g. community college or associate's degree, vocational or technical training) (3)
  4. Four-Year College Degree (e.g. BA, BS) (4)
  5. Post-Graduate Degree (e.g. MA, MSc, MPhil, PhD) (5)

Classification: Selection of "1, 2 or 3 = low-education". Selection of "4 or 5 = high-education".

6. Are you employed? (Either part-time or full-time)
  1. Yes (1)
  2. No (2)
7. [Only display if (5) "Yes"] Which employment classification best describes your job:
  1. Manager (e.g. chief executive, production manager) (1)
  2. Professional (e.g. health professional, teaching professional, legal professional) (2)
  3. Technician or associate professional (e.g. health associate, communications technician) (3)
  4. Clerical support (e.g. customer services, keyboard clerk) (4)
  5. Service or sales (e.g. sales worker, personal care worker) (5)
  6. Agricultural, forestry and fishery (6)
  7. Craft and related trades (e.g. construction worker, electrician) (7)
  8. Plant and machine operators, or assembler (8)
  9. Elementary occupation (e.g. cleaner, food preparation) (9)
  10. Armed forces (10)

Classification: Selection of "1, 2 or 3 = high-skill". Selection of "4, 5, 6, 7, 8, 9, 10 = low-skill".

7. [Only display if (5) "No"] Are you:
  11. Unemployed but seeking employment (1)

- 12. Retired (2)
- 13. Other permanently unemployed (e.g. chronic illness, private income) (3)
- 8. What political ideology do you identify with?
  - 1. Conservative (1)
  - 2. Moderate (2)
  - 3. Liberal (3)
- 9. How often do you read political news?
  - 1. Never (1)
  - 2. Occasionally (2)
  - 3. Frequently (3)
- 10. In 2015, roughly how much of the U.S. population was foreign-born?  
 [Question with Sliding Scale Response Option. Range of Scale: 0 – 35%]

[Insert Experimental Treatment Stage One: Information Provision (Low vs. High)]

- 11. “The U.S. accepts too many immigrants”. Do you agree or disagree with this statement?
  - 1. Strongly agree (1)
  - 2. Somewhat agree (2)
  - 3. Neither agree or disagree (3)
  - 4. Somewhat disagree (4)
  - 5. Strongly disagree (5)
- 12. “The U.S. accepts too many *low-skilled* immigrant”. Do you agree or disagree with this statement?
  - 1. Strongly agree (1)
  - 2. Somewhat agree (2)
  - 3. Neither agree or disagree (3)
  - 4. Somewhat disagree (4)
  - 5. Strongly disagree (5)
- 13. “The U.S. accepts too many *high-skilled* immigrants”. Do you agree or disagree with this statement?
  - 1. Strongly agree (1)
  - 2. Somewhat agree (2)
  - 3. Neither agree or disagree (3)
  - 4. Somewhat disagree (4)
  - 5. Strongly disagree (5)
- 14. What was the topic of the article?
  - 1. Trade (1)
  - 2. Visas (2)
  - 3. Immigration (3)
  - 4. National Security (4)

[Correct = 3. Incorrect = 1, 2 or 4]

[Insert Experimental Treatment Stage Two: Race/Skill Manipulation]

- 15. “The U.S. should accept more immigrants like the individual interviewed”. Do you agree or disagree with this statement?
  - 1. Strongly agree (1)
  - 2. Somewhat agree (2)
  - 3. Neither agree or disagree (3)

4. Somewhat disagree (4)
  5. Strongly disagree (5)
16. What was the occupation of the immigrant interviewed?
1. Software Developer (1)
  2. Construction Worker (2)
  3. Electrician (3)
  4. Lawyer (4)
- [IF Treatment A or B: Correct = 2]  
[IF Treatment C or D: Correct = 1]

[Insert MTurk Survey Completion Code]

## Survey Treatments

## Stage ONE: Information Provision

## Low Information (A)

**Data Shows the Impact of Immigration to the United States**

Published: November 10, 2017



The Statue of Liberty as a symbol of immigration

Immigration has shaped the United States since the country's founding. Beyond being a powerful demographic force for how the country and its population became what they are today, immigration has contributed to many economic, social and political processes.

Peak immigration periods have influenced fundamental transformations of the U.S. economy and society. Recent research indicates that the impact of immigration depends on the characteristics of each immigrant.

## High Information (B)

**Data Shows the Impact of Immigration to the United States**

Published: November 10, 2017



The Statue of Liberty as a symbol of immigration

Immigration has shaped the United States since the country's founding. Peak immigration periods have influenced fundamental transformations of the U.S. economy and society. Recent research indicates that the impact of immigration depends on the characteristics of each immigrant. One important difference is between high-skilled and low-skilled immigrants.

Low-skilled immigrants tend to find work as service and sales support or agricultural and construction laborers. When there are more immigrants of this kind, workers in low-skill occupations domestically may experience higher job competition and lower wages. Findings

also suggest that regions with larger populations of low-skilled immigrants experience greater demand for government funded services. However, it is important to acknowledge that immigrants of low-skill are associated with reductions in the cost of living for the average American.

Recent research also sheds light on the impact of high-skilled immigrants in the U.S. Immigrants of high-skill tend to fill positions ranging from software developers to firm executives. These positions are associated with higher tax contributions and spending as they pay higher wages. Job competition among high-skilled domestic labor and immigrants does not appear to be so significant. Some data even suggests that employing high-skilled immigrants increases a firm's ability to create positions and hire more domestic labor.

[Stage TWO: Race and Skill Manipulation](#)

[Low-Skill → Hispanic \(A\)](#)

## **Data Shows the Impact of Immigration to the United States**

Published: November 10, 2017

---

... contd.

Immigration remains a heavily debated U.S. policy issue. To better understand the reality of the policy, we conducted interviews with recent immigrants. Victor Rodriguez arrived two years ago and has worked as a construction laborer. When asked about his experience, Mr. Rodriguez said that despite the demanding conditions, he is grateful for the opportunity for work. "I understand some people do not support immigration, but I work hard," said Mr. Rodriguez.

[Low-Skill → White European \(B\)](#)

## **Data Shows the Impact of Immigration to the United States**

Published: November 10, 2017

---

... contd.

Immigration remains a heavily debated U.S. policy issue. To better understand the reality of the policy, we conducted interviews with recent immigrants. Peter Miller arrived two years ago and has worked as a construction laborer. When asked about his experience, Mr. Miller said that despite the demanding conditions, he is grateful for the opportunity for work. "I understand some people do not support immigration, but I work hard," said Mr. Miller.

[High-Skill → Hispanic \(C\)](#)

## **Data Shows the Impact of Immigration to the United States**

Published: November 10, 2017

---

... contd.

Immigration remains a heavily debated U.S. policy issue. To better understand the reality of the policy, we conducted interviews with recent immigrants. Victor Rodriguez arrived two years ago and has worked as a software developer for a tech-company. When asked about his experience, Mr. Rodriguez said that despite the challenges of his highly skilled role, he is grateful for the opportunity to work. "I understand some people do not support immigration, but I work hard," said Mr. Rodriguez.

[High-Skill → White European \(D\)](#)

## **Data Shows the Impact of Immigration to the United States**

Published: November 10, 2017

---

... contd.

Immigration remains a heavily debated U.S. policy issue. To better understand the reality of the policy, we conducted interviews with recent immigrants. Peter Miller arrived two years ago and has worked as a software developer for a tech-company. When asked about his experience, Mr. Miller said that despite the challenges of his highly skilled role, he is grateful for the opportunity to work. "I understand some people do not support immigration, but I work hard," said Mr. Miller.

## Appendix B: Tables &amp; Figures

Table 1. Sample Demographic Data

Parameters	Population	Treatment Stage One			Treatment Stage Two		
		Group A	Group B	Group C	Group A	Group B	Group C
	N=2,067	N=1,038	N=1,029	N=532	N=561	N=473	N=501
<b>Gender</b>							
Male	956 (46.3)	481 (46.3)	475 (46.2)	232 (43.6)	254 (45.3)	242 (51.2)	228 (45.5)
Female	1106 (53.5)	555 (53.5)	551 (53.5)	298 (56.0)	306 (54.5)	230 (48.6)	272 (54.3)
Other	5 (0.2)	2 (0.2)	3 (0.3)	2 (0.4)	1 (0.2)	1 (0.2)	1 (0.2)
<b>Race</b>							
White	1598 (77.3)	798 (78.9)	800 (77.7)	407 (76.5)	441 (78.6)	368 (77.8)	382 (76.2)
Black or African American	135 (6.5)	66 (6.4)	69 (6.7)	41 (7.7)	29 (5.2)	30 (6.3)	35 (7.0)
Hispanic or Latino	108 (5.2)	57 (5.5)	51 (5.0)	26 (4.9)	32 (5.7)	18 (3.8)	32 (6.4)
Asian or Asian American	155 (7.5)	79 (7.6)	76 (7.4)	37 (7.0)	44 (7.8)	38 (8.0)	36 (7.2)
Native American	6 (0.3)	3 (0.3)	3 (0.3)	0 (0)	2 (0.4)	2 (0.4)	2 (0.4)
Middle Eastern	13 (0.6)	7 (0.7)	6 (0.1)	5 (0.9)	2 (0.4)	2 (0.4)	4 (0.8)
Mixed Race	52 (2.5)	28 (2.7)	24 (2.3)	16 (3.0)	11 (2.0)	15 (3.2)	10 (2.0)
<b>Age</b>							
15-24	248 (12.0)	119 (11.5)	129 (12.5)	77 (14.5)	66 (11.8)	48 (10.1)	57 (11.4)
25-34	826 (40.0)	426 (41.0)	400 (38.9)	205 (38.5)	232 (41.4)	193 (40.8)	196 (39.1)
35-44	504 (24.4)	259 (25.0)	245 (23.8)	124 (23.3)	143 (25.5)	116 (24.5)	121 (24.2)
45-54	270 (13.1)	134 (12.9)	136 (13.2)	66 (12.4)	64 (11.4)	64 (13.5)	76 (15.2)
55-64	157 (7.6)	68 (6.6)	89 (8.6)	42 (7.9)	41 (7.3)	35 (7.4)	39 (7.8)
65-74	55 (2.7)	30 (2.9)	25 (2.4)	16 (3.0)	13 (2.3)	16 (3.4)	10 (2.0)
75+	7 (0.3)	2 (0.2)	5 (0.5)	2 (0.4)	2 (0.4)	1 (0.2)	2 (0.4)
<b>Citizenship</b>							
Native-born U.S. Citizen	1956 (94.6)	981 (94.5)	975 (94.8)	493 (92.7)	532 (94.8)	451 (95.3)	480 (95.8)
Naturalized U.S. Citizen	111 (5.4)	57 (5.5)	54 (5.2)	39 (7.3)	29 (5.2)	22 (4.7)	21 (4.2)
<b>Education</b>							
Middle School	6 (0.3)	2 (0.2)	4 (0.4)	3 (0.6)	0 (0)	2 (0.4)	1 (0.2)
High-School or GED	385 (18.6)	192 (18.5)	193 (18.8)	96 (18.0)	105 (18.7)	94 (19.9)	90 (18.0)
Post-High-School Training	511 (24.7)	251 (24.2)	260 (25.3)	147 (27.6)	139 (24.8)	110 (23.3)	115 (23.0)



Four-Year College	856 (41.4)	433 (41.7)	423 (41.1)	223 (42.0)	231 (41.2)	188 (39.7)	214 (42.7)
Post-Graduate	309 (14.9)	160 (15.4)	149 (14.5)	63 (11.8)	86 (15.3)	79 (16.7)	81 (16.2)
Employment Status							
Employed	1669 (80.7)	857 (82.6)	812 (78.9)	417 (78.4)	459 (81.8)	382 (80.8)	411 (82.0)
Unemployed	398 (19.3)	181 (17.4)	217 (21.1)	115 (21.6)	102 (18.2)	91 (19.2)	90 (18.0)
Employment Classification (n=1669)							
Manager	239 (14.3)	124 (14.5)	115 (14.2)	57 (13.7)	67 (14.6)	61 (16.0)	54 (13.1)
Professional	454 (27.2)	247 (28.8)	207 (25.5)	117 (28.1)	121 (26.4)	93 (24.3)	123 (29.9)
Technician or Associate Professional	237 (14.2)	120 (14.0)	117 (14.4)	65 (15.6)	61 (13.3)	54 (14.1)	57 (13.9)
Clerical Support	309 (18.5)	155 (18.1)	154 (19.0)	71 (17.0)	89 (19.4)	60 (15.7)	89 (21.7)
Service or Sales	219 (13.1)	107 (12.5)	112 (13.8)	51 (12.2)	70 (15.3)	56 (14.7)	42 (10.2)
Agricultural, Forestry or Fishery	11 (0.7)	6 (0.7)	5 (0.6)	1 (0.2)	2 (0.4)	4 (1.0)	4 (1.0)
Craft and Related Trades	47 (2.8)	24 (2.8)	23 (2.8)	14 (3.4)	9 (2.0)	16 (4.2)	8 (1.9)
Plant and Machine Operator	36 (2.2)	21 (2.5)	15 (1.8)	9 (2.2)	11 (2.4)	11 (2.9)	5 (1.2)
Entry-Level	105 (6.3)	48 (5.6)	57 (7.0)	30 (7.2)	24 (5.2)	24 (6.3)	27 (6.6)
Armed Forces	11 (0.7)	5 (0.6)	6 (0.7)	2 (0.5)	4 (0.9)	3 (0.8)	2 (0.5)
Unemployment Classification (n= 398)							
Unemployed but Seeking Employment	240 (60.6)	108 (60.0)	132 (61.1)	66 (57.4)	61 (61)	57 (62.6)	56 (62.2)
Retired	68 (17.2)	35 (19.4)	33 (15.3)	21 (18.3)	16 (16)	16 (17.6)	15 (16.7)
Other Permanently Unemployed	88 (22.2)	37 (20.6)	51 (23.6)	28 (24.3)	23 (23)	18 (19.8)	19 (21.1)
Ideology							
Conservative	523 (25.3)	268 (25.8)	255 (24.8)	135 (25.4)	126 (22.5)	122 (25.8)	140 (27.9)
Moderate	648 (31.3)	312 (30.1)	336 (32.7)	155 (29.1)	175 (31.2)	158 (33.4)	160 (31.9)
Liberal	896 (43.3)	458 (44.1)	(42.6)	242 (45.5)	260 (46.3)	193 (40.8)	201 (40.1)
Political Engagement							
Never	94 (4.5)	38 (3.7)	56 (5.4)	27 (5.1)	28 (5.0)	13 (2.7)	26 (5.2)
Occasionally	1151 (55.7)	558 (53.8)	593 (57.6)	286 (53.8)	308 (54.9)	270 (57.1)	287 (57.3)
Frequently	822 (39.8)	442 (42.6)	380 (36.9)	219 (41.2)	225 (40.1)	190 (40.2)	188 (37.5)
Immigration Statistic							
Mean % ( $\pm$ sd)	15.8 $\pm$ 7.7	16.1 $\pm$ 7.1	15.5 $\pm$ 7.7	16.0 $\pm$ 7.9	15.9 $\pm$ 7.6	15.4 $\pm$ 7.5	15.8 $\pm$ 7.9

**Table 2. Multivariate Regression of Responses to “The U.S. accepts too many immigrants” for Respondents in the Low-Information Treatment**

		Low-Information Treatment N=1,038
		“The U.S. accepts too many immigrants” 5 = Strongly Agree 1 = Strongly Disagree
Age		
	25-34	0.00 (0.12)
	35-44	0.17 (0.12)
	45-54	0.38 (0.14)**
	55-64	0.30 (0.17)*
	65-74	0.09 (2.3)
	75+	-1.01 (0.82)
Gender		
	Male	-0.90 (0.72)
	Other	-0.36 (0.79)
Ideology		
	Moderate	-0.68 (0.09)***
	Liberal	-1.64 (0.09)***
Political Engagement		
	Occasionally	-0.42 (0.19)**
	Frequently	-0.50 (0.20)**
Education		
	College	-0.12 (0.08)
Employment Status		
	Employed	0.30 (0.10)**
Skill-Level		
	High-Skill	-0.11 (0.08)
Race		
	White	0.05 (0.08)
Constant		3.73 (0.25)
		F(16,2020) 29.92***
		<i>Note:</i> *p < 0.1; **p < 0.05; ***p < 0.01

**Table 3. T-Test of Means of Responses to “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” Across Information Treatment Groups**

	T-Test		
	Both Information Treatment Respondents N = 2,067	Low-Information Treatment Respondents Only N= 1,038	High-Information Treatment Respondents Only N=1,029
ImmigrationLow	2.82 (0.03)	2.77 (0.04)	2.87 (0.04)
ImmigrationHigh	2.11 (0.02)	2.07 (0.03)	2.16 (0.03)
Diff	0.70 (0.03)***	0.70 (0.04)***	0.71 (0.04)***
<i>Note</i> *p < 0.1; **p < 0.05; ***p<0.01			

**Table 4. Multivariate Regression: Hypothesis Four, Model 1**

	“The U.S. should accept more immigrants like the individual interviewed” N=2,067
Experiment Stage One	
High-Info	0.18 (0.06)***
Experiment Stage Two	
Immigrant High-Skill	0.00 (0.06)
Immigrant Hispanic	0.05 (0.04)
High-Info*Immigrant High-Skill	-0.23 (0.09)**
Constant	2.03 (0.05)
	F(4, 2,062)                      3.97***
<i>Note:</i> *p < 0.1; **p < 0.05; ***p < 0.01	

**Table 5. Multivariate Regression: Hypothesis Four, Model 2**

		“The U.S. should accept more immigrants like the individual interviewed” N=2,064
<hr/>		
Experiment Stage One		
	High-Info	0.16 (0.06)***
Experiment Stage Two		
	Immigrant High-Skill	-0.04 (0.06)
	Immigrant Hispanic	0.02 (0.05)
	High-Info*Immigrant High-Skill	-0.21 (0.09)**
Age		
	25-34	0.19 (0.07)***
	35-44	0.25 (0.08)***
	45-54	0.38 (0.09)***
	55-64	0.34 (0.10)***
	65-74	0.20 (0.15)
	75+	0.77 (0.38)**
Ideology		
	Moderate	-0.18 (0.06)***
	Liberal	-0.62 (0.06)***
Gender		
	Female	0.07 (0.04)
	Other	0.78 (0.44)*
Education		
	College	-0.07 (0.05)
Employment		
	Employed	0.14 (0.06)**
	High-Skill	-0.07 (0.05)
Race		
	White	0.06 (0.05)
	Unlike-Race	0.06 (0.05)
Constant		
		2.02 (0.11)
	F(19, 2,044)	11.42***
<hr/>		
	<i>Note:</i>	*p < 0.1; **p < 0.05; ***p < 0.01
<hr/>		

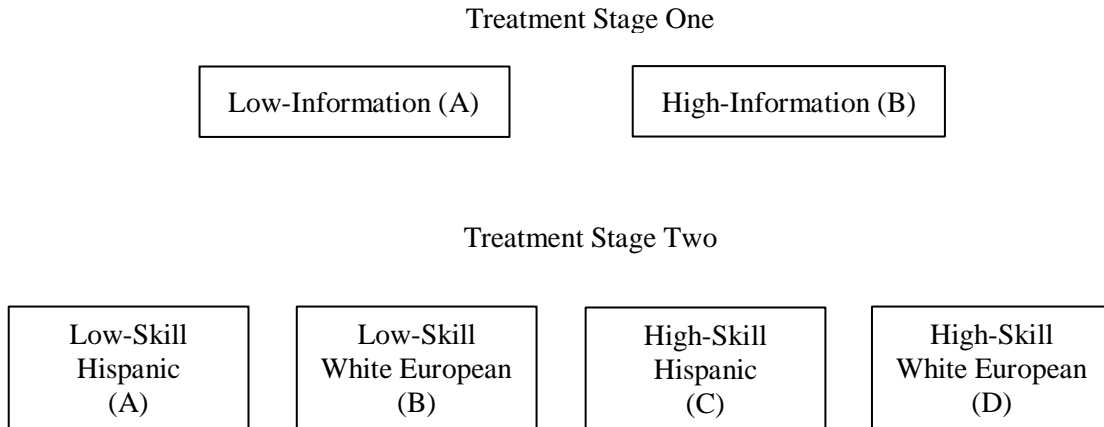
**Table 6. Multivariate Regression: Hypothesis Four, Model 3**

		“The U.S. should accept more immigrants like the individual interviewed” N=2,064
Experiment Stage One	High-Info	0.13 (0.06)**
Experiment Stage Two	Immigrant High-Skill	-0.14 (0.04)***
	Immigrant Hispanic	0.01 (0.05)
High-Info*Immigrant	Unlike-Skill	-0.13 (0.09)
Age	25-34	0.20 (0.07)***
	35-44	0.25 (0.08)***
	45-54	0.38 (0.09)***
	55-64	0.34 (0.10)***
	65-74	0.21 (0.15)
	75+	0.78 (0.38)**
Ideology	Moderate	-0.18 (0.06)***
	Liberal	-0.62 (0.06)***
Gender	Female	0.07 (0.04)
	Other	0.78 (0.44)*
Education	College	-0.06 (0.05)
Employment	Employed	0.14 (0.06)**
	High-Skill	-0.07 (0.05)
	Unlike-Skill	0.04 (0.06)
Race	White	0.06 (0.05)
	Unlike-Race	0.07 (0.05)
Constant		2.03 (0.11)
	F(20, 2,043)	10.75***
<i>Note:</i>		*p < 0.1; **p < 0.05; ***p < 0.01

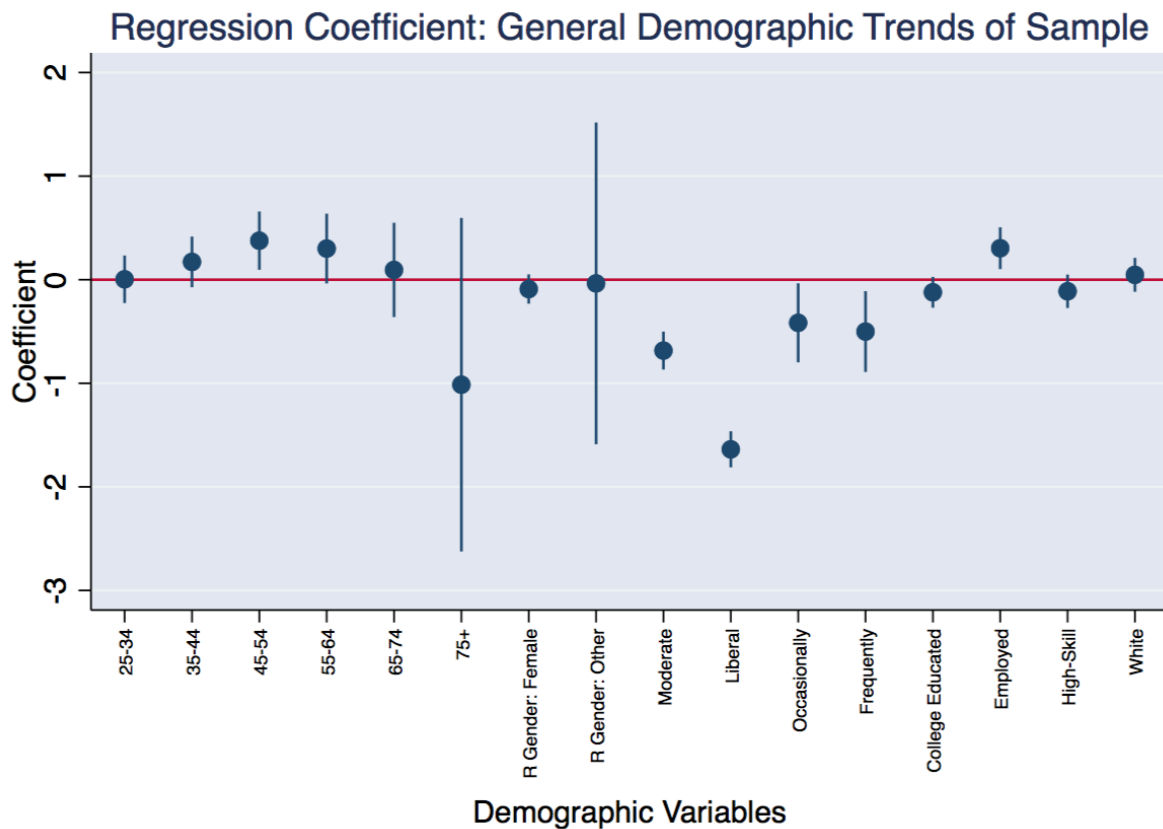
**Table 7. Calculation of Predicted Outcomes Relative to Constant (Model 3)**

	Low-Information Treatment		High-Information Treatment	
	Immigrant Low-Skill	Immigrant High-Skill	Immigrant Low-Skill	Immigrant High-Skill
Respondent Low-Skill	Const.	-0.10 [-0.24, 0.05]	<b>0.13</b> [0.01, 0.25]	-0.10 [-0.24, 0.04]
Respondent High-Skill	-0.03 [-0.19, 0.12]	<b>-0.21</b> [-0.35, -0.08]	-0.03 [-0.19, 0.13]	-0.08 [-0.27, 0.10]

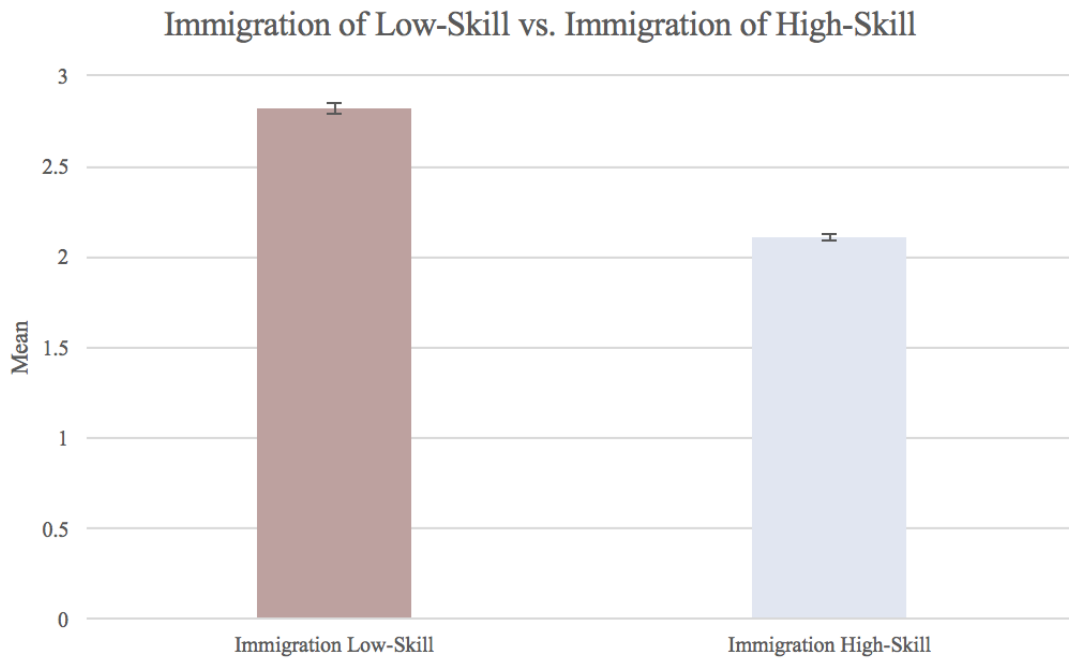
**Figure 1. Outline of Treatment Stages**



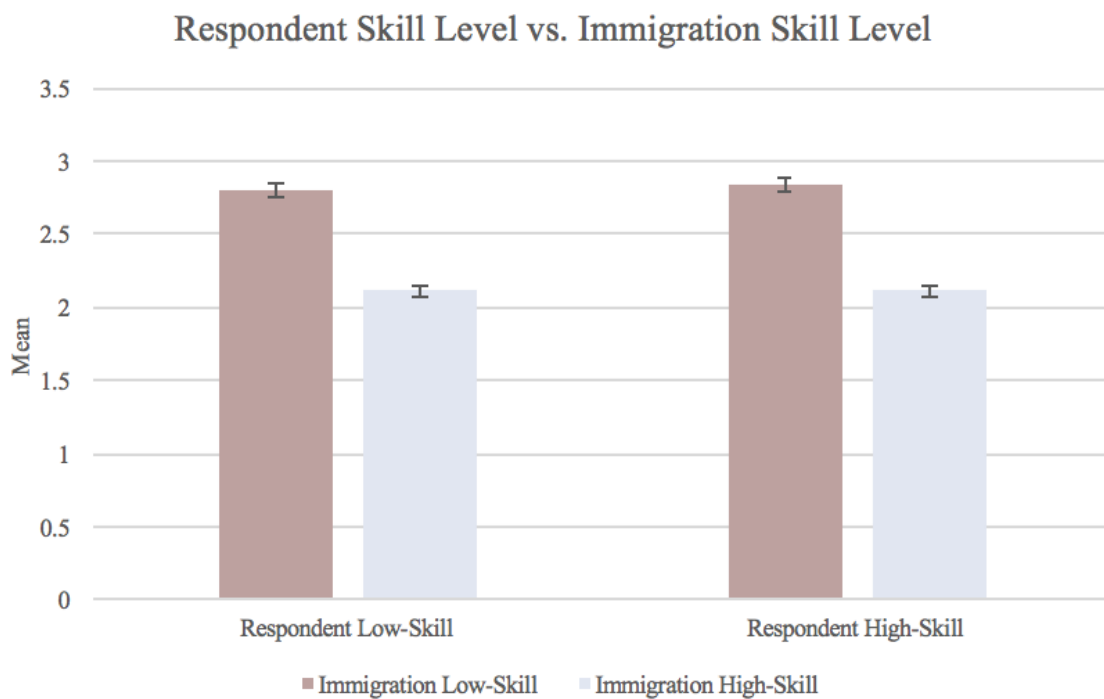
**Figure 2. Plot of Regression Coefficients for Demographic Variables for Responses to “The U.S. accepts too many immigrants” (Low-Information Treatment)**



**Figure 3. Hypothesis One: Mean of Responses to “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” Across Both Information Treatments**

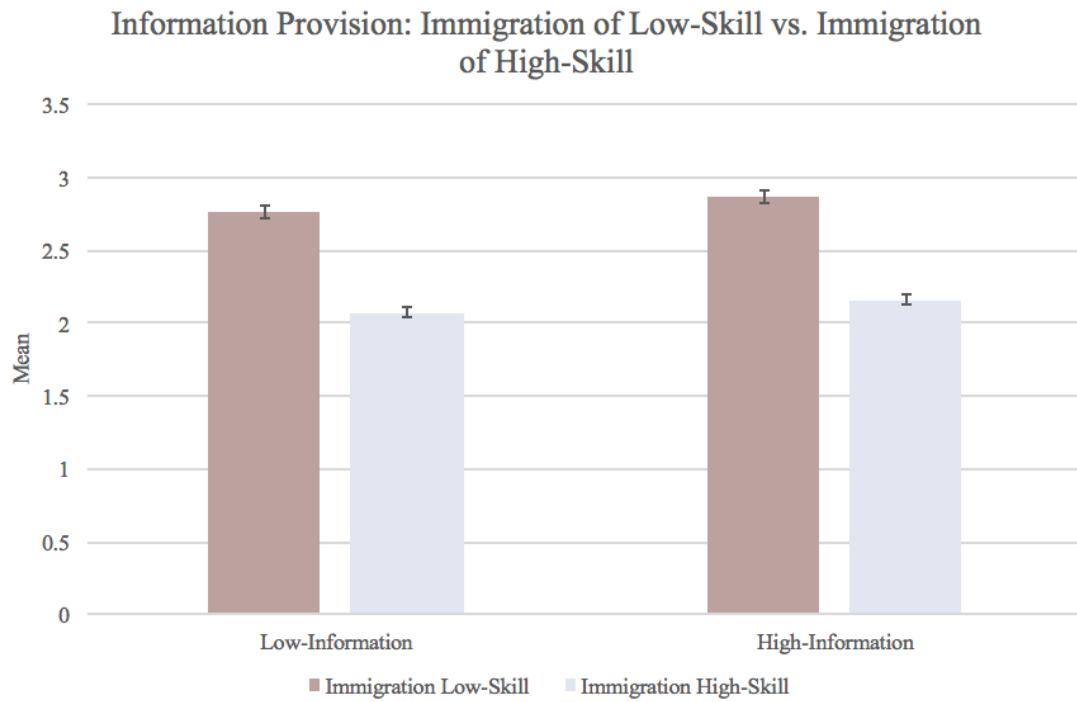


**Figure 4. Hypothesis Two: Mean of Responses to “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” Relative to Respondent Skill Level**

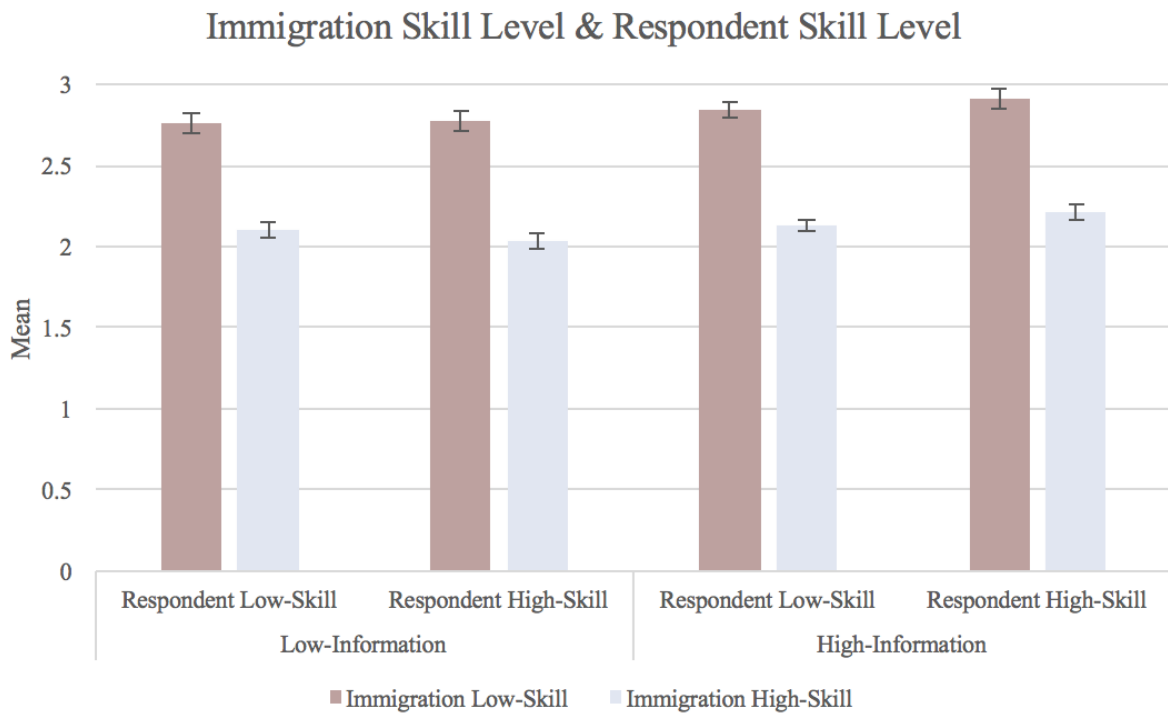




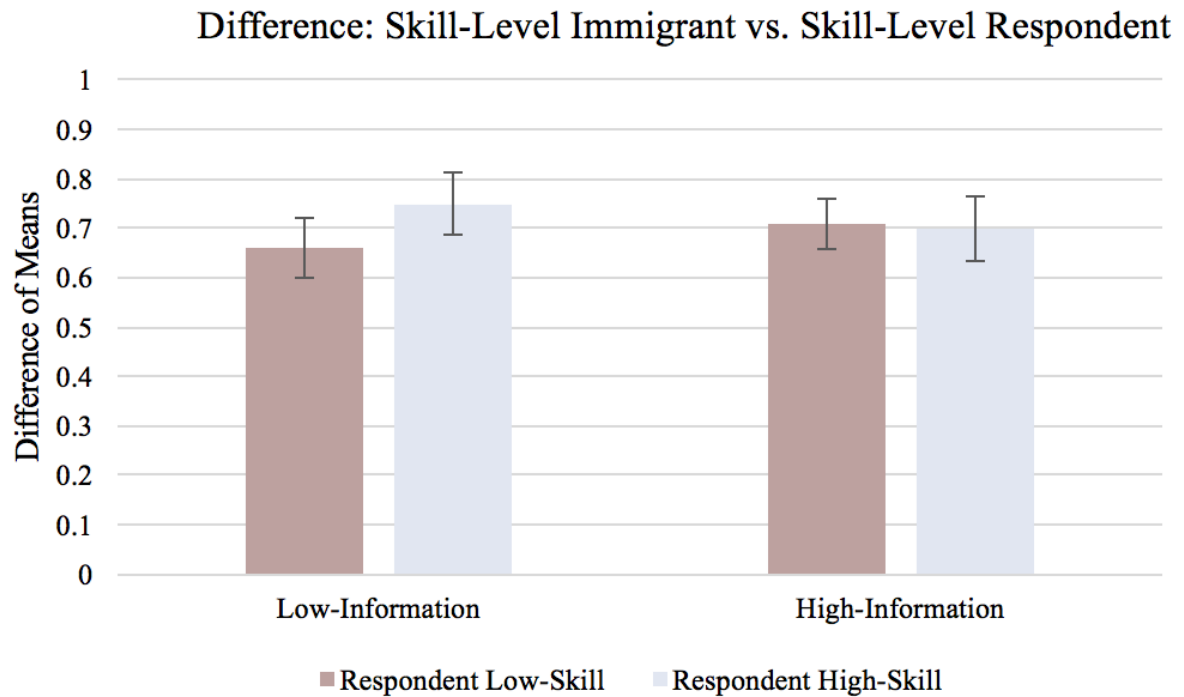
**Figure 5. Hypothesis Three: Mean of Responses to “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” Relative to Information Treatments**



**Figure 6. Hypothesis Three: Mean of Responses to “The U.S. accepts too many *low-skilled* immigrants” and “The U.S. accepts too many *high-skilled* immigrants” Relative to Respondent Skill Level & Information Treatments**



**Figure 7. Hypothesis Three: Plot of the Difference of Means for Immigration of Low and High-Skill, Relative to Respondent Skill Level & Information Treatments**



**Figure 8. Hypothesis Four: “Big-Picture” Display of Responses to “The U.S. should accept more immigrants like the individual interviewed”**

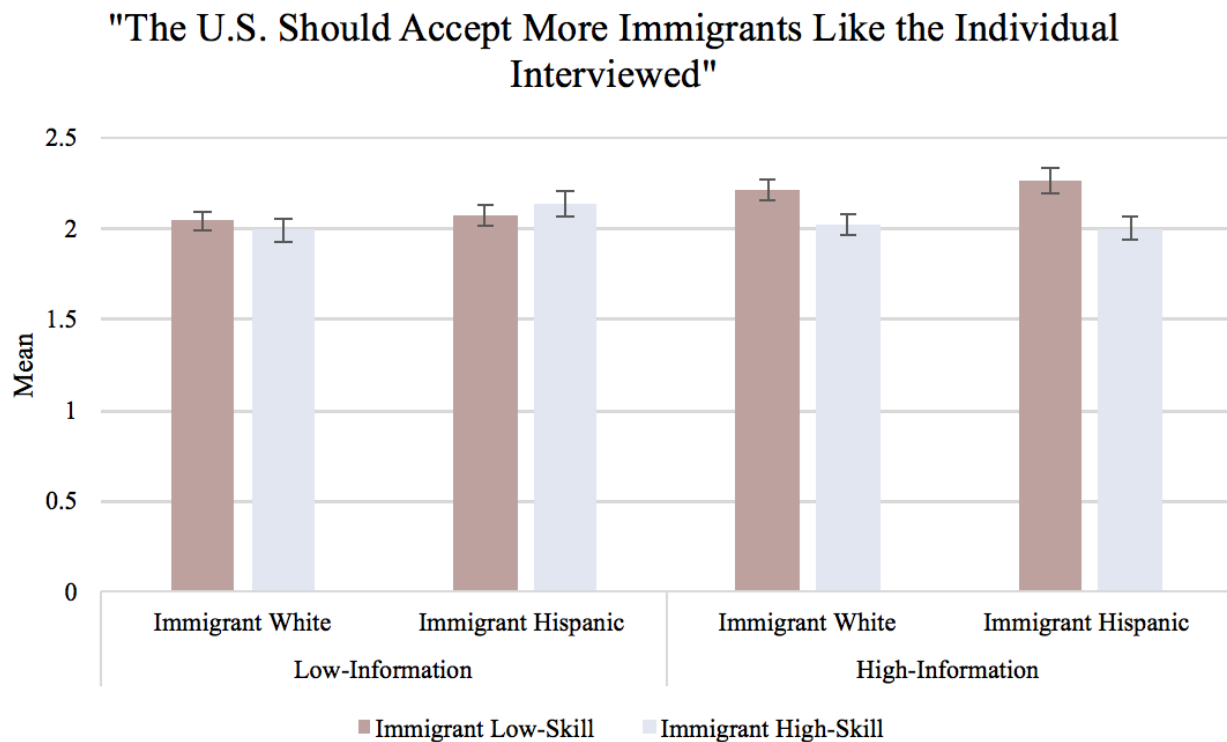


Figure 9. Hypothesis Four Regression Model 1

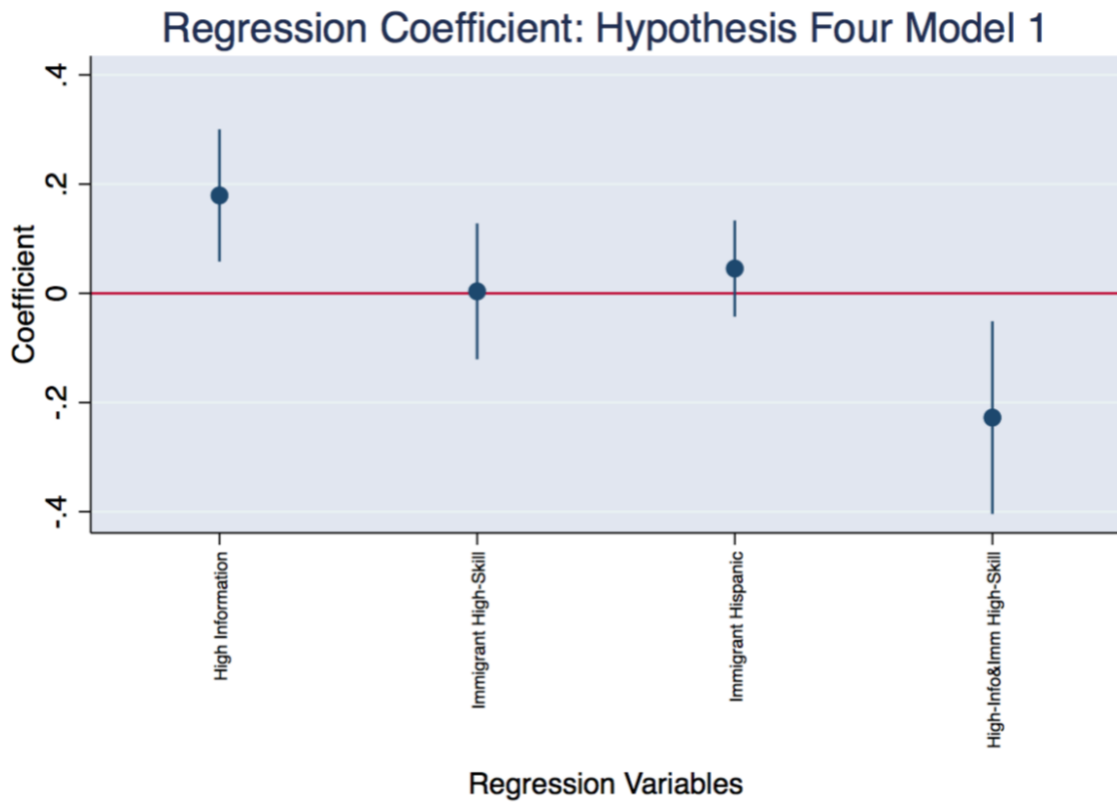


Figure 10. Hypothesis Four Regression Model 2 – “Unlike” Race

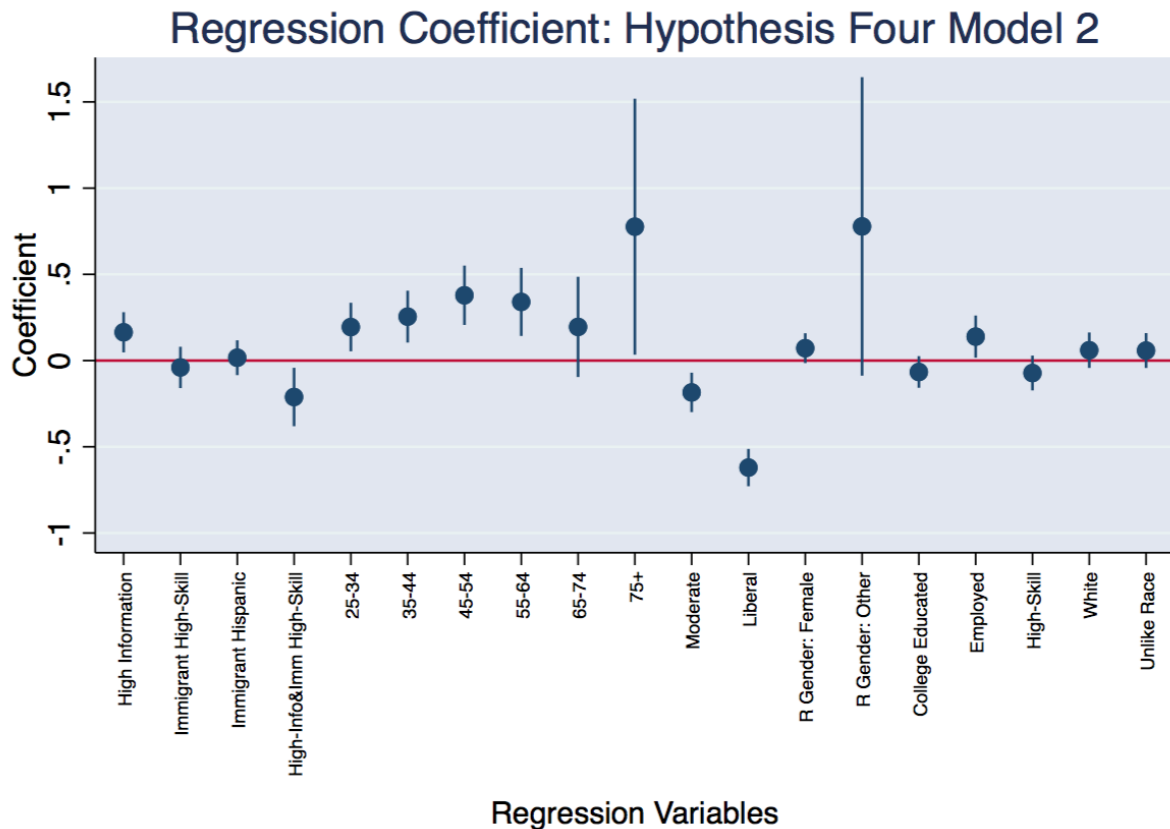
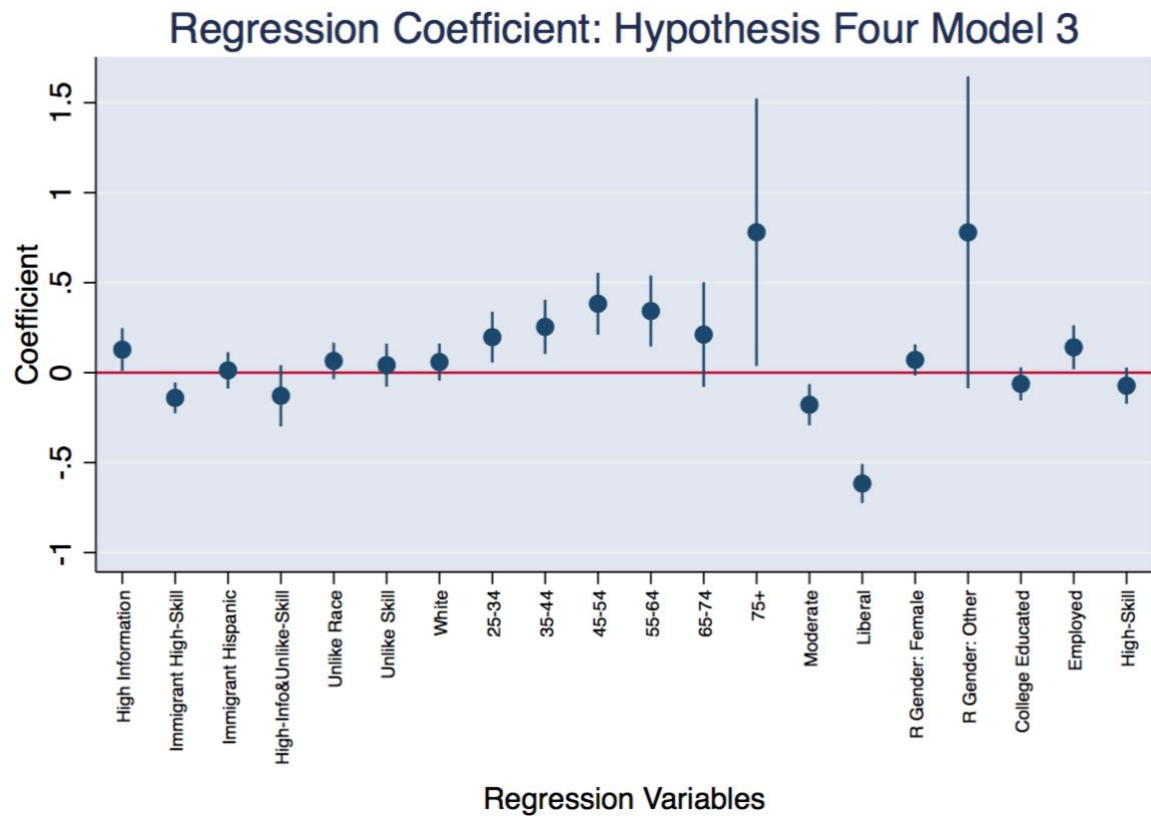


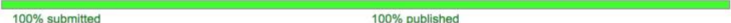












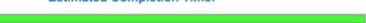








Figure 11: Hypothesis Four Regression Model 3



## Appendix C: MTurk Batches: 11 Total

Note: 10 complete & 1 closed early due to lack of respondents

<b>Thesis Survey 11.3</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 26, 2018	Assignments Completed:	165 / 165
Time Elapsed:	4 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 10.2</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 25, 2018	Assignments Completed:	300 / 300
Time Elapsed:	4 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 9.1</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 22, 2018	Assignments Completed:	200 / 200
Time Elapsed:	4 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 8.1</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 21, 2018	Assignments Completed:	118 / 252
Time Elapsed:	5 days	Estimated Completion Time:	March 17, 2018 10:10 PM PDT (Saturday)
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 7.1</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 20, 2018	Assignments Completed:	250 / 250
Time Elapsed:	4 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 6.1</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 19, 2018	Assignments Completed:	251 / 251
Time Elapsed:	4 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 5.2</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 18, 2018	Assignments Completed:	300 / 300
Time Elapsed:	4 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 4.1</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 17, 2018	Assignments Completed:	213 / 213
Time Elapsed:	4 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 3.1</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 16, 2018	Assignments Completed:	203 / 203
Time Elapsed:	5 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 2.1</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 15, 2018	Assignments Completed:	200 / 200
Time Elapsed:	4 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		
<hr/>			
<b>Thesis Survey 1.1</b> <span style="float: right;"><a href="#">Results</a> <a href="#">Delete</a></span>			
Created:	February 14, 2018	Assignments Completed:	164 / 164
Time Elapsed:	4 days	Estimated Completion Time:	COMPLETE
Batch Progress:	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"></div> </div>		

## Appendix D: Variable & Command Codebook

<b>STATA Variables:</b>	<b>Codebook</b>
<b>Gender:</b>	- Entry-Level Occupation (9)
- Male (1)	- Armed Forces (10)
- Female (2)	<b>Unemployed:</b>
- Other (3)	- Seeking Employment (1)
<b>Race:</b>	- Retired (2)
- White (1)	- Other (3)
- Black or African American (2)	<b>Ideology:</b>
- Hispanic or Latino (3)	- Conservative (1)
- Asian or Asian American (4)	- Moderate (2)
- Native American (5)	- Liberal (3)
- Middle Eastern (6)	<b>PolNews:</b>
- Mixed Race (7)	- Never (1)
<b>Age:</b>	- Occasionally (2)
- 15-24 (1)	- Frequently (3)
- 25-34 (2)	<b>ImmigrationGeneral:</b>
- 35-44 (3)	- Strongly Agree (1)
- 45-54 (4)	- Somewhat Agree (2)
- 55-64 (5)	- Neither Agree or Disagree (3)
- 65-74 (6)	- Somewhat Disagree (4)
- 75+ (7)	- Strongly Disagree (5)
<b>Citizenship:</b>	<b>ImmigrationLow:</b>
- Native-born U.S. Citizen (1)	- Strongly Agree (1)
- Naturalized U.S. Citizen (2)	- Somewhat Agree (2)
- U.S. Visa Holder (3)	- Neither Agree or Disagree (3)
- Refugee or Asylee (4)	- Somewhat Disagree (4)
<b>Education:</b>	- Strongly Disagree (5)
- Middle School (1)	<b>ImmigrationHigh:</b>
- High-School Degree or GED (2)	- Strongly Agree (1)
- Post-High School	- Somewhat Agree (2)
Education/Training (3)	- Neither Agree or Disagree (3)
- Four-Year College (4)	- Somewhat Disagree (4)
- Post-Graduate Degree (5)	- Strongly Disagree (5)
<b>Employment Status:</b>	<b>ImmigrationSpecific:</b>
- Employed (1)	- Strongly Agree (1)
- Unemployed (2)	- Somewhat Agree (2)
<b>Employed:</b>	- Neither Agree or Disagree (3)
- Manager (1)	- Somewhat Disagree (4)
- Professional (2)	- Strongly Disagree (5)
- Technician or Associate	<b>Usable:</b>
Professional (3)	- Usable (1)
- Clerical Support (4)	- Omit (0)
- Service or Sales (5)	<b>Response Error:</b>
- Agricultural, Forestry & Fishery	- Usable (1)
(6)	- Omit (0)
- Craft and Related Trades (7)	
- Plant and Machine Operators (8)	

**STATA New Variables for Analysis:**

## T1\_HighInfo:

- Low-Info Treatment A (0)
- High-Info Treatment B (1)

## T2\_HighSkill:

- Immigrant Low-Skill (0)
- Immigrant High-Skill (1)

## T2\_Hisp:

- Immigrant White (0)
- Immigrant Hispanic (1)

## R\_HighSkill:

- Respondent Low-Skill (0)
- Respondent High-Skill (1)

## R\_Employed:

- Respondent Unemployed (0)
- Respondent Employed (1)

## R\_College:

- Respondent < 4 Year-College (0)
- Respondent ≥ 4 Year-College (1)

## R\_White:

- Respondent Non-White (0)
- Respondent White (1)

## R\_Female:

- Respondent Male or Other (0)
- Respondent Female (1)

## R\_Other:

- Respondent Female or Male (0)
- Respondent Other (5)

## T2\_UnlikeRace:

- Respondent & Immigrant Like-Race (0)
- Respondent & Immigrant Unlike-Race (1)

## T2\_UnlikeSkill:

- Respondent & Immigrant Like-Skill (0)
- Respondent & Immigrant Unlike-Skill (1)

## test:

- Inverted scale for variable ImmigrantGeneral

## test2:

- Inverted scale for variable ImmigrantLow

## test3:

- Inverted scale for variable ImmigrantHigh

## diff:

- Mean test2 – Mean test3

## T1\_HighT2\_HighSkill:

$$= T1\_HighInfo * T2\_HighSkill$$

- Immigrant Low-Skill & Treatment Low-Info (0)
- Immigrant High-Skill & Treatment High-Info (1)

## T1\_High\_T2\_UnlikeSkill:

$$= T1\_HighInfo * T2\_UnlikeSkill$$

- Respondent & Immigrant Like-Skill & Treatment Low-Info (0)
- Respondent & Immigrant Unlike-Skill & Treatment High-Info (1)

**Code Commands:****R:**

```

Sample Demographic Analysis
DataUsable <- read_csv("~/Desktop/Senior/Thesis/Data/Clean Data/DataUsable.csv")
summary(DataUsable)
#Treatment Stage One: A/B
table(DataUsable$TreatmentStageOne)
#Gender
prop.table(table(DataUsable$Gender))
#Gender A/B
prop.table(table(DataUsable$Gender,DataUsable$TreatmentStageOne),margin=2)
#Gender A/B/C/D
prop.table(table(DataUsable$Gender,DataUsable$TreatmentStageTwo),margin=2)
#Race
prop.table(table(DataUsable$Race))
#Race A/B
prop.table(table(DataUsable$Race,DataUsable$TreatmentStageOne),margin=2)
#Race A/B/C/D
prop.table(table(DataUsable$Race,DataUsable$TreatmentStageTwo),margin=2)
#Age
prop.table(table(DataUsable$Age))
#Age A/B
prop.table(table(DataUsable$Age, DataUsable$TreatmentStageOne), margin=2)
#Age A/B/C/D
prop.table(table(DataUsable$Age, DataUsable$TreatmentStageTwo), margin=2)
#Citizenship
prop.table(table(DataUsable$Citizenship))
#Citizenship A/B
prop.table(table(DataUsable$Citizenship, DataUsable$TreatmentStageOne), margin=2)
#Citizenship A/B/C/D
prop.table(table(DataUsable$Citizenship, DataUsable$TreatmentStageTwo), margin=2)
#Education
prop.table(table(DataUsable$Education))
#Education A/B
prop.table(table(DataUsable$Education, DataUsable$TreatmentStageOne), margin=2)
#Education A/B/C/D
prop.table(table(DataUsable$Education, DataUsable$TreatmentStageTwo), margin=2)
#Employment Status
prop.table(table(DataUsable$EmploymentStatus))
#Employment Status A/B
prop.table(table(DataUsable$EmploymentStatus, DataUsable$TreatmentStageOne),
margin=2)
#Employment Status A/B/C/D
prop.table(table(DataUsable$EmploymentStatus, DataUsable$TreatmentStageTwo),
margin=2)
#Employment Classification
prop.table(table(DataUsable$Employed))
#Employment Classification A/B
prop.table(table(DataUsable$Employed, DataUsable$TreatmentStageOne), margin=2)

```



```

#Employment Classification A/B/C/D
prop.table(table(DataUsable$Employed, DataUsable$TreatmentStageTwo), margin=2)
#Unemployed
prop.table(table(DataUsable$Unemployed))
#Unemployed A/B
prop.table(table(DataUsable$Unemployed, DataUsable$TreatmentStageOne), margin=2)
#Unemployed A/B/C/D
prop.table(table(DataUsable$Unemployed, DataUsable$TreatmentStageTwo), margin=2)
#Ideology
prop.table(table(DataUsable$Ideology))
#Ideology A/B
prop.table(table(DataUsable$Ideology, DataUsable$TreatmentStageOne), margin=2)
#Ideology A/B/C/D
prop.table(table(DataUsable$Ideology, DataUsable$TreatmentStageTwo), margin=2)
#Political Engagement
prop.table(table(DataUsable$PolNews))
#Political Engagement A/B
prop.table(table(DataUsable$PolNews, DataUsable$TreatmentStageOne), margin=2)
#Political Engagement
prop.table(table(DataUsable$PolNews, DataUsable$TreatmentStageTwo), margin=2)
#Political Statistic, A/B, A/B/C/D
tapply(DataUsable$Statistic, mean)
tapply(DataUsable$Statistic, sd)
tapply(DataUsable$Statistic, DataUsable$TreatmentStageOne, mean)
tapply(DataUsable$Statistic, DataUsable$TreatmentStageOne, sd)
tapply(DataUsable$Statistic, DataUsable$TreatmentStageTwo, mean)
tapply(DataUsable$Statistic, DataUsable$TreatmentStageTwo, sd)
#Example X2 Analysis for Demographic Variables
table(DataUsable$TreatmentStageTwo, DataUsable$Education)
chisq.test(table(DataUsable$TreatmentStageTwo, DataUsable$Education))
table(DataUsable$TreatmentStageOne, DataUsable$Ideology)
chisq.test(table(DataUsable$TreatmentStageOne, DataUsable$Ideology))

```

**STATA:**

```

*Demographic ImmigrationGeneral Regression (Low-Information (A))
regress test i.Age R_Female R_Other i.Ideology i.PolNews R_College R_Employed
R_HighSkill R_White if T1_HighInfo==0
*Graph plot for regression coefficients
coefplot, vertical drop(_cons) yline(0)
*Paired T-Test for ImmigrationLow ImmigrationHigh (A & B)
ttest test2 == test3
*Paired T-Test for ImmigrationLow ImmigrationHigh (A only)
ttest test2 == test3 if T1_HighInfo==0
*Paired T-Test for ImmigrationLow ImmigrationHigh (B only)
ttest test2 == test3 if T1_HighInfo==1
*Generating diff variable for test2 – test 3
gen diff = test2-test3
*Two-sample t-test with unequal variances to determine whether diff differs significantly
between A & B
ttest diff, by(T1_HighInfo) unequal
*Diff Means for R_High & HighInfo
ci means diff if R_HighSkill ==1 & T1_HighInfo ==1
*Diff Means for R_High & LowInfo
ci means diff if R_HighSkill ==1 & T1_HighInfo ==0
*Diff Means for R_Low & HighInfo
ci means diff if R_HighSkill ==0 & T1_HighInfo == 1
*Diff Means for R_Low & LowInfo
ci means diff if R_HighSkill ==0 & T1_HighInfo == 0
*Graph of skill-level immigration vs. skill-level respondent
graph bar (mean) test2 test3, over(R_HighSkill) over(T1_HighInfo)
*Analyzing difference in respondent skill responses across information treatments
ci means diff if R_HighSkill==1 & T1_HighInfo==1
ci means diff if R_HighSkill==1 & T1_HighInfo==0
ci means diff if R_HighSkill==0 & T1_HighInfo==1
ci means diff if R_HighSkill==0 & T1_HighInfo==0
*Regression analysis for hyp-2 and hyp-3
reg diff R_HighSkill T1_HighInfo R_Hi_T1_Hi
reg test2 R_HighSkill T1_HighInfo R_Hi_T1_Hi
reg test3 R_HighSkill T1_HighInfo R_Hi_T1_Hi
*Hypothesis 4: Model 1
regress ImmigrationSpecific T1_HighInfo T2_HighSkill T2_Hisp T1_HighT2_HighSkill
*Calculating differences between responses in Model 1
coefplot, vertical drop(_cons) yline(0)
lincom T1_HighInfo + T2_HighSkill + T1_HighT2_HighSkill
lincom T1_HighInfo +T2_HighSkill + T1_HighT2_HighSkill – T1_HighInfo
*Hypothesis 4: Model 2
regress ImmigrationSpecific T1_HighInfo T2_HighSkill T2_Hisp T1_HighT2_HighSkill
i.Age i.Ideology R_Female R_Other R_College R_Employed R_HighSkill R_White
T2_UnlikeRace
coefplot, vertical drop(_cons) yline(0)
*Hypothesis 4: Model 3

```

```
regress ImmigrationSpecific T1_HighInfo T2_HighSkill T2_Hisp T1_High_T2_UnlikeSkill
T2_UnlikeSkill T2_UnlikeRace R_White i.Age i.Ideology R_Female R_Other R_College
R_Employed R_HighSkill
```

```
coefplot, vertical drop(_cons) yline(0)
```

\*Collecting Information for Plots & Error Bars (these are a few examples, not an extensive list)

```
ci means ImmigrationSpecific if T2_HighSkill==0 & T2_Hisp==0 & T1_HighInfo==0
```

```
ci means ImmigrationSpecific if T2_HighSkill==1 & T2_Hisp==0 & T1_HighInfo==0
```

```
ci means ImmigrationSpecific if T2_HighSkill==0 & T2_Hisp==1 & T1_HighInfo==0
```

```
ci means ImmigrationSpecific if T2_HighSkill==1 & T2_Hisp==1 & T1_HighInfo==0
```

```
ci means ImmigrationSpecific if T2_HighSkill==0 & T2_Hisp==0 & T1_HighInfo==1
```

```
ci means ImmigrationSpecific if T2_HighSkill==1 & T2_Hisp==0 & T1_HighInfo==1
```

```
ci means ImmigrationSpecific if T2_HighSkill==0 & T2_Hisp==1 & T1_HighInfo==1
```

```
ci means ImmigrationSpecific if T2_HighSkill==1 & T2_Hisp==1 & T1_HighInfo==1
```

```
ci means test2 if R_HighSkill==0 & T1_HighInfo==0
```

```
ci means test2 if R_HighSkill==1 & T1_HighInfo==0
```

```
ci means test2 if R_HighSkill==0 & T1_HighInfo==1
```

```
ci means test2 if R_HighSkill==1 & T1_HighInfo==1
```

```
ci means test3 if R_HighSkill==0 & T1_HighInfo==0
```

```
ci means test3 if R_HighSkill==1 & T1_HighInfo==0
```

```
ci means test3 if R_HighSkill==0 & T1_HighInfo==1
```

```
ci means test3 if R_HighSkill==1 & T1_HighInfo==1
```

\*Calculating Predicted Outcomes (these are a few examples, not an extensive list)

```
regress ImmigrationSpecific T1_HighInfo T2_HighSkill T2_Hisp T1_High_T2_UnlikeSkill
T2_UnlikeRace T2_UnlikeSkill R_White i.Age i.Ideology R_Female R_Other R_College
R_Employed R_HighSkill
```

```
lincom R_HighSkill + T2_UnlikeSkill
```

```
lincom T2_HighSkill + T2_UnlikeSkill
```

```
lincom T2_HighSkill + R_HighSkill
```

```
lincom T1_HighInfo
```

```
lincom T1_HighInfo + T1_High_T2_UnlikeSkill + R_HighSkill + T2_UnlikeSkill
```

```
lincom T1_HighInfo + T2_HighSkill + T1_High_T2_UnlikeSkill + T2_UnlikeSkill
```

```
lincom T1_HighInfo + T2_HighSkill + R_HighSkill
```

```
lincom T2_HighSkill + R_HighSkill - T1_HighInfo - T2_HighSkill - R_HighSkill
```

```
lincom T1_HighInfo - T1_HighInfo - T2_HighSkill - R_HighSkill
```

### References

- Bearce, David H. and Andrew F. Hart. 2017. "International Labor Mobility and the Variety of Democratic Political Institutions," *International Organization* 17(1): 65-96
- Berinsky, Adam J., Gregory A. Huber and Gabriel S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk," *Political Analysis* 20(3): 351-368
- Brader, Ted, Nicholas A. Valentino and Elizabeth Suhay. 2008. "What Triggers Public Opposition to Immigration? Anxiety, Group Cues and Immigration Threat," *American Journal of Political Science* 52(4): 959-978
- Cacciatore, Michael A., Dietram A. Scheufele and Shanto Iyengar. 2016. "The End of Framing as we Know it...and the Future of Media Effects," *Mass Communication and Society* 19(1): 7-23
- Card, David, Christian Dustmann and Ian Preston. 2005. "Understanding Attitudes to Immigration: The Migration and Minority Module of the First European Social Survey," *Centre for Research and Analysis of Migration, Discussion Paper Series CDP No. 03/05*
- Citrin, Jack, Donald P. Green, Christopher Muste and Cara Wong. 1997. "Public Opinion Toward Immigration Reform: The Role of Economic Motivations," *The Journal of Politics* 59(3): 858-881
- Comenetz, Joshua. 2016. "Frequently Occurring Surnames in the 2010 Census," [Census.gov](http://Census.gov)
- Domke, David, Taso Lagos, Mark Lapointe, Melissa Meade & Michael Xenos. 2000. "Elite Messages and Source Cues: Moving Beyond Partisanship," *Political Communication* 17(4): 395-402
- Facchini, Giovanni, Yotam Margalit and Hiroyuki Nakata. 2016. "Countering Public Opposition to Immigration: The Impact of Information Campaigns," *IZA Institute of Labor Economics, Discussion Paper Series IZA DP No. 10420*: 1-47
- Gerber, Alan S., Gregory A. Huber, Daniel R. Biggers and David J. Hendry. 2017. "Self-Interests, Beliefs and Policy Opinions: Understanding How Economic Beliefs Affect Immigration Policy Preferences," *Political Research Quarterly* 70(1): 155-171
- Guisinger, Alexandra. 2017. *American Opinion on Trade: Preferences Without Politics*. New York: Oxford University Press.
- Guisinger, Alexandra and Elizabeth N. Saunders. 2017. "Mapping the Boundaries of Elite

- Cues: How Elites Shape Mass Opinion Across International Issues,” *International Issues Quarterly* 61(2): 425-441
- Hainmueller, Jens and Michael J. Hiscox. 2007. “Educated Preferences: Explaining Attitudes Toward Immigration in Europe,” *International Organization* 61(2):399-442
- Hainmueller, Jens & Michael J. Hiscox. 2010. “Attitudes Toward High-Skilled and Low-Skilled Immigration: Evidence from a Survey Experiment,” *American Political Science Review* 104(1): 61-84
- Hainmueller, Jens and Daniel J. Hopkins. 2014. “The Hidden American Immigration Consensus: A Conjoint Analysis of Attitudes Towards Immigrants,” *American Journal of Political Science* 59(3): 529-548
- Hainmueller, Jens, Michael J. Hiscox and Yotam Margalit. 2017. “Do Concerns about Labor Market Competition Shape Attitudes Toward Immigration? New Evidence,” *Journal of International Economics* 97(1): 193-207
- Hansen, Ole-Petter Moe. 2017. “Quantifying Determinants of Immigration Preferences,” Discussion Paper, University of St. Gallen: 1-38
- Hanson, Gordon H., Kenneth Scheve and Matthew J. Slaughter. 2007. “Public Finance and Individual Preferences Over Globalization Strategies,” *Economics and Politics* 19(1): 1-33
- Harell, Allison, Stuart Soroka, Shanto Iyengar and Nicholas Valentino. 2012. “The Impact of Economic and Cultural Cues on Support for Immigration in Canada and the United States,” *Canadian Journal of Political Science* 45(3): 499-530
- Harris, J. Andrew. 2015. “What’s in a name? A Method for Extracting Information About Ethnicity from Names,” *Political Analysis* 23(2): 212-224
- Haynes, Chris, Jennifer Merolla and S. Karthick Ramakrishnan. 2016. *Framing Immigrants: News Coverage, Public Opinion, and Policy*. New York: Russel Sage Foundation
- Huber, Gregory A. and Kevin Arceneaux. 2007. “Identifying the Persuasive Effects of Presidential Advertising,” *American Journal of Political Science* 51(4):957-977
- Iyengar, Shanto, et. al. 2013. “Do Attitudes About Immigration Predict Willingness to Admit Individual Immigrants? A Cross-National Test of the Person-Positivity Bias,” *Public Opinion Quarterly* 77(3): 641-665
- Kerr, Sari Pekkala, William R. Kerr and William F. Lincoln. 2015. “Firms and the Economics of Skilled Immigration,” *Innovation Policy and the Economy* 15(1):115-152

- Malhotra, Neil, Yotam Margalit and Cecilia Hyunjung Mo. 2013. "Economic Explanations for Opposition to Immigration: Distinguishing between Prevalence and Conditional Impact," *American Journal of Political Science* 57(2): 391-410
- Mansfield, Edward D., Diana C. Mutz and Laura R. Silver. 2015. "Men, Women, Trade and Free Markets," *International Studies Quarterly* 59(2): 303-315
- Margalit, Yotam. 2012. "Lost in Globalization: International Economic Integration and the Sources of Popular Discontent," *International Studies Quarterly* 56(3): 484-500
- Mayda, Anna Maria. 2006. "Who is Against Immigration? A Cross-Country Investigation of Individual Attitudes Toward Immigrants," *The Review of Economics and Statistics* 88(3): 510-530
- Rho, Sungmin and Michael Tomz. 2017. "Why Don't Trade Preferences Reflect Economic Self-Interest?" *International Organization* 71(S1): S85-S108