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Framing the "Others": Examining positive and negative framing effects on attitudes toward immigration in neutral news media and partisan sources

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Abstract

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Framing has been increasingly used by political elites as a tactic to influence public opinions
toward immigration. Motivated by the widespread use of framing, my paper intends to study
the impacts of framing on public attitudes toward immigrants, public attitudes toward
immigration policies, and public willingness to participate in political actions for or against
immigration. Using a survey experiment, I compare the impact of economic threat frames
versus cultural threat frames, positive frames versus negative frames, and frames from a
neutral source versus frames from a partisan-leaning source. My research aims to reconcile the
two main domains of literature in the field of political communication – racial priming and
general framing, as this research examines if the findings on the factors that determine the
relative effectiveness of framing – tone, source, and moderators – can be applied to the context
of immigration priming with a racial overtone.

This research finds: (1) Overall, negative frames are more effective than positive frames.
Cultural frames do not demonstrate a consistent difference in effects than economic frames.
While the neutral frames that come from the Associated Press steadily showcase a larger
impact than the Republican frames, the neutral AP frames do not show a consistent difference
in impacts than Democratic frames. (2) Liberals display a decline in their level of favorableness
toward immigration in response to an exposure to any type of frames, either positive or
negative, neutral or partisan. Conservatives are more persuade by negative frames and less
persuaded by positive frames. Moderates generally display framing effects in alignment with
the tone – either positive or negative - of the frames.

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Muzhi Liu

Introduction

In recent years, the immigrant population in the United States has increased steadily. In large part, this is due to the passage of the Immigration and Nationality Act of 1965, which eliminated the country's quota system, a significant obstacle for immigrants from immigration-heavy countries (Pew Research Center 2020). Currently, the immigration population stands at over 40 million (Pew Research Center 2020). At the same time, immigration has become an important political issue across the United States, with political figures seeking to maintain issue ownership (Merry 2022).

Politicians emphasize different aspects of immigration issues to appeal to voters who share ideological proximity. For instance, scholars find that Donald Trump employed a "villain frame" on his Twitter page, portraying immigrants as culturally threatening to cater to voters who have conservative attitudes and persuade them to retweet and vote in alignment with Trump (Merry 2022). On the contrary, some Democratic candidates who have immigration backgrounds, such as Ilhan Omar (D-MN), tend to depict immigrants in a sympathetic light in their campaigns, featuring them as victims and beneficial to society. In addition to voter mobilization effects, posts that involve political motivations from partisan-leaning sources or candidates have the effect of framing, that is, presenting an issue that leads to a change in people's consideration process related to the issue. News media also produce more neutral articles that seek to inform people of immigration status quo and potentially shape public stances on immigration (Chong and Druckman 2007).

The general public has been consistently exposed to the framing tactics employed by partisan platforms and the news media including a mix of positive and negative value-imbued portrayals of immigrants. Since framing is massive in scale while subtle in appearance, audiences often cannot easily distinguish framed ideas from their original ideas, leading to an unconscious change in public attitudes. For instance, Meeks (2019) observes that Trump's attack frames have led to more retweets and favorites than other frames, which increases the claims of media bias and the public's belief in bias. This creates a destructive, self-sabotaging loop for the news media (Chadwick, 2017). Scholars have expressed concerns about how framing is employed as a way for authorities to manipulate public attitudes toward immigration, viewing framing as a potential threat to the legitimate representation of public interests under democratic systems (Riker 1986; Zaller 1992; Entman 1993; Bartels 2003). Given the salience of the immigration issue due to the increasing immigrant population and the potential concerns related to the widespread use of framing, it is useful to examine how different types of framing could shape public attitudes.

Previous scholars approach the issue of immigration framing through the framework proposed by racial priming scholars. In particular, scholars find that negative immigration framing conveys subtle cues that link the frames to the image of certain group of immigrants, thereby triggering people's anxiety and causing people to act in hostility against the immigrants in their subsequent decision-making processes (Valentino, Hutchings and White, 2002; Hutchings and Valentino, 2004; Brader, Valentino and Suhay, 2008). However, the racial priming frameworks seem less capable to account for today's increasingly complex political situations where audience can be exposed to various types and mediums of frames from different sources. On the other hand, while the literature on general framing theory has examined how

different characteristics of a frame – including the content, tone, and source - and the characteristics of audience – so-called "moderators" (Chong and Druckman, 2007) -would entail different framing effects, there are less scholars who utilize the framework of general framing under the immigration context, where a racial overtone is implied.

Accordingly, using a survey experiment, I compare the impact of economic threat frames versus cultural threat frames, positive frames versus negative frames, and frames from a neutral source versus frames from a partisan-leaning source in this thesis. My research aims to reconcile the two main domains of literature in the field of political communication – racial priming and general framing, as this research examines if the findings on the factors that determine the relative effectiveness of framing – tone, source, and moderators – can be applied to the context of immigration priming with a racial overtone.

Literature Review

Portrayal of immigrants since 1870

How immigration should be perceived in the United States has been a salient issue throughout history (Tichenor, 2002). Although the nationalities of dominant immigrant populations have been different, the public political discourse around immigration and the image of the immigration population have demonstrated substantial threads of commonality across time. One thread commonality lies in the debate on the cost and benefit that an increasing population of immigration could bring in, and the general public tends to side with the former than the latter (Simon and Alexander, 1993).

Restrictive policies that limited the number of incoming immigrants were first introduced in the late 19th century, when the belief that immigrants brought threats to the U.S. acquired

prominence among the general public (Simon, 1985). An increase in immigration from southern and eastern Europe fueled negative sentiments toward immigrants in the context of economic recession in the early 1880s. The origin of the ethnocentric belief that Anglo-Saxon people enjoy racial superiority can be dated to this time, when it started gaining popularity. On the other hand, the gold-mining projects ongoing in California in the mid-19th century entailed a substantial demand for labor. Chinese immigrants, who was in charge of the construction of the Central Pacific Railroad, surged into the job and filled this vacancy. The local Irish workers, however, were angered by the huge amount of Chinese immigrant population, and they formed a labor union to persuade Congress that Chinese immigrants were occupying the limited job opportunities that the native white citizens were entitled to. The "economic threat" belief regarding immigration started to popularize, and Congress passed the Chinese Exclusion Act of 1882. With the Chinese immigrant population halted, the labor union vented their "economic threat" beliefs against other immigrant groups (such as Japanese immigrants), which led to the passage of the 1907 Gentlemen's Agreement that terminated the Japanese immigrant flow into the U.S. (Muller and Espenshade, 1985).

The U.S. public, however, adopted a more liberal attitude toward immigration after World War II (Simon, 1985). The passage of the amendments to the Immigration and Nationality Act of 1952 mirrored this less restrictive attitudes toward immigrants. The 1972 amendments eliminated the system of capping immigrant visa allocations with quotas based on immigrants' country of origin, giving more chances for immigrants from immigration-heavy areas to be admitted to the U.S. Harwood (1986) attributed the relaxation of restrictionist attitudes toward immigrants to growing worldly acceptance of America as a superpower that has the normative

responsibility to uphold human rights in a way to accept immigrants from around the world and to reduce racial prejudice.

However, the liberalization of public opinion on immigration was short-lived, as a wave of "neo-restrictionism" reemerged in the late 1970s. Two-thirds of respondents to a national survey in 1981 and a Roper poll in 1982 said they wanted to reduce levels of legal immigration; the number of respondents who indicated restrictive attitudes toward immigration was twice as large as it was in a Gallup survey conducted in 1965. (Harwood, 1986). In 1990, more than three-quarters of respondents to a Roper poll said they did not want immigration levels to increase, and nearly half said they should be reduced (Day, 1990; Simon and Lunch, 1999). In contrast, the proportion of the public favoring immigration increases has remained consistently low, typically hovering around 10%. (Fetzer, 2000).

Surveys suggest that public sentiments against immigration indicated their fear that immigrants would bring economic and cultural threats to the U.S, and the latter seemed to overweigh the former. (Citrin et al., 1997; Sniderman et al., 2000; Scheve and Slaughter, 2001). Scholars have found that anti-immigration rhetoric among the public often has group overtones, as people tend to make a distinction between "bad" and "good" immigrants on the basis of race and ethnicity. In particular, people tend to identify Hispanic immigrants or immigrants from stigmatized groups as "bad" immigrants, as opposed to those from more affluent European countries like Ireland or Poland. (Huntington, 2004).

Politicians have always catered to the general public's sentiments and concerns that stem from the perception that immigration poses economic and cultural threats to the U.S. when proposing and passing anti-immigration legislation (Hainmueller and Hopkins, 2014). The

Senate Bill 1080 and the House Bill 2281 of the state of Arizona are two examples of this. The former mandates that police check the citizenship status of anyone whom they suspect of living illegally in the United States, while the latter seeks to eliminate ethnic studies from public school curricula, thereby reducing opportunities for non-immigrant citizens to learn about immigration history and the challenges and plights faced by immigrants. In more recent years, the Trump administration adopted a hostile stance against both legal and illegal immigration. Against legal immigration, Trump cut the annual admission quota of refugees in half and de-staffed United States Citizenship and Immigration Services (USCIS) agencies (Pew Research Center, 2020). On the other hand, Trump's "zero-tolerance" policy against illegal immigration led to the separation of families at the border and the detainment of children in cages, which further ignited public debate about immigration (Pew Research Center, 2020). The outlook for immigrant populations in the U.S. is becoming increasingly dire.

Long-term factors that shape immigration attitudes

From past to present, scholars have found two long-term factors in the general public perceiving immigrants as harmful to the United States: an individual-driven factor based on the economic threats that the immigrant population entails, and a group-driven factor that stems from ethnocentrism (Hainmueller and Hopkins, 2014).

There are two broad categories of economic threats. One thread of argument lies in the aggregate fiscal burden caused by the welfare reliance of immigrants. The second component of this argument is associated with market competitions that stem from the limited job opportunities under which the immigrants need to compete with native citizens. (Hainmueller and Hopkins, 2014). The former can be characterized by beliefs that immigration hurts the national economy

since low-skilled immigrants could increase fiscal pressure, resulting in increased taxes or reduced per capita transfers for public spending (Hanson et al. 2007). According to Calavita (1996), the concerns over fiscal pressure drove up public support for California Proposition 187, a controversial bill that aims to eliminate the social beneficial services that immigrants are entitled to receive within the state.

The labor market competition hypothesis, on the other hand, suggests that opposition to immigration will be the most intense among native citizens whose jobs are at the brink to be "taken" by qualified immigrants. Following this line of argument, Scheve and Slaughter (2001) observe that low-wage workers are the most opposed to immigration, since they face greater market competitions caused by the inflow of working-class immigrants. However, Hainmueller and Hiscox (2010), using a survey experiment, found very limited support for the labor market competition hypothesis, concluding that the general public prefers high-skilled immigrants and that hostility based on job competition may only apply to a small subset of native citizens within specific occupational strata.

Nelson and Kinder (1996) first contended that the socio-cultural argument of "immigration threat" stems from the group-centric logic. Specifically, scholars found that immigration attitudes are largely rooted in group identity and prejudice (Kinder, 2003). The theory that best explains the relationship between immigrant populations and native citizens is based on the conflict between "out-group" and "in-group."

Blumer (1958) introduced the group position theory, which asserts that intergroup hostility is not solely the result of negative affect or stereotypes, despite the fact that these concepts play a significant role. Blumer (1958) identified the desire to maintain or increase the relative status and

power of the in-group vis-à-vis relevant out-groups as the primary motivation for prejudice. Following this line of reasoning, scholars have proposed that the concept of ethnocentrism, which is able to predict opposition to immigration in various contexts (Sniderman and Hagendoorn, 2007).

Following the prior argument on ethnocentrism, Kinder and Kam (2009) showed that ethnocentrism predisposes White Americans to the belief that, while the needs of "in-group" White immigrants should be prioritized, immigration involving other races and non-White countries of origin is "foreign" and should be curtailed. Other scholars have found that language differences, race, cultural differences, and differing religious beliefs could all be factors that activate ethnocentric concerns and affect native citizen opinions about whether immigrants are likely to adapt to a new identity or elevate the cultural heterogeneity of their destination (Sinderman and Hagendoorn, 2004; Ford, 2011; Ford et al., 2012; Hainmueller and Hangartner, 2013; Hainmueller and Hopkins, 2014).

In addition to the "intergroup" dynamic, recent scholars have determined that there is possibly a dynamic between "in-group" and "in-group," dependent on the racial hierarchy and on the level of identification with the "in-group" that the member has. Masuoka and Junn (2013) maintained that different sense of "belonging to the nation" solidifies the lower position on the racial hierarchy that American White citizens may impose on immigrants. Cater and Pérez (2015) indicated that people who belong to a higher position in the racial hierarchy tend to form more exclusive patterns in rejecting people of minority ethnicities in an immigration context.

Long-term memory activated by situational triggers – framing

While the perception that immigration could bring economic and cultural threats is shared among the general public, scholars have suggested that these shared "threat perceptions" are stored in people's memory and can be reactivated by situation triggers when they are exposed to relevant information; this effect is called "framing" (Iyengar and Kinder, 1987). Discussion on the mechanism of framing has evolved, and scholars have come up with at least three models on framing.

The first, the "cognitive accessibility" model, argues that framing activates ideas that have been stored in memory and rewinds them to the "top of the head." Scholars argue that once the memory has been activated by frames, it becomes more accessible to be retrieved and relied on in the subsequent decision-making processes, thereby shaping public opinions (Iyengar and Kinder, 1987; Kinder and Sanders, 1996; Valentino, 1999; Mendelberg, 2001).

Nelson and colleagues (1997) introduced the "relative importance" model, arguing that framing has an effect by altering the perceived relative importance of different aspects of an issue, thereby shaping people's overall evaluation.

More recent scholarship, like that of Lodge and Taber (2005), has introduced the "hot cognition" model, contending that framing triggers different types of "affects" or emotions based on the audience's past attitudes and evaluations of the issue. This initial emotion that people form at the onset of their exposure to framing, in turn, biases the audience's information processing process. (Lodge and Taber 2005). Following this argument, Chong and Druckman (2007) argued that before the framing effects takes place, the frame needs to generate enough activation potential that the stored aspect of consideration will be retrieved from long-term

memory and reinforced by the frames to which people are exposed; the emotion evoked by frames may provide this activation potential.

Relatively more scholars rely on the third model, in which framing triggers emotion. Scholars have found two emotional systems in this framing process. Marcus, Neuman, and Mackuen (2000) introduced the "disposition system," according to which individuals form enthusiasm toward frames based on the positive feedbacks they receive from the frames. In contrast, Brader, Valentino, and Suhay (2008) developed the "surveillance system" model, which induces anxiety in response to potential threats depicted in frames. Anxiety prompts the audience to actively seek out information in their memory, thereby increasing the likelihood of learning and persuasion. In addition, since emotions are motivational impulses (Lodge et al., 2006), they increase the likelihood that individuals will engage in political activity (Brader, 2005, 2006; Valentino et al., 2006).

Racial priming in general and in the immigration context

Scholars have also paid attention to how framing takes effect when combined with a racial overtone. Racial priming involves a subtle reference to a group in political messaging and information, which reactivates the audience's memory of the presence of an "out-group" and causes the audience's consideration and subsequent evaluation to depend on the group-based perception. (Nelson and Kinder, 1996; Gilens, 1999; Mendelberg, 2001; Valentino, Hutchings, and White, 2002). Scholars also actively connect literature on racial priming to prior discussion of general framing, as racial priming involves the implicit mentioning of group as a factor for consideration in public opinion, and people, after receiving the information, tend to give this

particular consideration (pertaining to groups) more weight in their subsequent decision-making processes, which fits into Nelson and colleagues' (1997) findings on framing theory.

Mendelberg (2001) provided a comprehensive framework for explaining the effects of racial priming messages by synthesizing prior theory on racial priming. Her argument consists of three parts. First, while White Americans are aware of the "norm of equality," they become dissatisfied and resentful of other minority groups, such as Blacks, who do not adhere to the American creed of individualism and hard work. Second, although people no longer explicitly discuss about racial resentment, certain racial schemas that are stored in people's memory can be made more accessible by an exposure to racial priming for an automatic use in subsequent political decision-making process. Third, although the majority of people would reject racial appeal messages immediately due to their violation of the "norm of equality" they believe in, they would not be able to recognize the racial messages as violations if they are subtle enough, allowing racial priming to sneak in and exert its influence. Following this line of reasoning, Valentino, Hutchings, and White (2002) employed an experimental design and proposed that an exposure to subtle negative group cues can activate people's evaluation based on racial attitudes and affect subsequent political judgments.

Scholars have found that racial priming that involves subtle group cues can be transferrable to the context of immigration. Immigration scholars build upon prior framing theory and the racial priming model, delving into the mechanisms and effects of how immigration framing. Following this line of thought, Valentino, Hutchings, and White (2002) utilized an experimental design and proposed that exposure to subtle negative group cues can activate people's evaluation based on racial attitudes and affect subsequent political judgments,

and the retrieval of racial schemas conform to the cognitive accessibility models, meaning that the racial schemas must exist beforehand in order to be retrieved.

Taking a step further, Brader, Valentino and Suhay (2008) indicated that anxiety is retrieved and reinforced in the process of racial priming, especially in a racial priming message that implicitly mentions an out-group. Their argument has three components. First, immigrants being non-Whites, combined with their status as immigrants, can lead to White citizens' anxiety. Second, racial or ethnic cues in framing activate White citizens' anxiety and cause changes in opinion and behavior that are independent of changes in beliefs regarding the severity of the immigration problem. Third, the triggers for anxiety may or may not correspond to realistic or legitimate threats.

Others have observed that the negative sentiment and emotions triggered by racial priming that involves implicit group cues are mainly directed at the Latinx group in the U.S. (Pérez, 2010). Similarly, Valentino, Brader, and Jardina (2012) found that Latinx immigrants seem to provoke significantly more concerns than immigrants from Eastern Europe and Africa. In addition, Valentino, Brader, and Jardina (2012) determined the general immigration image White people think of when exposed to group cue messages – when the group is not specified in the political message, white people tend to "conjure up" a Latinx image in their mind.

On the question of racial priming under the immigration context, scholars have found race to be a mediating factor of the priming effect. Scholars perceive a need to explore the mediating effects of race, as they observe that Black people also show concerns regarding competition with Latinx immigrants (Gay, 2006) and a slightly higher tendency than White people to indicate that Latinx immigrants are "taking the job away from American citizens" (Doherty, 2006).

The perception of psychological connectedness as a group and the decision-making based on the shared consciousness (i.e., group utility heuristic) have been found to be crucial in explaining the liberal orientations that Black American hold on a variety of political issues (Dawson, 1994; Tate, 1993). Following this line of argument, scholars have examined whether this shared group consciousness is also applicable to Black opinions regarding immigration, when they are posed in a position against another minority group. Ethnocentrism-motivated sentiments may also apply to non-White groups: Bobo and Hutchings (1994) demonstrated, for instance, that in addition to Whites, minority groups such as African Americans, Hispanics, and Asian Americans exhibit a moderately high tendency to perceive intergroup conflict as zero-sum due to their shared group grievance, and this zero-sum perceptions are significantly linked to an increasing level of support for restrictive policies among Black and White citizens (Bobo and Hutchings, 1996). However, ethnocentrism among Black groups has certain limitations. For instance, White (2007) found that among Blacks, explicit references to race take effects more reliably than implicit reference, as the former activates racial in-group identification while the latter was moderated by the negative representation of the in-group.

Effects of negative versus positive framing

Negative framing reinforces negative attitudes toward immigrants, strengthening the image of immigrants as newcomers who threaten American economic well-being and cultural solidarity (Lecheler et al., 2015; Heyer, 2018; Van Kingeren et al., 2015). In a recent publication, Liu (2022) measured public attitudes toward immigrants by using eight typical items that were modified from previous studies examining which issues related to immigration concerned people the most (de Vreese and Boomgaarden, 2005; Hainmueller and Hiscox, 2010; Hooghe and de

Vroome, 2015). Respondents were asked to indicate their level of agreement on seven-point scales, with statements such as "immigration undermines U.S. labor market" and "immigrants threaten the American way of life" (Liu, 2022). Liu (2022) found that people exposed to immigrant threat frames provided more negative responses.

The cultivation of anti-immigrant sentiment elicits harmful behavior and reduces public support for policies favorable to immigrants (Seate and Mastro, 2017), for example, refugee admission (Liu, 2022). In terms of public policy, threatening media frames play a key role in shaping public opposition to immigration resettlement and more lenient immigration policies, such as the Dream Act or DACA (Flynn and Horiuchi, 2017; Haynes et al., 2016; Shanahan et al., 2017). Moreover, negative frames often lead to more restrictive opinions on immigration, such as increased support for deportation policies and further restrictions on immigrant voters (Haynes et al., 2016; Udani and Kimball, 2018). Simonsen and Bonikowski (2022) found that people who are exposed to the framing of immigrants as economic and cultural threats tend to distance themselves from the parties and politicians that hold competing opinions to these frames—the Democratic Party in the U.S. context.

While negative framing relies on anxiety to have an effect, positive framing resorts to activating people's enthusiasm toward a certain subject (Valentino et al., 2008). Commonly employed positive framing tactics include victimization and benefit frames. The victimization frame often portrays immigrants or refugees as passive victims seeking help in democratic nations due to persecution in their home country or due to external circumstances beyond their capabilities (Esses et al., 2013; Greussing and Boomgaarden, 2017; Ramasubramanian and Miles, 2018). Benefit frames, on the other hand, portray immigrants as beneficial to society by emphasizing their economic and cultural benefits (Hayne et al., 2016).

Despite the efficiency of positive frames in generating positive attitudes, scholars generally hold that frames are less effective in motivating subsequent changes in political attitudes, including changes in policy support (Hayne et al., 2016). Ferwerda, Flynn, and Horiuchi's (2017) study on refugee resettlement policy emphasized that positive frames did little to boost support for the program, while threatening media frames played a key role in shaping public opposition.

Relative effectiveness of different types of framing

At this point, I have covered the scholarly debate on the mechanisms of racial priming and their effects on immigration attitudes, support for policies, and willingness to undertake political actions, as well as the phenomenon that negative immigration framing is more effective than positive immigration framing. However, the reason negative framing is more effective is relatively understudied in the field of racial priming. Thus, we may want to take a step back from the racial priming literature and look at the general framing literature, in which scholars have proposed reasons for the relative effectiveness of different types of framing.

Negative framing is more effective

Scholars have argued that negative information is more informative since it points out the potential costs of different courses of action, and people are more inclined to accept it because they are motivated to avoid costs (Geer, 2006; Jones and McGills, 1976; Kaheneman and Tversky, 1979; Lupia and McCubbins, 1998). Negative framing of immigration, therefore, better captures attention than positive framing.

Chong and Druckman (2007) defined the "strength" of the frames as associated with the persuasiveness of the frames. Meanwhile, they find that negative framing as the stronger can

leave a stronger impression among an audience and be more persuasive, as negative framing captures public attention better and often can overweigh competing frames.

Source mediating effect

In addition to its content, scholars have focused on the characteristics of framing, such as how the credibility of a source can moderate the effects of framing. Several influential studies of media effects (e.g., Iyengar, 1991; Zaller, 1992) provided a similar portrait of the general public. The central premise of the argument is that citizens are "lazy organisms" (McGuire, 1969) who seek to expend the least amount of mental energy possible when processing political messages.

Zaller (1992) did concede that citizens could resist persuasion under specific conditions. Specifically, he asserted that citizens tend to reject arguments from sources with low credibility while accepting arguments from sources with high credibility. In his view, partisanship or ideology is typically a factor in determining one's credibility. For instance, citizens who identify as Democrats should accept arguments from Democratic sources while rejecting arguments from Republican sources.

Subsequent scholars corroborated his findings. Druckman (2001) indicated that framing effects become stronger when the citizens find the sources to be reliable and trust-worthy. Similarly, Brewer's (2001) study suggested that active processing of frames may limit the power of elite framing: frames only produced effects among those who "judged the frame to be strong." In an examination of the different "mental routes" that an audience relies on when processing frames with a neutral or biased source, Turner (2007) found that individuals whose ideologies were most at odds with the presumed ideology of the media source perceived the contents as ideologically biased without carefully examining them. Instead of relying on the information, the

audience may take a "peripheral route," using heuristic cues to form a judgment of the content (Turner, 2007).

Moderators

In addition to the characteristics of the framing itself, the characteristics of the audience, which scholars call "moderators," also matter: individual predispositions such as values (Druckman, 2001; Barker, 2005; Lau and Schlesinger, 2005; Shen and Edwards, 2005) and knowledge (Kinder and Sanders, 1990; Druckman and Nelson, 2003). If people exposed to framing have a strong predisposition that is opposed to the frame, framing effects will be reduced; on the other hand, people are susceptible to framing about a particular issue when they have yet to form an exact attitude or a settled predisposition. (Chong and Druckman, 2007).

Knowledge is a relevant moderator. However, studies have reported inconsistent findings. While some have found stronger framing effects among individuals with less knowledge about the issues (Kinder and Sanders, 1990; Haider-Markel and Joslyn, 2001), others have reported the opposite (Nelson et al., 1997). Druckman and Nelson (2003) argued that scholars failed to observe a consistent finding because they did not control for the predispositions of knowledgeable individuals, which are often quite strong. After controlling for those predispositions, Druckman and Nelson (2003) foundthat knowledge enhanced framing effects because it makes the information featured in a frame more accessible and easily interpreted and comprehended by an audience.

Understudied areas in racial priming and the potential contribution of this thesis

Racial priming and the relative effectiveness of framing are the two "big questions" that political communication scholars are focused on. The underlying factor that drives the effects of racial priming lies in the implicit presence of "group cues" in political messaging. In the context of immigration, "group cues" activate latent perceptions of immigrants as threats—either economically or socio-culturally—and this process leads to an intensification of anxiety toward immigration populations. This anxiety then will entail more hostile immigration opinions, less support for immigration-friendly policies, and political actions against immigration.

Another set of political communication literature on framing has identified mechanisms explaining the relative effectiveness of different types of framing. Scholars have found that framing effects are subject to the following factors: the characteristics of the frame, the mediating effect of the source, and the presence of moderators among the audience. The graph below summarizes scholarly findings on general framing effects.

Figure 1: Framework of general framing theory
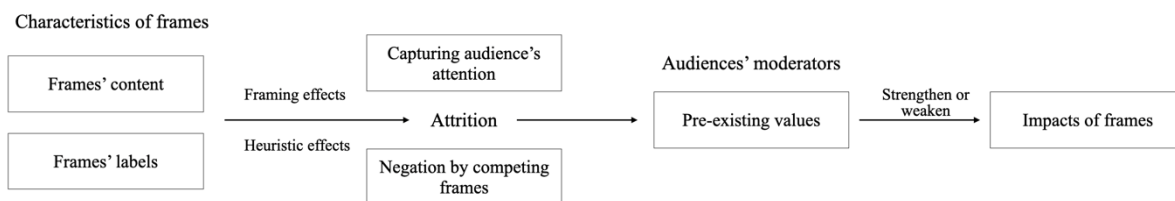
Note: the figure above summarizes the working mechanisms of the general framing theory discussed above. The figure discusses when the content of the frames, source of the frames, and the moderator mediating effects come in throughout the entire process in which a general framing takes effects.

There is a gap between the two fields of literature: the racial priming literature focuses mainly on the effect of negative framing and the mechanisms, while there is a need to explore

other types of immigration framing given the increasing salience of immigration issues in society and the proliferation of different portrayals of immigration using framing from multiple sources of political messaging. Meanwhile, the framing theory literature only discusses framing effects under the context of general issues in the U.S. without incorporating the racial overtones of these issues, which has become another important dimension to consider in the process employed when people evaluate political issues (Hutchings and Valentino, 2004).

Recent scholars have started incorporating the framework of general framing into the immigration priming research agenda. For instance, comparing negative and positive immigration framing, scholars generally hold that frames are less effective in motivating subsequent changes in political attitudes, including changes in policy support (Hayne et al. 2016). Johnston, Newman, and Velez (2015), on the other hand, focused on personality as a moderator of the effects of immigration framing and found that ethnic change polarizes citizens according to personality traits, as those averse to uncertainty feel a heightened cultural threat from ethnic change, while those open to uncertainty feel less threatened. They suggested that traits related to uncertainty aversion may be also applicable to the mediating effects of political ideology on immigration framing.

In this thesis, I also seek to reconcile the gap between the two areas of literature—racial priming and general framing. I test whether current findings from the general framing literature hold in the immigration context when a more subtle racial priming is involved. In particular, using a survey experiment, I examine the following three questions in the context of immigration: First, whether negative framing is more effective than positive framing. Second, whether framing by neutral news media is more effective than framing from a partisan source, since audiences tend to perceive the former as more credible than the latter. Third, how political ideology can

serve as a moderator that mediates the effects of immigration framing. If these hypotheses hold, this suggests that framing theory is applicable to the context of racial priming, which reconciles the gap between these two areas of literature.

Theory and hypotheses

Two pillars of my theory – racial priming and general framing theory

The existing literature on racial priming is based on the theoretical framework established by Mendelberg (2001). Particularly, scholars rely on Mendelberg (2001)'s conclusion that only subtle group cue can have an effect on the audience, as only implicit racial priming can "sneak in" people's guard that is informed by their belief in racial equality, when the audiences are dissatisfied about the potential threats that "out-groups" could bring in. Valentino, Hutchings, and White (2002) find corroborating evidence for Mendelberg's framework through an experiment. Subsequent research, such as that of Brader, Valentino, and Suhay (2008), employs Mendelberg's (2001) framework and takes one step further by demonstrating that subtle racial priming heightens anxiety among white citizens.

Similarly, my theory is founded on Mendelberg's (2001) framework. In the meantime, the general framing framework proposed by Chong and Druckman (2007) becomes another pillar of my theory. In particular, I intend to incorporate an important component of Chong and Druckman's (2007) model - the factors that could potentially influence the framing effects, such as the tone of the frames, the content of the frames, the source of the frames, and the mediating effects of moderators - into my argument, which is based on Mendelberg (2001)'s argument regarding the priming effects of implicit racial cues. There is a need to do so because my theory's starting point, or Mendelberg (2001)'s argument when it was proposed, only examines the overall

priming mechanisms and does not provide an explanation for how these characteristics of the frames and their audience could cause the framing effects to change. By connecting the two models, I hope to demonstrate that Mendelberg's (2001) model can be used to assess the relative effectiveness of immigration frames, and that the general framing theory still holds under the immigration context when an implicit racial overtone is at play, thereby bridging the gap between racial priming theory and general framing theory.

Negative framing vs. positive framing

Framing theory scholars argue that negative framing is more effective than positive framing since the former stands out as more novel, therefore capturing attention better (Lau 1982, 1985; Fiske 1980; Chong and Druckman, 2007; Haynes et al., 2016). Negative framing points out the potential costs of different courses of action, and people are more inclined to accept them because they are motivated to avoid costs (Geer 2006; Jones and McGills 1976; Kaheneman and Tversky 1979; Lupia and McCubbins 1998). The longer people' attention has been retained by the frames, the more information that the frames are able to transmit to the audiences (Heyer, 2018). Negative frames, therefore, will appear more persuasive and outweigh other types of frames people receive under a competitive environment (Sniderman and Theriault, 2004).

I argue that this framework can be applied to the context of immigration, where subtler forms of racial priming are in play. When white citizens are exposed to negative framing regarding immigration, they conjure up an "out-group" image. In the meantime, the information provided by the negative framing that this "out-group" image may pose threats to the United States and to them activates their latent negative perception of the out-group. As this stored memory is reactivated by this subtle, as opposed to explicit, group cue, the audience develops

anxiety, which encourages them to seek more information from the negative framing's content, resulting in a more powerful framing effect. Ultimately, they rely on the information they obtain from the framing, along with their emotional response, to make subsequent decisions.

When people are exposed to a positive framing that includes a subtle racial cue, the subtle racial cue will still evoke the latent "out-group" image as a threat stored in people's memories. The audience, simultaneously, receives the positive messages conveyed by the positive framing. I argue that positive messages counteract with the reactivated memory of out-group resentment, thereby diminishing how positive messages can elicit emotions. The positive emotions, or enthusiasm, induced by positive framing counteract the anxiety made available by the subtle racial cue, resulting in a mediated, weaker emotional response to the framing. This mediated emotion does not result in the same level of information-seeking motivations as the negative framing, resulting in a diminished framing effect. The following figure depicts the procedure.

Figure 1: Negative framing of immigration vs. positive framing of immigration
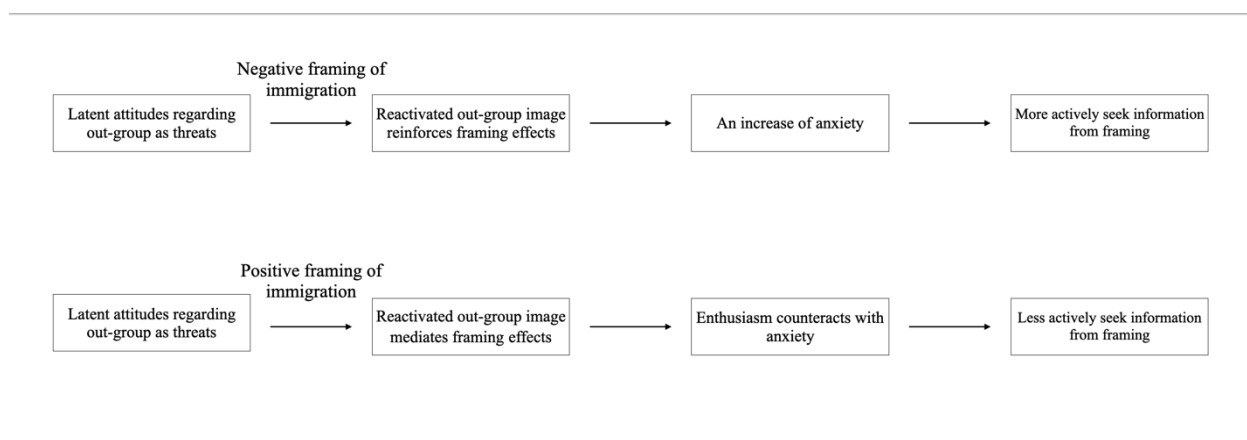
Note: the figure above illustrates my proposed mechanisms of negative framing of immigration and positive framing of immigration from neutral sources. The figure briefly explains the logic why negative framing of immigration leads to a stronger framing effectiveness, and positive framing leads to a weaker framing effectiveness.

Based on the above, I hypothesize:

H1: Negative framing of immigration has a larger framing effect on people's attitudes toward immigration, supportiveness for immigration policies, and willingness to act on immigration-related issues than positive framing.

Economic framing vs. cultural framing

Since the dichotomy between economic-driven and cultural-driven sentiments from native citizens (i.e. economic threats and cultural threats) is specific in the context of immigration, is unique to the context of immigration, the question of whether economic or cultural framing has stronger framing effects does not typically constitute a part of general framing scholars' research agenda. Although immigration scholars have recently discovered that culturally-motivated sentiments rooted in the ethnocentric beliefs of natives appear to outweigh economically-motivated sentiments, they have yet to consider how this dominance of cultural beliefs can shape framing effects when either of the two beliefs is incorporated into immigration frames.

I argue that cultural framing of immigration is more effective as it better helps "conjure up" the "out-group" image stored in people's memory. While cultural framing of immigration normally makes the argument that immigrants as "out-group" brings cultural heterogeneity into the U.S., which weakens the U.S. cultural cohesiveness, economic framing of immigration tends to focus more on aggregate data regarding the economic costs entailed by immigrants, which appear more remote and disconnected to concrete "out-group" images. As the cultural framing better re-activates people's latent resentment toward the out-group, it more effectively evokes anxiety and motivates people to undertake active information-seeking. Therefore, I hypothesize:

H2: Cultural framing of immigration has a larger framing impact on people's attitudes toward immigration, supportiveness for immigration policies, and willingness to act on immigration-related issue than economic framing.

Neutral framing vs. partisan framing

General framing scholars have argued that the credibility of source has strong mediating effects on the framing effects (Zaller, 1992; Druckman, 2001; Brewer, 2001). In particular, people develop a "peripheral route" of information processing when they are exposed to a source that is perceived to be biased, so that the audience tend to rely on the source as a heuristic to interpret the frames rather than the information that the frames convey (Turner, 2007).

I argue that a less reliable or seemingly objective source influences the racial priming effects in the context of immigration. Let's suppose that individuals are exposed to a negative framing of immigration and are aware that the framing originates from a partisan source (like the Republican Party). The subtle racial cue in the negative framing will still allow them to conjure up the out-group image. However, because they are aware that the framing comes from a biased source, they may cast doubt on the reliability of the message, therefore forming less anxiety in response to the message. Due to a lower level of emotional response, they will engage in the information-gathering process less actively. In the meantime, as they collect information from the frames, they will be wary of the information and keep cautious, as they are aware that the information may be biased. Due to the same mechanism, positive framing from a partisan source will also result in weaker framing effects. The process is illustrated in the figure below.

Figure 2: Partisan framing mechanisms
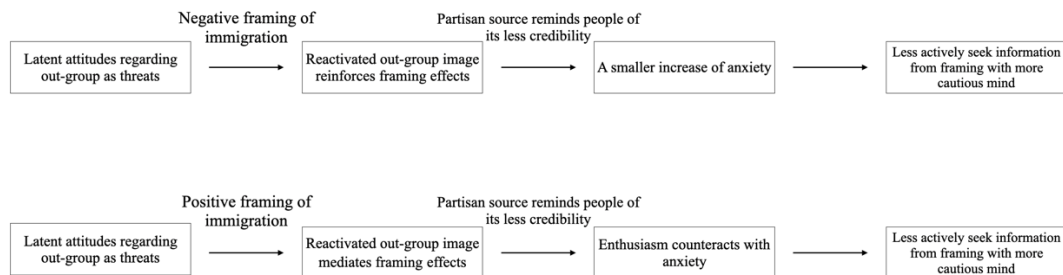
Note: the figure above illustrates my proposed mechanisms of negative framing of immigration and positive framing of immigration from partisan sources. The figure briefly explains the logic why partisan framing, either negative or positive, leads to a weaker framing effect.

Based on the above, I hypothesize that:

H3: Compared to frames from partisan sources, the frames from a neutral source tend to have a larger framing impact on people's attitudes toward immigration, supportiveness for immigration policies, and willingness to act on immigration-related issue

Political ideology's mediating effects on framing

General framing scholars argue that the framing effects can be mediated by moderators, like individual dispositions (Druckman, 2001; Barker, 2005; Lau and Schlesinger, 2005; Shen and Edwards, 2005). If people exposed to framing have a strong predisposition that is opposed to the frame, framing effects will be reduced; on the other hand, people are susceptible to framing about a particular issue when they have yet to form an exact attitude or a settled predisposition. (Chong and Druckman, 2007).

Political ideology is often a reliable predictor of people's predispositions toward immigration issue (Hainmueller and Hopkins, 2014). Based on this finding, I argue that political ideology has a mediating effect on the effects of immigration framing. Since conservative-

leaning people and liberal-leaning people may have different response mechanisms to the frames, it is necessary to use two models to examine their response patterns respectively.

Conservative people may have a greater initial level of resentment toward out-group. Therefore, a negative framing tends to effectively re-activate their perceived image of out-group stored in their memory and evoke anxiety. Meanwhile, they will regard the negative framing as more credible as the covered information aligns with their beliefs. The combination of anxiety and perceived credibility of the framing will motivate conservative people to seek information from the frame, thus leading to a greater framing effect. On the other hand, when conservative people are exposed to a positive framing, the positive message may be outweighed by the racial resentment stems from the out-group image that the subtle racial cue conjures up. Therefore, conservatives do not form a sense of enthusiasm in response to positive framing. Meanwhile, since positive framing message does not align with their beliefs, they tend to take additional precautions against positive framing message during the subsequent information-seeking process. Therefore, conservatives do not tend to find positive framing as convincing. The following figure illustrates the process.

Figure 3: Framing mechanism among conservative people
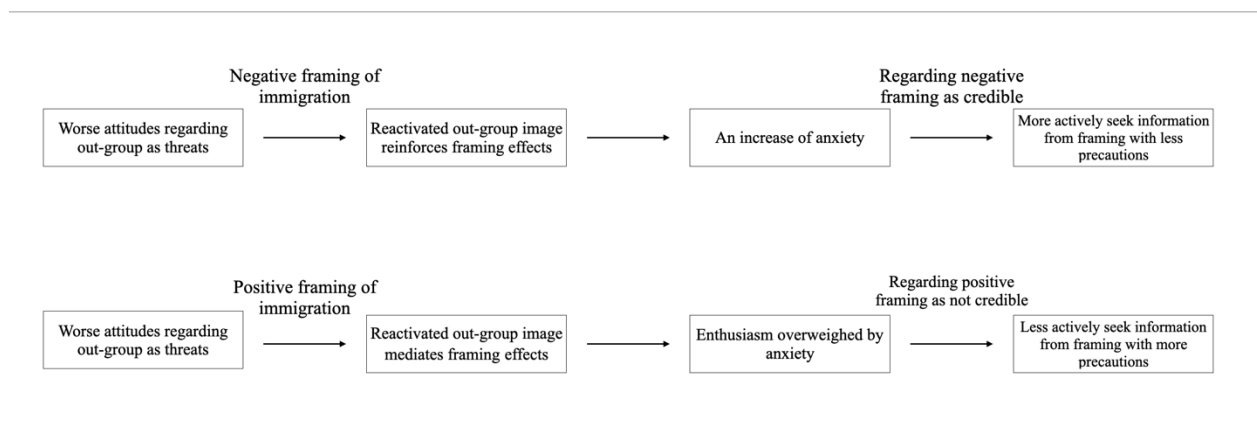
Note: the figure above illustrates my proposed mechanisms of how negative and positive framing take effects among conservative respondents. The figure explains why negative framing leads to a stronger framing effect, and positive framing leads to a weaker framing effect among conservative people.

Similarly, I argue that conservative people tend to be more active and less cautious in information-seeking in response to Republican framing, while they tend to be less active and more cautious in information-seeking in response to Democratic framing. Based on the above, I hypothesize:

H4.a: Negative frames are more effective among people who self-identify as conservatives; positive frames are less effective among them.

H4.b: Republican frames are more effective among people who self-identify as conservatives; democratic frames are less effective among them.

On the other hand, liberal people tend to have better initial attitudes toward immigrants. It would be harder for negative framing to re-activate the racial resentment among them, so that they will display a less increase in the level of their anxiety. Meanwhile, liberal people tend to regard negative framing as less credible as the message does not align with what they think. With the two forces combined, liberal people tend to seek information from negative framing less actively with more precautions. By contrast, when exposed to positive framing, I argue that liberal people tend to form a stronger enthusiastic attitude than anxiety. Given that they tend to find the positive framing as more credible, they tend to more actively engage in information-seeking with less precautions. The following figure illustrates the mechanisms I discussed above.

Figure 4: Framing mechanism among liberal people
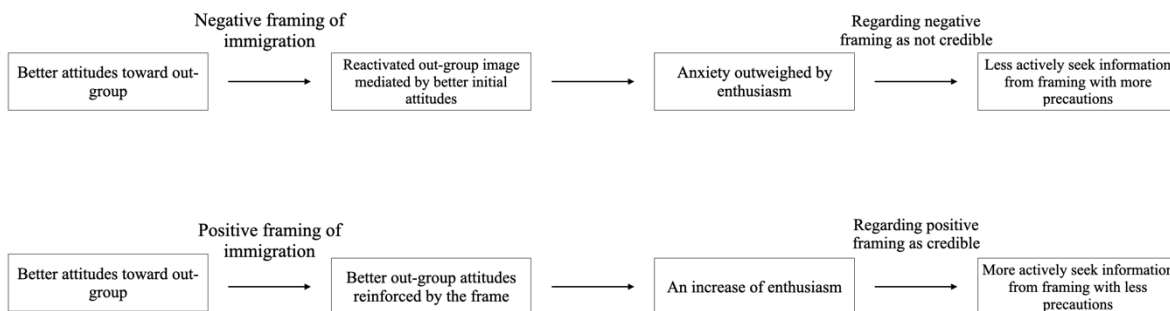
Note: the figure above illustrates my proposed mechanisms of how negative and positive framing take effects among liberal people. The figure explains why negative framing leads to a weaker framing effect, and positive framing leads to a stronger framing effect among liberal people.

Following my argument above, I assume that liberal people tend to be more active and less cautious in information-seeking in response to Democratic framing, while they tend to be less active and more cautious in information-seeking in response to Republican framing. I therefore hypothesize:

H4.c: Positive frames are more effective among people who self-identify as liberals; negative frames are less effective among them.

H4.d: Democratic frames are more effective among people who self-identify as liberals; Republican frames are less effective among them.

Research Design

Overall design

This research uses a randomized survey experiment design to test the hypotheses. The survey comprises closed-end questions. The unit of analysis is the individual survey respondent, part of a sample of US citizens. The survey is distributed via the online platform Lucid. Since this study uses treatment groups, dividing the total sample into smaller subsamples, the sample

size is a significant factor. Power calculations were conducted to determine a minimum required sample size of 1,800 respondents.

Research design and setup

Each respondent receives a treatment that includes a label and a vignette frame. The label indicates the source from which the vignette frame originates, and the vignette frame is a brief article describing immigration in a particular tone. The experiment consists of one baseline group and eight treatment groups, as shown in the below **Table 1**. The respondents in the baseline group do not receive any treatment, and they are simply asked to complete the survey. The eight treatment groups reflect a 2 by 4 designs: the "2" stands for 2 types of sources – neutral or partisan, and the "4" represents 4 types of immigration framing – negative economic framing, negative cultural framing, positive economic framing, and positive cultural framing. The respondents are randomized into one of the nine groups (eight treatment group plus a baseline group), and Table 1 also suggests the number of respondents in each group.

Table 1: General experimental set-up and the number of respondents randomly assigned into each group

Types of framing			Number of respondents
Neutral framing	The Associated Press	Negative economic framing	191
		Negative cultural framing	188
		Positive economic framing	201
		Positive cultural framing	192
Partisan framing	The Republican Party	Negative economic framing	190
		Negative cultural framing	192
	The Democratic Party	Positive economic framing	184
		Positive cultural framing	191

No framing (baseline)	230

Vignette treatment

Two sentences are placed above the frame as a prompt. The first sentence introduces the source, and the second states that the frame represented the opinion of the source. In real-world settings, a variety of sources can be identified to frame an issue. This research simplifies the real-world setting significantly as only three sources of frames are included, with only one shown to each respondent in one vignette.

In the experiment, I choose The Associated Press to represent the neutral news media. Based on the website Media Bias Fact Check, among the influential news media, three media sources – New York Times, the Reuters, and the Associated Press - fall in the "least biased" range, and the Associated Press is rated as the most neutral among the three (Media Bias Fact Check, 2022). Individual actors were omitted for two reasons. First, it is unlikely that respondents would have been familiar with the opinions of any specific actors. Therefore, including individuals can have caused confusion. Second, since individuals' opinions are not highly representative of party opinions, it seems inappropriate to use the former as heuristics with which the readers can use to form a shortcut to the latter. Below is the description of the opening sentences:

Below is an excerpt from the Associated Press/the Democratic Party/the Republican Party that describes a recent study of immigration. The excerpt represents the opinion of the Associated Press/the Democratic Party/the Republican Party.

Economic vs. cultural frames

The description of the frames follows the opening sentences. The two negative frames used in this study are based on two widely accepted hypotheses on the types of political arguments that influence anti-immigration attitudes – the economic threat story and the cultural threat story.

For comparison with the negative framing, counter-cases are also included with a positively framed economic/cultural dichotomy. The two positive frames respectively portray immigrants as economically and culturally beneficial.

The negative economic frames consist of four sentences: an opening sentence that introduces the topic, a concluding sentence, and two body sentences derived from the most widely cited models of economic concerns—labor competitiveness and fiscal burden (Hainmueller and Hopkins, 2014). The first is based on labor market competition models that indicate that immigrant workers will take native people's job opportunities and drive down wages (Scheve and Slaughter, 2001; Mayda, 2006). The second is founded on the concept that lower-skilled and jobless immigrants rely on welfare and, consequently, burden the host country financially (Hanson et al., 2007; Facchini and Mayda, 2009). These two body sentences form a frame for the overall argument that immigrants are a burden on the national economy. Below is a description of the negative economic framing:

Subject: Immigration hurts the economy of the United States

Immigration hurts the economy of the United States. First, 54 percent of adult aliens and 61 percent of all immigrants entered through family member's visa are low-skilled and will be in direct competition with those workers who are currently struggling. Second, these jobless immigrants will likely end up on federal or state benefit programs, leading to a net loss to the public fiscal condition resulting from a large pool of unskilled immigrants overwhelms any economic benefit that they provide. Therefore, immigrants pose significant economic burden to the United States.

The cultural frame then has an identical paragraph structure to the economic frame. The two body sentences are based on a model in which the cultural concerns of native citizens stem from ethnocentric thoughts, which underlies natives' restrictive views toward immigration (Hainmueller and Hopkins, 2014). According to Hainmueller's and Hopkins' (2014) summary of

the extant literature, two assumptions contribute to this ethnocentric view: first, many immigrants have a low language proficiency, leaving them somewhat disconnected from the natives; second, immigrants harm the cultural homogeneity of a nation by bringing in external cultural elements. The two body sentences of the cultural frame address these viewpoints, respectively. Below is a description of the negative positive framing:

Subject: Immigration hurts cultural homogeneity of the United States

Immigration hurts cultural homogeneity of the United States. First, more than 50 percent of immigrants from Asia and 75 percent of immigrants from Central America don't speak English, which makes these immigrants further disconnected from the US culture. Second, a large number of today's immigrants come from collective societies that tend to create passive, conformist citizens who are more deferential to authority than Americans, which weakens the American cultural cohesion. Therefore, immigrants pose significant cultural threats to the United States.

The four-sentence structure is also applied to the positive frames, with their messaging exactly the opposite of the corresponding negative frame. Specifically, in the positive economic frame, the introductory and concluding sentences stated that immigration fuels the economy. The first body sentence indicates that immigrants provide jobs for native workers, instead of taking them away; the second sentence indicates that immigrants create an overall rise in GDP instead of burdening the fiscal system. Below is the description of positive economic framing:

Subject: Immigration fuels the national economy of the United States

Immigration fuels the national economy of the United States. First, immigrant-owned businesses have an average of 11 employees, which provides important job opportunities for natives and especially those who struggle to find jobs. Second, when immigrants enter the labor force, they increase the productive capacity of the economy and thus raise the GDP accrued to natives typically by 0.2 to 0.4 present, which amounts to $36 to $72 billion per year. This phenomenon is known as "immigration surplus". Therefore, immigrants bring significant economic benefits to the United States.

While it is impossible to reverse the causal mechanisms so simply for the positive cultural frames, I address the two problems the negative cultural frames are derived from—disconnection between immigrants and natives, and a threat to cultural homogeneity. Specifically, in the first body sentence, immigrants' areas of connection with natives are mentioned, including their commitment to democracy and the American dream, despite the various sub-identities held by people with such goals. The second sentence then proposes that external cultural influences, such as food and art, have the effect of strengthening American cultural power. Below is the description of positive cultural framing:

Subject: Immigration fuels cultural diversity for the United States

Immigration fuels cultural diversity for the United States. First, although immigrants may have their own identities and cultures, 89 percent of them agree to the "American way of living" and share the same stance with us toward our key principles, including democracy and American dreams. Second, our cultures have subtly converged over the years, which collectively makes up the entire American culture that is inclusive and open to multiple perspectives. Therefore, immigrants bring significant cultural benefits to the United States.

Wording of the frames

To improve authenticity, the wording of the frames is modeled on articles and posts from immigration study think tanks and partisan sources. To craft the negative frames, I rely on the posts from the Center of Immigration Studies (CIS), a conservative think tank on immigration, as well as posts from the Republican Party. For the negative economic frame, I collect verbatim descriptions of concerns around labor competitiveness and a fiscal burden on CIS website. Similarly, for the negative cultural frame, I pick messages corresponding to the two cultural threat viewpoints mentioned above from the CIS website. To write the positive frames, I use wording from the George W. Bush Center, an organization that has a moderate-to-liberal stance on immigration issues. The two body sentences of the positive economic frame came from the

website's article, "Benefits of Immigration Outweigh the Costs," from which I select two descriptions that express the exact opposite messages to the perceived economic threats. Similarly, I use messages from posts and publications on the George W. Bush Center's website that fit my criteria described above to craft the body sentences of the positive cultural frame.

I avoid the use of moralized language so that a confounding variable in the form of moral framing is not introduced. Moral framing has been defined by researchers as built around people's values concerning what is right and wrong (Skitka, 2010), and researchers have found that moralization can strengthen framing effects. To make my voice sound credible, I insert statistical data from the sources I reviewed in each of the body sentences of the frames.

Survey Items

The survey included a demographic question on the respondent's political ideology. The question was presented in the form of multiple choices, which asked the respondents to select the option that described their personal situations most accurately.

Although under the context of polarization, people can more safely associate Democrats with liberals, Republicans with conservatives, the reasons that I distinguish political ideology from partisanship and ask the respondents to indicate their political ideology specifically are following: First, scholars find that partisanship is less able to predict people's stance on immigration issues than political ideology (Hainmueller and Hopkins, 2015). Hainmueller and Hopkins (2015) find that Americans' preferences over immigration vary very little with their partisanship, while political ideology that predicts the level of ethnocentrism turns out to have a stronger association with immigration attitudes. Second, in the question, I divide the overall political ideology spectrum into a 7-point scale (as shown in **Appendix**), which is a more

accurate description than the "3-point scale" partisanship. For instance, those who identify here with "3 – slightly liberal" and "5 – slightly conservative" may tend to identify themselves with the Democratic Party or the Republican Party, which, to some extent, exaggerates the level they identify with the party.

The dependent variables include one set of question that measures how people think the immigration population contributes to the U.S., followed by one set of question that measures people's level of support for certain immigration policies, and the last set of question that measures people's willingness to participate in petitions regarding immigration issue, as shown in **Appendix**. Each question asks the respondents to indicate their opinions on a 1 to 5 ordinal scale.

Statistical Analysis

Descriptive Statistics

Since the research employs a survey experiment method, it is important to examine representativeness of the survey population. If the respondents are not representative enough of the entire American population, the generalizability of research can be limited. In this section, I display the distribution of the survey respondents by gender, race, age, education, and political ideology. Within the sample table, I compare the distribution of the sample population by any particular category with that of the national population to examine the overall representativeness of the sample population.

Table 1: Distribution of the sample population by demographic factors, including gender, race, age, education, and political ideology, and distribution of national population by the same factors

Categories	Sample Population	National Population
Gender		

Male	50.2% (885)	49.5%
Female	49.8% (877)	50.5%
Race		
White	71.3% (1,256)	58.2%
Hispanic	13.2% (232)	18.9%
Black	8.11% (143)	11.6%
Asian	4.37% (77)	5.7%
Native	2.04% (36)	1.3%
Age		
18-24	16.17% (285)	11.71%
25-44	33.71% (594)	34.58%
45-54	20.37% (359)	16.03%
55 or older	30.30% (534)	37.82%
Education		
Less than high school	4.14% (73)	8.9%
High School	29.4% (518)	27.9%
Some college	31.67% (558)	25.4%
Bachelor's	26.5% (467)	23.5%
Advanced	8.85% (156)	14.4%
Political Ideology		
Very liberal	9.13% (161)	5.23%
Liberal	12.03% (212)	17.15%
Slightly liberal	9.36% (165)	13.86%
Moderate	38.37% (676)	25.77%
Slightly conservative	8.91% (157)	11.64%
Conservative	13.00% (229)	21.15%

Very conservative	9.76% (172)	6.07%

Note: The national population information comes from the following sources: **Gender and Race**: United States Census Bureau: Quick Fact. **Age**: United States Census Bureau, Estimates of the Total Resident Population and Resident Population Age 18 Years and Older for the United States. The distribution of national population by age groups is calculated using the total people within a certain age group, which the document indicates, divided by the total population subtracted by people who are under 18 years old. **Education**: United States Census Bureau: Census Bureau Releases New Educational Attainment Data. **Political Ideology**: ANES 2020 Time Series Study. The distribution is re-calculated after I filter out the numbers of responses including "Refused", "I don't know", "I have never thought about it" from the total respondents. After eliminating all the above-mentioned types of responses irrelevant to this study, the re-calculated total is now 7,056 instead of 8,280.

As **Table 1** shows, the distribution of the sample population by gender is generally aligned with the distribution of the national population by gender. In the sample population, the number of male respondents is slightly higher than that of female respondents. This difference, however, is tiny, so it may not impact the representativeness of the sample population much.

The distribution of Hispanic, black, and Asian respondents in the sample population is significantly less than the distribution of these racial groups in the national population. At the same time, the distribution of white respondents is 13.1% higher than that of white people in the national population. An excess of white respondents and a lack of respondents from minority racial groups may lead to a conservative bias, demonstrating a lower baseline attitude toward immigration.

Compared to the national population, the sample population generally displays an excess of young people (age 18-24) and a lack of older people (age 55 or older). Therefore, the response from the sample population may showcase a liberal bias.

The sample population has a smaller percentage of people who have the education level less than high school, but a larger distribution of people who have completed high school, some college, and a bachelor's degree respectively. However, there are 5.55% less people in the

sample population who attain an advanced degree than in the national population. Considering the sample representativeness in terms of education, the sample population may tend to be liberal-skewed.

In terms of political ideology, the sample population displays a skew toward the moderate. However, although there are fewer people who identify with either the liberal or conservative side, the distribution is not disproportionately skewed to the side. The distribution of conservative respondents in the sample population (31.67%) slightly outweighs that of the liberal respondents in the sample population (30.52%), which demonstrates a similar pattern to the ANES 2020 data, in which the distribution of conservative (38.86%) outweighs the distribution of liberal (36.24%) as well. Therefore, the political ideology in the sample population may be more centered while not biased toward any side of the political spectrum.

In overall, the survey population is generally representative of the national population. However, on matrixes including race, age, and education level, the distribution of the survey population slightly differs from that of the national population, which may limit the external validity of this experiment and create either conservative or liberal bias.

Table 2: the number of respondents by political ideology in each treatment group, and the number of overall respondents in each treatment group.

	Liberals	Moderates	Conservatives	Total
AP negative economic	40	106	45	191
AP negative cultural	40	103	45	188
AP positive economic	42	114	45	201
AP positive cultural	41	108	43	192
RP negative economic	41	106	43	190

RP negative cultural	40	110	42	192
DP positive economic	38	113	43	184
DP positive cultural	41	112	48	191
Baseline	59	124	47	230
Total	373	996	401	1,770

Table 2 shows that the number of respondents is approximately the same across each treatment. After stratifying the total respondents in each treatment group into three subgroups by their political ideology, the number of respondents remains evenly distributed across each treatment group. Therefore, the respondents are generally well-randomized into treatment groups, which ensures the internal validity of this experiment.

Framing impacts overall

The figure below (**Figure 1**) displays the coefficients that denote the impacts of each type of frame on people's immigration attitudes. The baseline group, in which the respondents do not receive any treatment, is not directly shown in the graph. Instead, the coefficients here represent the distance between the respondents' attitudes in each treatment group and the respondents' attitudes in the baseline group. A larger number of the coefficient, therefore, means a further distance of the treatment group from the baseline group, suggesting a larger framing impact.

Figure 1: Framing and People's attitudes toward immigrants' contribution
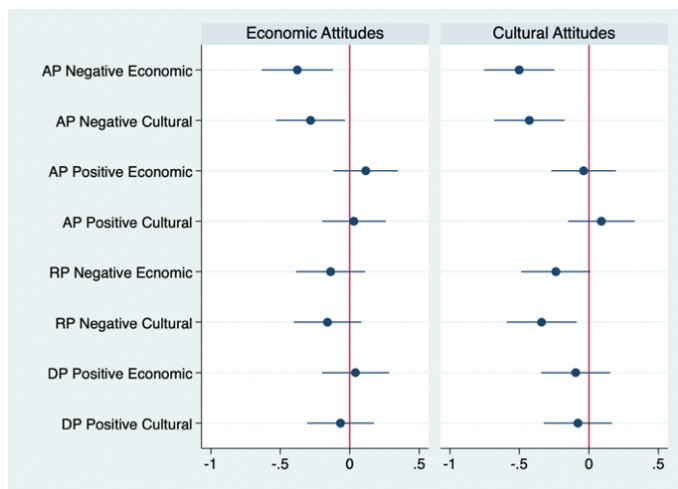
Note: This plot shows the estimated effect of the randomly assigned framing treatment on the people's attitudes toward immigrants' economic contribution to the U.S. (in the left panel) and cultural contribution to the U.S. (in the right panel). Bars represent 95% confidence intervals.

Hypothesis I: negative frames vs. positive frames

Figure 1 suggests that negative framing – both economic and cultural - from Associated Press has a statistically significant impact on people's economic and cultural attitudes. The AP negative framing leads to negative impact on a statistically significant level, yet the AP positive framing does not generate statistically significant impact. In some cases, like the AP positive economic frame on people's attitudes on immigrants' cultural contribution, the positive framing even leads to negative changes.

The negative framing is identified to have a larger impact than positive framing on people's attitudes toward immigrants' contribution to the U.S. Compared to the baseline, AP's negative framing leads to a higher impact suggested by the coefficient than the positive framing of the same type from the AP. The two-sample t test results in the below **Table 3** also suggests

that the difference between negative and positive frames is highly statistically significant, corroborating the pattern we identify using linear regression.

Table 3: the two-sample t test results between the effects on people's attitudes toward immigrants' contribution in the U.S. by AP positive frames and the effects by AP negative frames.

	Attitudes on economic contribution				Attitudes on cultural contribution			
	Means	Standard Deviation	t-value	p-value	Means	Standard Deviation	t-value	p-value
AP negative economic vs. positive economic frame	3.165	1.36	t(385) =-3.86	0.0001	3.08	1.31	t(380)=-3.72	0.0001
	3.66	1.15			3.54	1.13		
AP negative cultural vs. positive cultural frame	3.26	1.28	t(385) =-2.56	0.0107	3.15	1.32	t(375)=-3.99	0.0001
	3.57	1.09			3.67	1.18		

On immigrants' economic contribution, the 187 respondents who received the AP negative economic frame (M=3.165, SD=1.36) significantly reported a greater decline of attitude compared to the 200 respondents who received the AP positive economic frame (M=3.66, SD=1.15), t(385)=-3.86, p=0.0001. The 190 respondents who received the AP negative cultural frame (M=3.26, SD=1.28) also significantly demonstrated a larger decrease in attitudes compared to the 187 respondents who received the AP cultural frame (M=3.57, SD=1.09), t(387)=-2.56, p=0.0107.

Similarly, on immigrants' cultural contribution, the 186 respondents who received the AP negative economic frame (M=3.08, SD=1.31) significantly reported a greater decline of attitude compared to the 196 respondents who received the AP positive economic frame (M=3.54, SD=1.13), t(380)=-3.72, p=0.0001. The 191 respondents who received the AP negative cultural frame (M=3.15, SD=1.32) also significantly demonstrated a larger decrease in attitudes

compared to the 186 respondents who received the AP cultural frame (M=3.67, SD=1.18),

t(375)=-2.56, p=0.0001. In short, the p-value displayed above suggests the significant differences

between the framing effects of each type of AP negative frame and AP positive frame on

people's attitudes toward immigrants' contribution, further corroborating the findings suggested

by **Figure 1**.

Hypothesis II: economic frames vs. cultural frames

On people's attitudes toward immigrants' both economic and cultural contribution to the

U.S., from **Figure 1**, economic frames do not lead to a different impact than cultural frames.

Based on the two-sample t test results in **Table 4** below, none of the comparison between

economic and cultural frames is statistically significant.

Table 4: the two-sample t test results between the effects on people's attitudes toward immigrants'
contribution in the U.S. by economic frames and the effects by cultural frames.

	Attitudes on economic contribution				Attitudes on cultural contribution			
	Means	Standard Deviation	t-value	p-value	Means	Standard Deviation	t-value	p-value
AP negative economic vs. negative cultural frame	3.165	1.36	t(375) =-0.68	0.2487	3.08	1.31	t(375)=-3.72	0.2860
	3.26	1.28			3.15	1.32		
AP positive economic vs. positive cultural frame	3.66	1.16	t(385) =-2.56	0.2220	3.54	1.13	t(380)=-1.06	0.1437
	3.57	1.09			3.67	1.18		
RP negative economic vs. negative cultural frame	3.41	1.27	t(384) =0.17	0.4389	3.39	1.27	t(379)=0.77	0.2205
	3.38	1.28			3.24	1.33		
DP positive	3.58	1.23	t(379)	0.1962	3.48	1.28	t(380)=-	0.4512

economic vs. positive cultural frame	3.48	1.22	=0.8563		3.50	1.26	0.1227	

Hypothesis III: AP frames vs. partisan frames

On people's attitudes toward immigrants' both economic and cultural contribution to the U.S., as **Figure 1** shows, the AP negative frames consistently showcase larger impact than Republican negative frames. This finding is also supported by two-sample t test results in **Table 5** below. **Table 5** demonstrates that on people's attitudes toward both economic and cultural contribution of the immigrants to the U.S., the AP negative economic frames lead to a larger decline of people's attitudes than the RP negative economic frame on a statistically significant level, yet the differences in the relative effectiveness between AP and RP cultural frames are insignificant.

There is no significant difference between the coefficients AP positive frames and Democratic frames, as suggested in **Table 5**, perhaps because their effects are too weak. Although on a statistically insignificant level, the AP frames do consistently lead to larger increases in people's perceived level of immigrants' contribution compared to the DP frames. The 186 respondents who received the AP positive cultural frame even reported a larger increase in attitudes (M=3.67, SD=1.18) than the 193 respondents who received the DP positive cultural frame on a 90-percent confidence level (M=3.50, SD=1.26), t(377)=1.35, p=0.0890.

Table 5: the two-sample t test results between the effects on people's attitudes toward immigrants' contribution in the U.S. by economic frames and the effects by cultural frames.

	Attitudes on economic contribution				Attitudes on cultural contribution			
	Means	Standard Deviation	t-value	p-value	Means	Standard Deviation	t-value	p-value

AP negative economic vs. RP negative economic	3.165	1.36	t(370) =-1.75	0.0399	3.08	1.31	t(370)=-1.96	0.0251
	3.41	1.27			3.34	1.27		
AP negative cultural vs. RP negative cultural	3.26	1.28	t(389) =-0.97	0.1669	3.15	1.31	t(384)=-0.62	0.2661
	3.38	1.28			3.24	1.33		
AP positive economic vs. DP positive economic	3.66	1.16	t(388) =0.63	0.2660	3.54	1.13	t(383)=0.48	0.3146
	3.58	1.23			3.48	1.28		
AP positive cultural vs. DP positive cultural	3.57	1.09	t(376) =0.80	0.2113	3.67	1.18	t(377)=1.35	0.0890
	3.48	1.22			3.50	1.26		

Attitude questions on policy issues

Figure 2: Framing and people's support level for immigration policies
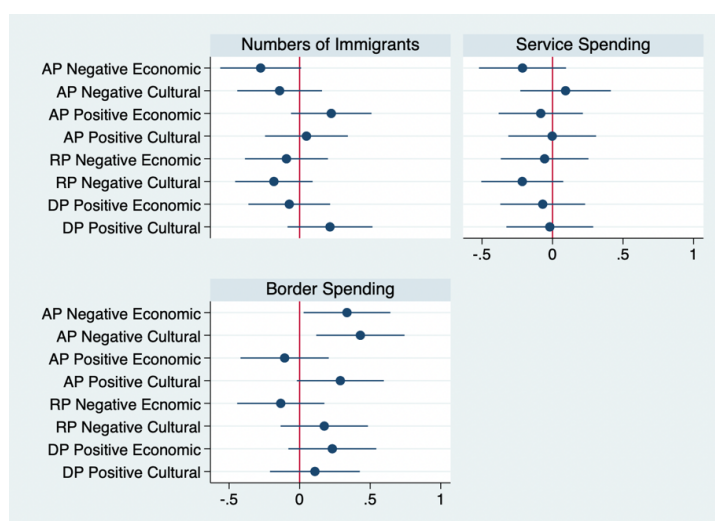
Note: This plot shows the estimated effect of the randomly assigned framing treatment on people's level of support for immigration policies, including increasing the number of immigrants admitted to the U.S.

(upper-left panel), increasing the size of service spending for immigrants (upper-right panel), and increasing the size of border spending on security measures (bottom panel). Bars represent 95% confidence intervals.

Hypothesis I: negative frames vs. positive frames

Generally, as **Figure 2** shows, on all the policy attitude questions, negative frames consistently demonstrate a larger impact than positive frames. On people's supportiveness for increasing the number of immigrants, the AP negative frames almost have negative impacts on people on statistically significant level, while the positive frames demonstrate only weak effects. The coefficient of AP negative frames, meanwhile, is also larger than that of the AP positive frames. The two-sample t test results also demonstrate that there is a significant difference in the relative effectiveness between AP negative framing and AP positive framing on this matrix, and the results are summarized in the **Table 6** below.

Table 6: the two-sample t test results between the effects on people's supportiveness for increasing the number of immigrants admitted to the U.S. by AP negative frames and the effects by AP positive frames.

	Supportiveness for increasing number of immigrants admitted to the U.S.			
	Means	Standard Deviation	t-value	p-value
AP negative economic vs. AP positive economic	2.54	1.43	t(390) =-3.47	0.0003
	3.04	1.45		
AP negative cultural vs. AP positive cultural	2.69	1.56	t(381) =-1.16	0.0830
	2.87	1.50		

On people's supportiveness for increasing service spending for immigrants, however, according to **Figure 2**, only AP negative economic frame leads to the anticipated effect of negative changes. The AP negative cultural frame leads to a positive change, and both AP positive economic and cultural frames backfire. In addition, the AP negative frames do not

display a difference in effects compared to the AP positive frames on a statistically significant

level, and the results are summarized in the **Table 7** below. Therefore, the changes of people's

supportiveness for service spending for immigrants in response to the frames do not align with

the initial hypotheses.

Table 7: the two-sample t test results between the effects on people's supportiveness for increasing service spending for immigrants in the U.S. by AP negative frames and the effects by AP positive frames.

	Supportiveness for increasing service spending for immigrants in the U.S.			
	Means	Standard Deviation	t-value	p-value
AP negative economic vs. AP positive economic	3.11	1.52	t(389) =-0.95	0.1721
	3.25	1.47		
AP negative cultural vs. AP positive cultural	3.42	1.64	t(380) =0.6192	0.2681
	3.32	1.55		

On people's supportiveness for increasing border spending, according to **Figure 2**, both

AP negative economic and cultural frames steadily lead to an increased level of support. The AP

positive economic frame has weak negative effect, while the positive cultural frame backfires,

leading to an increase in people's support for increasing border spending on a statistically

significant level. The t-test results in **Table 8** also demonstrate that there is a difference in terms

of the relative effectiveness between AP negative economic frame and positive economic frame,

with the former being more effective than the latter. In addition, **Table 8** shows that people who

received the AP negative cultural frame reported a response that is not different on statistically

significant level (M=4.126, SD=1.55) to people who received the AP positive cultural frame

(M=4, SD=1.50), t(381)=0.8044, p=0.2108. Given that the AP positive cultural frame backfires,

it further proves that the positive cultural frame is not as effective as the negative cultural frame

is: Not only does it fail to lead to the anticipated direction of effect – a decline in support for

border spending – but it even increases people's level of support for such an anti-immigration policy almost to an statistically significant level, according to **Figure 2**, similar to the effects of negative cultural frame.

Table 8: the two-sample t test results between the effects on people's supportiveness for increasing border spending by AP negative frames and the effects by AP positive frames.

	Supportiveness for increasing border spending			
	Means	Standard Deviation	t-value	p-value
AP negative economic vs. AP positive economic	4.05	1.49	t(390) =2.88	0.0022
	3.60	1.58		
AP negative cultural vs. AP positive cultural	4.126	1.55	t(381) =0.8044	0.2108
	4	1.50		

Hypothesis II: economic frames vs. cultural frames

Generally, there is no consistent pattern that either AP economic or cultural frames are more effective than the other. According to **Figure 2**, on people's supportiveness for increasing number of immigrants, AP economic frames appear more effective than cultural frames, regardless of their tones being negative or positive. However, as indicated in the two-sample t test results in **Table 9** below, neither of the two groups of comparison is statistically significant. The t test results demonstrate that while the points of estimate in the regression plot (**Figure 2**) showcase that economic frames on the dimension of number of immigrants are more effective, this relative difference does not attain a statistically significant level.

Table 9: the two-sample t test results between the effects on people's supportiveness for increasing the number of immigrants being admitted to the U.S. by AP economic frames and the effects by AP cultural frames.

	Supportiveness for increasing the number of immigrants in the U.S.

	Means	Standard Deviation	t-value	p-value
AP negative economic vs. AP negative cultural	2.54	1.43	t(381) =-0.94	0.1751
	2.69	1.56		
AP positive economic vs. AP positive cultural	3.05	1.45	t(390) =1.21	0.1130
	2.87	1.50		

However, on people's supportiveness for increasing service spending and border spending, there is no consistent pattern that either AP economic or cultural frames are more effective. On people's level of support for service spending, while the AP negative economic frame seems more effective than the negative cultural one, the AP negative cultural frames appears more effective than the negative economic one on people's support for border spending. The AP positive frames often do not lead to their anticipated direction of effects, or backfire, which makes it hard to compare their relative effectiveness.

Among partisan frames, one pattern can be observed: Republican cultural frames consistently appear more effective than Republican economic frames on people's supportiveness for all three immigration policies, as the former always leads to a decline in support for immigration-friendly policies (increasing the number of immigrants and service spending) and an increase in support for anti-immigration policies (increasing border spending). **Table 10** displays the two-sample t test results between the effectiveness of the two types of Republican frames on the three policies mentioned above. According to **Table 10**, while the points of estimate in the regression plot (**Figure 2**) showcase that Republican cultural frame leads to a larger negative change than the Republican economic frame supportiveness on the support level for two immigration-friendly policies - increasing number of immigrants and increasing service spending - this relative difference does not attain a statistically significant level. On the other

hand, on increasing border spending, the Republican cultural frames do demonstrate a larger effect than the Republican economic frame on a statistically significant level.

Table 10: the two-sample t test results between the effects on people's supportiveness for the three policies (increasing the number of immigrants admitted to the U.S., increasing service spending for immigrants, and increasing border spending) by the two types of framing from the Republican Party.

	Supportiveness for increasing number of immigrants admitted to the U.S.			
	Means	Standard Deviation	t-value	p-value
RP negative economic vs. RP negative cultural	2.73	1.49	t(384) = 0.62	0.2682
	2.64	1.34		
	Supportiveness for increasing service spending for immigrants			
	Means	Standard Deviation	t-value	p-value
RP negative economic vs. RP negative cultural	3.27	1.53	t(387) =1.07	0.1418
	3.11	1.38		
	Supportiveness for increasing border spending			
	Means	Standard Deviation	t-value	p-value
RP negative economic vs. RP negative cultural	3.58	1.49	t(387) =-1.99	0.0234
	3.89	1.56		

The Democratic frames, on the other hand, always backfire, as they often lead to a decrease in supportiveness for immigration-friendly policies and an increase in supportiveness for increasing border spending. This makes it harder to compare the relative effectiveness between Democratic economic framing and Democratic cultural framing.

Hypothesis III: AP frames vs. partisan frames

Figure 2 indicates that the AP negative economic frame is consistently more effective than the Republican negative economic frame. Across all three policies, the AP negative economic frame leads to a larger decline in support for immigration-friendly policies and a larger increase in support for increasing border spending than RP negative economic frame. **Table 11** below displays the two-sample t test results between the relative effectiveness of the two types of framing.

Table 11: the two-sample t test results between the effects on people's supportiveness for the three policies (increasing the number of immigrants admitted to the U.S., increasing service spending for immigrants, and increasing border spending) by AP negative economic frame and RP negative economic frame.

	Supportiveness for increasing number of immigrants admitted to the U.S.			
	Means	Standard Deviation	t-value	p-value
AP negative economic vs. RP negative economic	2.54	1.43	t(376) = -1.21	0.1124
	2.73	1.49		
	Supportiveness for increasing service spending for immigrants			
	Means	Standard Deviation	t-value	p-value
AP negative economic vs. RP negative economic	3.11	1.52	t(375) =-1.00	0.1598
	3.27	1.53		
	Supportiveness for increasing border spending			
	Means	Standard Deviation	t-value	p-value
AP negative economic vs. RP negative economic	4.05	1.49	t(376) =3.06	0.0012
	3.58	1.49		

According to **Table 11**, while the points of estimate in the regression plot (**Figure 2**) showcase that AP negative economic frame leads to a larger negative change than the Republican economic frame on people's supportiveness on the support level for two

immigration-friendly policies - increasing number of immigrants and increasing service spending - this relative difference does not attain a statistically significant level. On the other hand, on anti-immigration policy here, or the increase in border spending, the AP negative economic frame leads to a higher support level than the Republican economic frame on a statistically significant level. **Table 11**, therefore, further corroborates the pattern that the AP negative economic frame is more effective than the RP negative economic frame displayed in **Figure 2**. On the other hand, the AP negative cultural frame does not appear to display a difference in effectiveness compared to Republican negative cultural frame. It is hard to evaluate the effect of Democratic frames relative to the AP positive frames since the former always backfire.

Willingness-to-act questions

Figure 3: Framing and people's willingness to participate in petitions
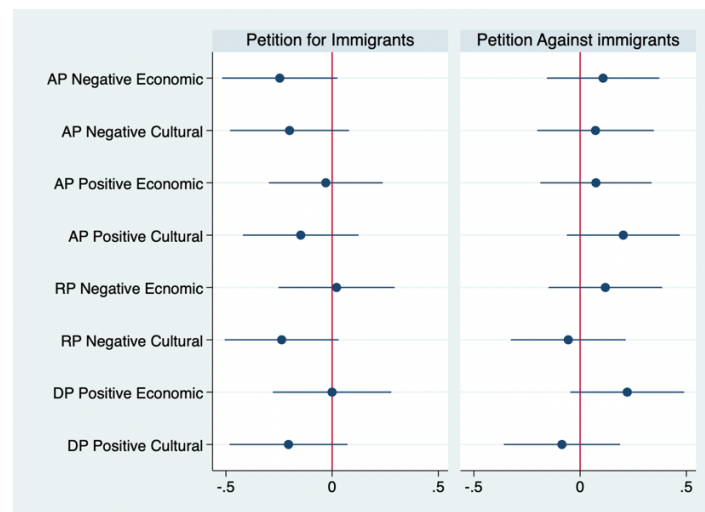
Note: This plot shows the estimated effect of the randomly assigned framing treatment on people's willingness to participate in petitions for immigrants (in the left panel) and petitions against immigrants (in the right panel). Bars represent 95% confidence intervals.

This section analyzes how each type of framing can influence people's level of willingness to participate in hypothetical actions regarding immigration. People are asked to indicate their willingness to participate in these action items on an ordinal scale of 1 to 5. Four items are studied under the context of willingness-to-act questions: petition for immigrants, petition against immigrants, assisting integration of immigrants, and providing financial help to immigrants. These four survey items are divided into two categories – petition, as shown in **Figure 3**, and more "laborious" actions regarding immigration, as shown in **Figure 4**. Signing a petition can be very easy as it only takes one "click" online sometimes, while assisting integration or providing financial help require tangible efforts and input of own resources.

Hypothesis I: negative frames vs. positive frames

On people's willingness to participate in petitions, the AP negative frames are consistently more effective than AP positive frames. In particular, the AP negative frames almost dissuade respondents to participate on a statistically significant level. On the other hand, both AP positive frames backfire, as they lead to insignificant yet negative effects on people's willingness to participate in petitions for immigrants. Similarly, on people's willingness to participate in petitions against immigrants, the AP negative frames and positive frames both lead to an increased willingness. It is particularly surprising to see that the AP positive frames, on people's willingness to participate in petitions against immigrants, lead to comparable level of increase compared to AP negative frames. In short, since AP negative frames work in their anticipated directions, while the AP positive frames always backfire, it suffices to demonstrate that AP negative frames are more effective than AP positive frames on changing people's willingness to participate in petitions regarding immigration.

Hypothesis II: economic frames vs. cultural frames

On people's willingness to participate in petitions, according to **Figure 3**, the AP economic and cultural frames generally do not demonstrate a difference in their effectiveness. **Table 12** below displays the two-sample t test results between the AP economic frames' and AP cultural frames' effects on petition willingness. **Table 12** indicates that there is no significant difference in effectiveness between the AP negative and positive frames, regardless of the tone, which provides further evidence for claim above.

Table 12: the two-sample t test results between the effects on people's willingness to participate in petitions regarding immigration by AP economic frames and the effects by AP cultural frames.

	Willingness to participate in petitions for immigrants in the U.S.			
	Means	Standard Deviation	t-value	p-value
AP negative economic vs. AP negative cultural	2.74	1.32	t(381) =-0.38	0.3585
	2.80	1.40		
AP positive economic vs. AP positive cultural	2.97	1.32	t(390) =0.96	0.1696
	2.84	1.33		
	Willingness to participate in petitions against immigrants in the U.S.			
	Means	Standard Deviation	t-value	p-value
AP negative economic vs. AP negative cultural	3.19	1.28	t(381) =0.28	0.3913
	3.16	1.38		
AP positive economic vs. AP positive cultural	3.15	1.29	t(390) =-1.07	0.1427
	3.29	1.28		

Among partisan frames, **Figure 3** suggests that an exposure to partisan cultural frames, regardless of the source or the tone, leads to a decline in willingness to participate in petitions for immigrants. On the other hand, an exposure to partisan economic frames, regardless of the

source or the tone, leads to an increase in willingness to participate in petitions against immigrants. **Table 13** below compares the relative effectiveness of partisan economic vs. partisan cultural frames on people's willingness to participate in petitions by showing the two-sample t test results. **Table 13** suggests that all the four groups of comparison demonstrate that partisan economic frames have a different effect than cultural frames on statistically significant level, which provides further proof for the claim I made above.

Table 13: the two-sample t test results between the effects on people's willingness to participate in petitions regarding immigration by partisan economic frames and the effects by partisan cultural frames.

|	Willingness to participate in petitions for immigrants in the U.S.			
	Means	Standard Deviation	t-value	p-value
RP negative economic vs. RP negative cultural	3.01	1.32	t(386) =1.92	0.0279
	2.75	1.33		
DP positive economic vs. DP positive cultural	2.99	1.41	t(387) =1.44	0.0753
	2.78	1.40		
	Willingness to participate in petitions against immigrants in the U.S.			
	Means	Standard Deviation	t-value	p-value
RP negative economic vs. RP negative cultural	3.20	1.30	t(386) =1.29	0.0995
	3.03	1.37		
DP positive economic vs. DP positive cultural	3.31	1.32	t(384) =2.23	0.0130
	3	1.38		

Hypothesis III: AP frames vs. partisan frames

On people's willingness to participate in petitions, **Figure 3** suggests that the AP frames generally have a similar level of effectiveness compared to partisan frames. There are two exceptions to this pattern: First, the AP negative economic frame leads to a larger decline in

willingness to participate in petitions for immigrants, yet Republican economic framing leads to a very weak effect. Second, while the AP positive cultural frame leads to a increase in people's willingness to participate in petitions against immigrants, the DP positive cultural frame leads to a decrease, which aligns with the anticipated direction.

Framing impacts with political ideology controlled

Attitudes toward immigration's contribution

Figure 4: Framing and people's attitudes toward immigrants' contribution by political ideology
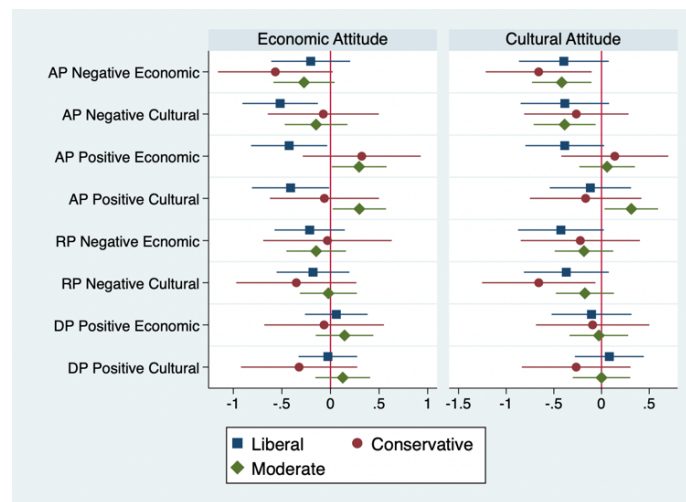
Note: This plot shows the estimated effect of the randomly assigned framing treatment on the people's attitudes toward immigrants' economic contribution to the U.S. (in the left panel) and cultural contribution to the U.S. (in the right panel). Respondents are stratified into three subgroups – liberal, conservative, and moderate – based on their political ideology. Bars represent 95% confidence intervals.

Hypothesis I: Liberal respondents are more responsive to positive frames yet less responsive to negative frames; conservative respondents are more responsive to negative frames yet less responsive to positive frames.

Figure 4 suggests that the liberal respondents find the AP negative frames persuasive and the AP positive frames not persuasive. Among liberal respondents, all AP frames, regardless of their tones being positive or not, lead to negative changes in the extent to which they think the immigrants to have economic and cultural contribution to the U.S, and the AP positive frames lead to a level of negative changes that are comparable to the effect of AP negative frames.

The conservative respondents demonstrate more negative impacts when exposed to AP's negative economic frame than the moderate respondents do. This pattern holds for both economic and cultural attitude questions. The conservative respondents receiving the AP negative cultural frame do not appear more persuaded than moderate respondents do. On the other hand, while conservative respondents display a similar treatment effects to moderate respondents when receiving AP positive economic frame, the former seems more doubtful of the AP positive cultural frames, which leads to far smaller effects among them than among moderate respondents.

Among moderate respondents, the AP frames work in anticipated directions: Positive AP frames lead to positive changes in attitudes, and negative AP frames lead to negative changes.

Hypothesis II: Liberal respondents are more responsive to Democratic frames yet less responsive to Republican frames; conservative respondents are more responsive to Republican frames yet less responsive to Democratic frames.

Figure 4 indicates that liberal respondents actually appear less persuaded by Democratic frames than moderate respondents are. Meanwhile, liberal respondents are more likely to be persuaded by Republican frames than moderate respondents are, since the former demonstrates a

larger decline in both their economic and cultural attitudes than the latter does when receiving

Republican framing.

Conservative respondents display a larger decline in both economic and cultural attitudes

in response to Republican cultural frame than moderate respondents do. In addition, conservative

respondents appear doubtful of the Democratic frames, which backfire among conservative

respondents.

The moderate respondents find partisan frames to be less persuasive than AP frames, as

partisan frames lead to smaller changes in their attitudes than AP frames do. Still, the partisan

frames generally work in the anticipated directions of effects.
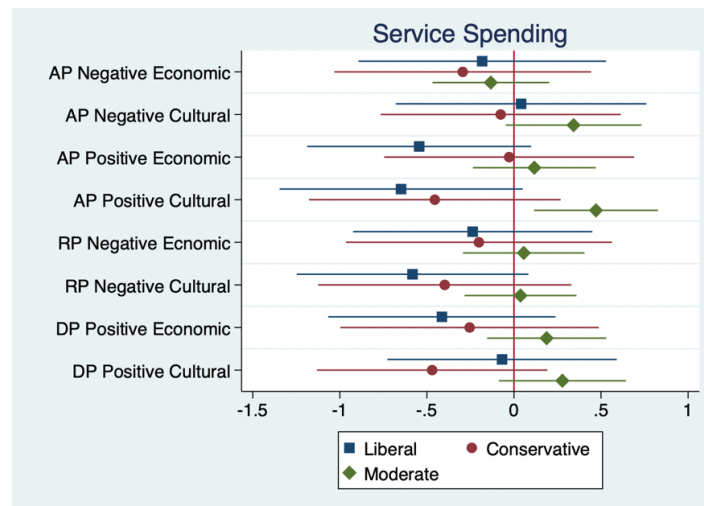
Attitudes toward policies

Figure 5: Framing and people's level of support for increasing number of immigrants
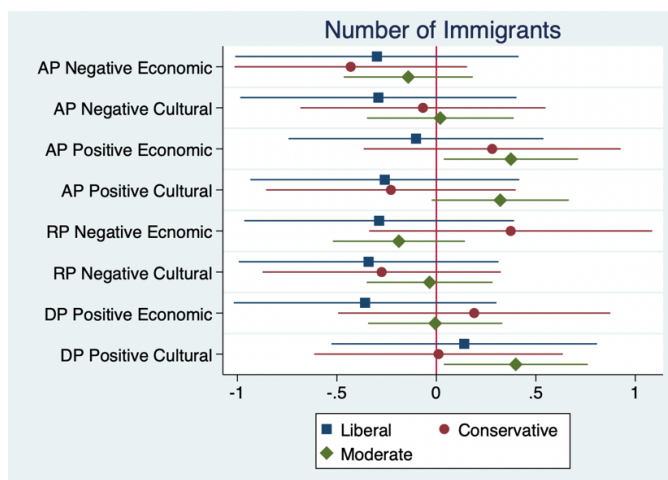
Note: This plot shows the estimated effect of the randomly assigned framing treatment on the people's
supportiveness level for increasing the number of immigrants in the U.S. Respondents are stratified into

three subgroups – liberal, conservative, and moderate – based on their political ideology. Bars represent 95% confidence intervals.

Figure 6: Framing and people's level of support for increasing service spending for immigrants

Note: This plot shows the estimated effect of the randomly assigned framing treatment on the people's supportiveness level for increasing service spending for immigrants in the 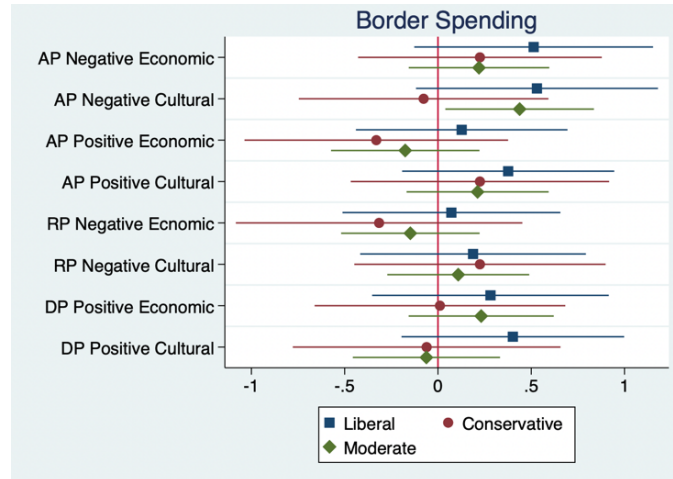U.S. Respondents are stratified into three subgroups – liberal, conservative, and moderate – based on their political ideology. Bars represent 95% confidence intervals.

Figure 7: Framing and people's level of support for increasing border spending

Note: This plot shows the estimated effect of the randomly assigned framing treatment on the people's supportiveness level for increasing border spending in the U.S. Respondents are stratified into three subgroups – liberal, conservative, and moderate – based on their political ideology. Bars represent 95% confidence intervals.

Hypothesis I: Liberal respondents are more responsive to positive frames yet less responsive to negative frames; conservative respondents are more responsive to negative frames yet less responsive to positive frames.

Figure 5, 6, and 7 suggest the similar pattern among the liberal respondents: Among them, an exposure to any type of AP frames, either negative or positive, leads to a decline of their level of support for policies in favor of immigrants, including increasing the number of immigrants and the size of service spending, and an increased level of support for policies against immigrants, like increasing border spending. On liberal respondents' support level for increasing the number of immigrants and border spending, the AP positive frames lead to a similar level of changes compared to what AP negative frames do. On liberal respondents' support level for increasing service spending, as **Figure 6** shows, AP positive framing even leads to a larger decline in their supportiveness compared to the decline caused by AP negative framing.

Conservative respondents appear more persuaded by negative economic frame and positive economic frame, both of which result in larger effects among conservative respondents than among moderate respondents. While the AP negative cultural frame leads to the anticipated direction of effect among conservative respondents, the effect is generally weak. Conservative respondents appear highly doubtful of AP positive cultural frames, which backfire among them.
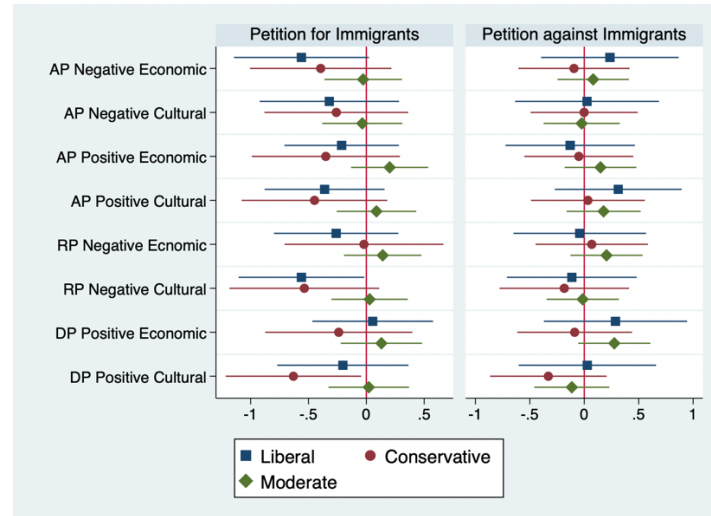
Hypothesis II: Liberal respondents are more responsive to Democratic frames yet less responsive to Republican frames; conservative respondents are more responsive to Republican frames yet less responsive to Democratic frames.

As **Figure 5, 6, and 7** indicate, almost all partisan frames result in a decline in liberal respondents' supportiveness for policies in favor of immigrants and an increased support level for policies against immigrants. Liberal respondents appear persuaded by Republican frames than moderate respondents are, and liberal respondents are highly doubtful of Democratic frames.

On the other hand, conservative respondents do not find the Republican economic frame convincing – the conservative respondents display an increased attitude in admitting more immigrants and a declined attitude toward increased border spending after their exposure to the Republican economic frame. The Republican cultural frame consistently leads to larger impact among conservative respondents than among moderate respondents. Meanwhile, the Democratic frames appear highly doubted by conservatives, as Democratic frames consistently lead to smaller and even backfired effects among conservative respondents.

Willingness-to-act questions

Figure 8: Framing and people's attitudes toward people's willingness to participate in petitions

Note: This plot shows the estimated effect of the randomly assigned framing treatment on people's willingness to participate in petitions for immigrants (in the left panel) and petitions against immigrants (in the right panel). Respondents are stratified into three subgroups – liberal, conservative, and moderate – based on their political ideology. Bars represent 95% confidence intervals.

Hypothesis I: Liberal respondents are more responsive to positive frames yet less responsive to negative frames; conservative respondents are more responsive to negative frames yet less responsive to positive frames.

As **Figure 8** suggests, in the case of petition for immigrants, liberal respondents appear more persuaded by AP negative frames and less persuaded by positive frames than moderate respondents. After exposure to negative frames, liberal respondents showcase a decreased willingness in participating in petitions for immigrants, and such decreases are consistently larger than those among moderate respondents. The AP positive frames even backfire among liberals. On their willingness to undertake petitions against immigrants, similarly, the negative economic frame generates a larger impact among liberals against the immigrants. The AP positive cultural frame, similarly, backfires among liberal respondents, as it leads to even larger willingness of them to undertake petitions against immigrants than it does among moderate respondents.

Among conservative respondents, they are more persuaded by AP negative frames and are less persuaded by AP positive frames. They showcase a larger decline in willingness to participate in petitions for immigrants after their exposure to negative frames than the moderates do. The positive frames backfire among conservatives, who showcase large decline in their willingness to participate in petitions for immigrants. However, in the case of petition against immigrants, the frames seem to have very weak effects, and the effects are smaller than those among moderates.

Hypothesis II: Liberal respondents are more responsive to Democratic frames yet less responsive to Republican frames; conservative respondents are more responsive to Republican frames yet less responsive to Democratic frames.

According to **Figure 8**, liberal respondents are more persuaded by Republican frames and less persuaded by Democratic frames than moderates are. On their willingness to participate in petition for immigrants, the Republican frames generate a larger decline among liberal respondents than they do among moderate respondents. The Democratic frames, on the other hand, do not lead to an increased willingness among liberal respondents as they do among moderate respondents; the Democratic positive cultural frame even backfires. On liberal respondents' willingness to participate in petitions against immigrants, similarly, both Democratic frames lead to an increased level of willingness, suggesting a backfired effect.

Conservative respondents are more persuaded by Republican frames than moderate respondents are. Both conservative frames lead to a larger decline in Republicans' willingness to participate in petitions for immigrants than they do among moderates. Meanwhile, conservative respondents appear highly doubtful of Democratic frames, which lead to much larger decline in their willingness to participate in petition for immigrants.

Discussion

In this experiment, I explore three types of people's immigration attitudes, including people's attitudes toward immigrants, people's perception of how important different characteristics of immigrants are in determining their admission, and people's willingness to act regarding immigration issues. I measure how these attitudes are affected by framing – a prioritization of specific aspects of a multi-faceted issue presented with an intention to change the weight people attribute to different aspects of the issue, which further changes people's overall opinions toward the issue. In this discussion section, I divide the hypotheses into two sub-sections – the framing effects overall, and the framing effects with the factor partisan ideology controlled.

General framing effects

<u>*Hypothesis I: negative frames vs. positive frames*</u>

The general framing effects are measured by examining the regression coefficient that stands for the treatment effects among general respondents. The results suggest that while negative frames lead to negative impacts on people's attitudes toward immigrants' contributions, a decline in people's supportiveness for immigration-friendly policies, an increase in people's support for increasing border spending, and people's willingness to participate in actions in favor of the immigrants, positive frames lead to smaller positive impacts on these dimensions. Therefore, I conclude that negative frames are more effective in shaping people's immigration opinions as the way I hypothesize.

Three reasons that explain this phenomenon above are suggested in the theory section: The negative frames are more able to evoke an anxiety, which leads to more active information-seeking among the audience subsequently. However, the content of the positive framing message

is mediated by the out-group image conjured up by the subtle group cue within the immigration frame, which leads to a mediated emotional response that does not entail the same level of information-seeking. Therefore, negative frames tend to have larger impacts than positive frames in changing people's attitudes.

While the positive frames are consistently observed to have smaller impacts, the phenomenon positive frame can more frequently "backfire" seems surprising. While this seems counter-intuitive in the first glance, two reasons may explain for this phenomenon: First, the positive effects of the positive messages have been outweighed by the negative effects caused by the "out-group" image that the subtle group cue within positive frames evokes. Therefore, although people receive positive frames, they still form an anxiety over enthusiasm, which leads to a negative change of their subsequent thinking and decision-making processes.

Second, people's negative responses to positive frames may be also triggered by their aversive attitudes toward the information. To be specific, when exposed to the positive frames, there is a higher chance that people may feel that the frames are not arguing about what they want to see. Therefore, they respond to the frames not based on rational evaluation of the information but on irrational emotion. Feeling that the frames are arguing against, they may form further negative attitudes toward the group at whom the frames are targeted.

Hypothesis II: economic frames vs. cultural frames

Cultural frames do not consistently appear more effective than economic frames on shaping people's attitudes toward immigrants' contribution, immigration policies, and people's willingness to act regarding immigration issues as I hypothesize. I previously assume that cultural framing may be more effective as they conform to people's pre-existing mindset of "us

versus them", so that cultural framing is more able to conjure up the out-group image among its audience than economic framing. However, this mindset may not be applied to population in general who may think differently than what average white conservatives do. In addition, it is plausible to argue that economic framing message can also elicit the out-group image as a threat, and that economic framing is comparable to cultural framing in its effectiveness in conjuring up the out-group image among its audience.

On people's supportiveness toward policies, there are consistent patterns in the different framing impacts between the two types of frames. For instance, while the AP economic negative framing works better than the AP negative cultural framing on people's level of support for increasing number of immigrants, the cultural framing, regardless of the tone, consistently leads to increased support for increasing border spending. This difference suggests that cultural framing may be more able to convince people to incorporate the group threats into their consideration on questions about illegal immigration than legal immigration.

Hypothesis III: neutral frames vs. partisan frames

Generally, Republican frames are less effective than the AP frames, and this finding aligns with my hypotheses. When realizing that there is a partisan label with the frame, people tend to consider the frame to be less objective and, therefore, become more cautious in the information-seeking process. At the same time, people keep less cautious to the AP frames because there is no heuristic that pre-primes them.

However, there is a less consistent pattern in the difference between the impacts of Democratic frames and the AP frames. The positive framing effects are generally weak already, so it may not be easy to observe a consistent difference between the two frames.

Framing effects with partisan ideology controlled

<u>*Hypothesis I: Liberal respondents are more responsive to positive frames yet less responsive to negative frames; conservative respondents are more responsive to negative frames yet less responsive to positive frames.*</u>

Among liberals, this hypothesis does not hold. Both AP negative and positive frames lead to more negative changes among liberals than among moderates. Although liberals generally demonstrate very significant baseline attitudes on the side in favor of immigration, from this pattern, we may conclude that liberals are less determined about their own stance, so they are more susceptible to frames that even do not align with their pre-existing beliefs in the first place. Another possible explanation is that the frames may lead the liberals to reconsider the issue on the dimension featured by the frames. Even if the frame is positive, it may remind the liberals of counterarguments against the information. Realizing that they are evaluating a complex issue, liberals may form a new, more nuanced stance supported by the information they are primed to consider (while the information is not necessarily covered by the frames) after their exposure to the frames.

The only exception is that the liberals are less persuaded by negative frames in attitudes toward individuals. This may tell us that liberals do not tend to evaluate individuals the same way as they evaluate general immigration issues. Meanwhile, they do not appear to be more persuaded by positive frames. This showcases the same pattern that the liberals are critical of the positive frames.

Among conservatives, they appear more persuaded by negative frames. This showcases an opposite pattern to that among liberals, which aligns with our hypothesis. The conservatives appear less critical of the frames that conform to and reinforce their pre-existing beliefs.

Compared to the moderates, who may be more doubtful of certain information in the negative frames, conservatives challenge the information in negative frames less, therefore demonstrating a larger persuasion effect by negative frames.

On the other hand, they are less persuaded by positive frames in general. In particular, conservatives appear very doubtful of positive cultural frames, which often lead to backfired effect. This further demonstrates that conservatives are less receptive of information that goes against their beliefs, even the information is from a neutral source like the Associated Press.

Generally, the moderates showcase persuasion patterns in alignment with the tones of the frames. They demonstrate positive changes in immigration attitudes after receiving positive frames, and vice versa.

Hypothesis II: Liberal respondents are more responsive to Democratic frames yet less responsive to Republican frames; conservative respondents are more responsive to Republican frames yet less responsive to Democratic frames.

This hypothesis does not hold among liberals. Republican frames display a greater framing effects among liberals, leading their attitudes to change in alignment with the anticipated direction. By contrast, the Democratic frames frequently backfire. This echoes the pattern I observed earlier: The liberals are susceptible to the frames that do not align with their pre-existing beliefs, and these frames can more easily change their attitudes. Meanwhile, they are skeptical toward the frames that conform to their beliefs, and they are less acceptive of the information that comes from such frames.

The conservatives are more persuaded by Republican cultural frames than moderates on attitude questions. The Republican economic frames, however, demonstrate a smaller persuasive impact among conservatives than moderates, and the Republican economics frame often

backfires. One reason could be that the conservatives are exposed to too much economic attack information from the Republican parties, so they become less convinced when they see the partisan source and the repetitive information. On the willingness-to-act questions, however, the conservatives are more persuaded by Republican frames, which align with our expectations. This may tell us the Republican economic frame is still considered as a reliable source among conservatives, especially when it comes to the willingness for them to put tangible efforts. On both attitudinal and willingness-to-act questions, the conservatives appear doubtful of Democratic frames, which often have only weak effects or even backfire.

Conclusion

This thesis conducts an experiment to study the relative influence between different types of frames – positive vs. negative, economic vs. cultural, and neutral vs. partisan – on people's opinions toward immigration and people's willingness to act regarding immigration issues. This research involves a comprehensive examination of the framing impacts through comparisons between traditional types of frames, which offers further justifications on prior framing theories and its applicableness to the context of racial priming and immigration. This research sheds extra light on the relative impacts between neutral frames and partisan frames, as well as how people across political ideology spectrum perceive frames differently.

The results of this study on overall framing impacts corroborate the general framing theory proposed by prior scholar and suggests that the components of the general framing theory can be transplanted to the immigration contexts and work well under the racial priming theory. The frames re-activate and refresh people's memory about the latent out-group image. After their

exposure to frames, people form an emotion in response to the activated out-group message plus the content of the message.

In an attempt to gain more insights on the recent debate about framing, this thesis compares the framing impacts between different types of frames and leads into several fruitful findings. First, negative frames are found to be more efficient than positive frames, which corroborate prior scholarly findings. While the experiment does not seek to verify the step-by-step processes through which frames take effects among the audience, the results ascertain the truthfulness of the scholarly consensus on the framing impacts of negative frames vis-à-vis positive frames and its applicableness to immigration issues.

Based on past findings on the reasons people are against immigration, this thesis takes a step further into the literature vacuum regarding the relative framing impact under the immigration context, comparing the effectiveness between economic and cultural framing as well as neutral and partisan framing that prior scholars have not extensively discussed under the background of immigration. The thesis finds that while cultural frames do not demonstrate a larger impact than economic frames on general immigration attitudes, cultural frames and economic frames may lead to different impacts on people's supportiveness for specific policy issues. This finding provides an implication that the effect of the same type of frame may fluctuate depending on the complexity of situations and issues.

The findings that negative frames from neutral sources are generally more efficient than negative frames from the Republican Party further our understanding of how "labels" of the frames may influence the framing impacts under the immigration context. My thesis further finds that the same information from a seemingly less objective source can be less convincing. Perhaps

because the impacts of positive frames are obviously smaller, I find neither significant nor consistent difference between positive frames from neutral sources and from the Democratic Party. To test on this, future research can adopt stronger frames that can entail more observable differences in framing effects.

This thesis finds that people with different political ideologies may respond to certain types of frames differently. While general framing scholars have found people with certain political ideology may be more inclined to trusting certain types of frames, my thesis extends this finding to the racial priming context and furthers this debate by identifying specific patterns: First, liberals consistently display a decline in their level of favorableness toward immigrants after their exposure to any type of frames, either positive or negative, neutral or partisan. Second, conservatives are more persuaded by negative frames and Republican frames while less persuaded by positive frames and Democratic frames. Third, moderates generally showcase framing effects in alignment with the tone – positive or negative - of the frames. The reasons why people with different political ideologies may respond to frames differently, however, are not a specific focus of this thesis. To test on these patterns and explore the persuasion mechanisms, future research may delve into two research questions: First, do these patterns only hold under the background of immigration issues, or are these patterns applicable to other political backgrounds? Second, what are the different manners through which people with distinct political ideologies receive and process the information from the frames, and how do these different manners lead to different framing impacts?

It is important to acknowledge an underlying limitation of relying on online platforms, such as Amazon's MTurk and Lucid that this study relies on, for public opinion research. The tendency for the proportion of sampled population to be skewed towards the white, younger, and

the more ideologically liberal may have produced biased results. The insufficient level of representativeness, therefore, would lead to a difference between sample average treatment effect and the population average treatment effect, with the latter being our genuine research interest but former a proxy. In this experiment, we find that people's age and political ideology are relatively more evenly distributed. However, the sample includes significantly more white respondents (n=1,259) than respondents of minority ethnicities (n=513). Therefore, the sample is not necessarily representative of the American population, and it could be argued that a more representative sample on the dimension of race and ethnicity may lead to less biased results.

However, considering the resources and time constraints of this study, an online platform like MTurk and Lucid looks suitable as a starting point. Another limitation of this survey lies in the sample size. While the overall sample size (n=1,770) is reasonably large, each treatment group only receives 190-200 respondents. Therefore, we find that in many cases, the p-value is around 0.1 to 0.15. With such p-value, we can only tell that the points of estimate are compatible with our hypotheses, but they cannot demonstrate statistical significance. Therefore, future research may scale down the number of treatment groups or include a larger sample size.

The outcomes of this study present several potential areas for future research on framing and immigration. While this experiment only alluded to some recent examples of frames, which focused heavily on how media sources may feature socio-tropic and public finance related concerns, future research can involve more recent political messaging methods, such as speeches, misinformation frames, and campaign advertisements. Additionally, as the content and experiments of this study were designed for respondents within the United States, future studies may modify the details for alternative contexts in different countries.

Meanwhile, it is worth studying the impact of framing while having other demographic variables, like age and race, in control. Haynes (2016) has found that White people may respond to immigration frames more negatively than people of minority ethnicities, while people of different minority ethnicities demonstrate more similar patterns in response to the frames. The psychological processes that account for the ways of their responses, however, are relatively under-studied. Scholars assume that minority ethnic groups may develop a pan-ethnic consciousness triggered by some specific information within the frames (Jones-Correa and Leal, 1995; Masuoka 2006; Junn and Masuoka 2008), to which White people may respond differently (Pérez, 2015). Segura and Rodrigues (2006), similarly, attributes the patterns to underlying historical and demographic circumstances that have been activated by the frames. In addition, recent scholarship such as Anoll (2018) have found that minority ethnic groups may respond to frames more actively in willingness-to-act questions than Whites do since they conceptualize "participation" differently (Anoll, 2018). Especially, people from minority ethnic groups are likely to participate in activities that are categorized as more "laborious" in my experimental setup (Anoll, 2022). Experiments specifically tailored to this question, therefore, should also be paid enough attention in the future to take more recent studies on framing from an ethnic perspective into account.

While this study forms one of the examples of a growing body of literature on framing that employs randomized survey experiments, it is always important to bear in mind that such basic experimental setup, in which treatment groups are used to simulate real-world frames, bear only minimal satisfying resemblance to the realistic framing settings, as is also acknowledged by Druckman (2022) in the Generalizing Persuasion (GP) framework. Other experimental studies should be conducted to understand what other factors in framing process – mostly the "settings"

of framing, like the impacts of competing frames – are overlooked in similar experiments, and

how they may influence the validity of our conclusions from experimental findings. Meanwhile,

other non-experimental types of research method – like survey and interview – should be

encouraged to undertake to study questions like framing, since they are more able to capture

implicit attitudes that exist outside the tightly controlled confines of the laboratory (Pérez, 2016).

Appendix

Appendix A: Qualtrics Survey Design

Do you agree to take part in the study?

- Yes (1)
- No (2)

If "Yes", begin survey

If "No", show "Thank you for your time" message

Begin Survey:

1. In general, how do you define your political ideology?
- Extremely Liberal (1)
- Liberal (2)
- Slightly liberal (3)
- Moderate (4)
- Slightly conservative (5)
- Conservative (6)
- Extremely conservative (7)

*Classification: Selection of "1, 2" = "liberal"; "3, 4, or 5" = "moderate"; "6, 7" = "conservative".

Next, you will read about a frame from a source that depicts immigration issues from the source's standpoint. Please read carefully. You will then be asked questions about the situation and your opinion.

Dependent Variable Question:

1. Please indicate on a scale of 1 to 5 the extent to which you agree with the following statements. 1 indicates complete disagreement and 5 indicates complete agreement.
(1) Overall, most recent immigrants to the United States contribute to this country economically.
(2) Overall, most recent immigrants to the United States enrich our culture by providing new ideas and customs.

2. What do you think Federal government should do on the following issues? 1 indicates that you think that item should be decreased a lot. 3 indicates that you think that item should remain the same. 5 indicates that you think that item should be increased a lot.
(1) The number of people allowed to immigrant to the US
(2) Spending on border security measures

(3) Spending on services to support recent immigrants

3. Please indicate your willingness to participate in the following political actions (1 means that you are strongly not willing to participate in an activity; 5 means you are strongly willing to participate in that activity).

(1) Sign an online petition about lifting the cap of yearly admitted immigrants to the U.S.

(2) Sign an online petition about imposing a more restrictive cap of yearly admitted immigrants to the U.S.

Appendix B: Tables and Figures

Table 1: the regression result table showing the regression coefficients between treatment groups and how much people think the immigrants to have economic contribution and cultural contribution in the U.S. and the p-value of each regression coefficient

	Economic contribution		Cultural contribution	
	Coefficient	P-value	Coefficient	P-value
AP Negative Economic	-0.377	0.004	-0.501	0.000
AP Negative Cultural	-0.283	0.026	-0.428	0.001
AP Positive Economic	0.115	0.331	-0.038	0.748
AP Positive Cultural	0.029	0.803	0.090	0.460
RP Negative Economic	-0.138	0.276	-0.238	0.061
RP Negative Cultural	-0.160	0.197	-0.341	0.008
DP Positive Economic	0.041	0.740	-0.095	0.454
DP Positive Cultural	-0.067	0.587	-0.079	0.527
Constant	3.543	N/A	3.576	N/A

Table 2: the regression result table showing the regression coefficients between treatment groups and people's level of support for immigration policies, including increasing the number of immigrants, the size of service spending, and border spending and the p-value of each regression coefficient

	Number of Immigrants		Service Spending		Border Spending	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
AP Negative Economic	-0.276	0.059	-0.213	0.177	0.336	0.033
AP Negative Cultural	-0.142	0.353	0.092	0.542	0.431	0.007
AP Positive Economic	0.224	0.124	-0.083	0.584	-0.106	0.505

AP Positive Cultural	0.048	0.748	-0.002	0.988	0.289	0.067
RP Negative Economic	-0.094	0.533	-0.056	0.724	-0.134	0.396
RP Negative Cultural	-0.183	0.192	-0.214	0.148	0.175	0.269
DP Positive Economic	0.073	0.619	-0.069	0.650	0.232	0.145
DP Positive Cultural	0.215	0.161	-0.019	0.902	0.108	0.506
Constant	2.820	N/A	3.323	N/A	3.711	N/A

Table 3: the regression result table showing the regression coefficients between treatment groups and people's willingness to participate in petitions for and against immigrants and the p-value of each regression coefficient

	Petition for immigrants		Petition against immigrants	
	Coefficient	P-value	Coefficient	Coefficient
AP Negative Economic	-0.2465	0.075*	0.1083	0.422
AP Negative Cultural	-0.2001	0.161	0.0725*	0.605
AP Positive Economic	-0.0298	0.827	0.0746	0.577
AP Positive Cultural	-0.1479	0.287	0.2033	0.134
RP Negative Economic	0.0208	0.882	0.1189	0.383
RP Negative Cultural	-0.2375	0.083*	-0.0557	0.686
DP Positive Economic	-0.0003	0.998	0.2219	0.104*
DP Positive Cultural	-0.2054	0.147	-0.0854	0.541
Constant	2.99	N/A	3.475	N/A

Table 4: the regression result table showing the regression coefficients between treatment groups and the extent to which people think immigrants to have economic and cultural contribution to the U.S, and the p-value of each regression coefficient.

	Overall (N=1,770)	Liberal (N=373)	Conservative (N=401)	Moderate (N=996)

Frames \ Coefficient	Economic Attitudes	Cultural Attitudes	Economic Attitudes	Cultural Attitudes	Economic Attitudes	Cultural Attitudes	Economic Attitudes	Cultural Attitudes
AP, Negative Economic	-0.34***	-0.49***	-0.203*	-0.395**	-0.57***	-0.66***	-0.27***	-0.417***
AP, Negative Cultural	-0.21***	-0.43***	-0.52***	-0.384**	-0.074	-0.264	-0.148	-0.387***
AP, Positive Economic	0.139**	-0.038	-0.43***	-0.386**	0.321*	0.140	0.295***	0.059
AP, Positive Cultural	0.056	0.090	-0.41***	-0.117	-0.063	-0.167	0.297***	0.313***
RP, Negative Economic	-0.136	-0.2378	-0.214*	-0.43***	-0.0311	-0.222	-0.147	-0.184*
RP, Negative Cultural	-0.151**	-0.3406	-0.180	-0.369**	-0.352*	-0.66***	-0.022	-0.174**
DP, Positive Economic	0.061	-0.0950	0.0059	-0.105	-0.0659	-0.093	0.145	-0.027
DP, Positive Cultural	-0.0122	-0.791	-0.0267	0.082	-0.323*	-0.265	0.126	0.0004
Partisanship Regression	N/A	N/A	0.788***	0.807***	-0.85***	-0.83***	0.0795	0.0425

*Note: The survey population is stratified into three subgroups by their political ideology.

Table 5: the regression result table showing the regression coefficients between treatment groups and people's level of support for immigration policies in favor of immigrants, and the p-value of each regression coefficient.

	Overall (N=1,770)		Liberal (N=373)		Conservative (N=401)		Moderate (N=996)	
Frames \ Coefficient	Numbers of Immi.	Services spending	Numbers of Immi.	Services spending	Numbers of Immi.	Services spending	Numbers of Immi.	Services spending
AP, Negative Economic	-0.28***	-0.213*	-0.299	-0.183	-0.431*	-0.294	-0.141	-0.133
AP, Negative Cultural	-0.142	0.092	-0.292	0.041	-0.067	-0.076	0.020	0.342***
AP, Positive Economic	0.224*	-0.0883	-0.102	-0.55***	0.281	-0.028	0.375***	0.117
AP, Positive Cultural	0.048	-0.0023	-0.260	-0.65***	-0.228	-0.455*	0.321***	0.471***
RP, Negative Economic	-0.094	-0.056	-0.288	-0.237	0.374*	-0.201	-0.188*	-0.056
RP, Negative Cultural	-0.183*	-0.214*	-0.341	-0.583**	-0.275	-0.398*	-0.034	-0.0373
DP, Positive Economic	-0.073	-0.069	-0.358*	-0.414*	0.190	-0.255	-0.006	0.188
DP, Positive Cultural	0.215*	-0.0192	0.140	-0.007	0.011	-0.47*	0.399***	0.278*
Partisanship Regression	N/A	N/A	0.875***	0.923***	-0.70***	-0.84***	-0.09*	-0.02

*Note: The survey population is stratified into three subgroups by their political ideology.

Table 6: the regression result table showing the regression coefficients between treatment groups and people's level of support for increasing border spending, and the p-value of each regression coefficient.

	Overall (N=1,770)	Liberal (N=373)	Conservative (N=401)	Moderate (N=996)
Frames \ Coefficient	Spending on Border	Spending on Border	Spending on Border	Spending on Border
AP, Negative Economic	0.336***	0.513*	0.225	0.220*
AP, Negative Cultural	0.431***	0.531*	-0.077	0.438***
AP, Positive Economic	-0.106	0.127	-0.331	-0.175
AP, Positive Cultural	0.289***	0.376*	0.225	0.212*
RP, Negative Economic	-0.134	0.072	0.316	-0.148
RP, Negative Cultural	0.175	0.188	0.225	0.109
DP, Positive Economic	0.232*	0.281	0.011	0.232*
DP, Positive Cultural	0.108	0.401*	-0.061	-0.062
Partisanship Regression	N/A	-0.640***	1.173***	-0.404***

*Note: The survey population is stratified into three subgroups by their political ideology.

Table 7: the regression result table showing the regression coefficients between treatment groups and people's willingness to participate in petitions for and against immigrants, and the p-value of each regression coefficient.

	Overall (N=1,770)		Liberal (N=373)		Conservative (N=401)		Moderate (N=996)	
Frames \ Coefficient	Petition For	Petition against	Petition For	Petition against	Petition For	Petition against	Petition For	Petition against
AP, Negative Economic	-0.25***	0.108	-0.561**	0.236	-0.394*	-0.094	-0.027	0.082
AP, Negative Cultural	-0.201*	0.072	-0.320*	0.026	-0.259	-0.001	-0.035	-0.024
AP, Positive Economic	-0.30	0.075	-0.213	-0.129	-0.35	-0.05	0.201*	0.150
AP, Positive Cultural	-0.148	0.203*	-0.361*	0.312	-0.448*	0.034	0.087	0.178
RP, Negative Economic	0.020	0.119	-0.261	-0.041	-0.020	0.069	0.142	0.205*
RP, Negative Cultural	-0.24***	-0.056	-0.561**	-0.114	-0.536*	-0.183	0.029	-0.014

DP, Positive Economic	-0.000	0.222*	0.055	0.287	-0.238	-0.089	0.131	0.276*
DP, Positive Cultural	-0.205*	-0.085	0.202	0.028	-0.63**	-0.33*	0.021	-0.114
Partisanship Regression	N/A	N/A	0.788***	-0.45***	-0.59***	0.799***	-0.11*	-0.027***

*Note: The survey population is stratified into three subgroups by their political ideology.

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