

Moderating Role of Country-of-Origin Stereotypes on Attitudes towards Immigrants^{*}

Boyoon Lee[†]
Vanderbilt University

Abstract

How do country-of-origin stereotypes influence native attitudes towards immigrants? Drawing on dual processing models of stereotypes from social psychology, I present three different ways that country-of-origin stereotypes might moderate how natives respond to information about immigrants. I use a conjoint experiment in Japan to examine how country-of-origin stereotypes related to competence and warmth, the two basic dimensions of stereotypes proposed by Fiske et al. (2002), condition the way that natives evaluate information about immigrant attributes when deciding their willingness to accept immigrants. I find that while negative country-of-origin stereotypes always reduce the value of these attributes, there is little evidence that positive stereotypes, especially as they relate to competence, have any moderating effect. My findings suggest that negative country-of-origin stereotypes weigh more heavily when natives process information that might affect their preferences for immigrant acceptance.

Keywords: anti-immigrant attitudes, country-of-origin stereotypes, survey experiment, conjoint design, Japan

^{*}I thank Ted Chen, Charles Crabtree, Bruce Desmarais, Matt Golder, Sona Golder, Hanno Hilbig, Omer Yalcin, Boliang Zhu, Kirill Zhirkov, and American Political Science Association Annual Meeting & Exhibition 2021 conference attendees for helpful comments. The survey experiment in this paper was approved by the Pennsylvania State University Institutional Review Board (Study number STUDY00014266). This is a part of the project pre-registered at OSF. All data and computer code necessary to replicate the results in this analysis will be made publicly available on my webpage at <https://boyoonlee.com/>

[†]Postdoctoral Fellow, Latin American Public Opinion Project (LAPOP), Vanderbilt University (boyoon.lee.lby@gmail.com).

How do country-of-origin stereotypes influence native attitudes towards immigrants? A growing body of research indicates that beliefs about the characteristics of an immigrant's nation and its members (i.e., country-of-origin stereotypes) affect natives' perception of an immigrant and their willingness to accept immigrants (Ford, Morrell and Heath 2012; Hainmueller and Hangartner 2013; Ostfeld 2017). However, how exactly an immigrant's country of origin stereotypes matter remains unclear and empirical evidence collected so far resorts to an indirect measure of country-of-origin stereotypes such as an immigrant's race or nationality, as well as to North American and Western European context. This paper aims to overcome these limitations and make three contributions to the literature on public attitudes towards immigrants. First, I explain how stereotypes associated with an immigrant's country of origin affect natives evaluation on which immigrants are more acceptable than others. Drawing on dual processing models of stereotyping in social psychology, I claim that pre-existing beliefs about an immigrant's country of origin lead natives to respond differently to information about the immigrant's unique personal attributes (i.e., individuating information). Second, while previous studies rely on an indirect measure of country-of-origin stereotypes such as an immigrant's race or nationality, I introduce a direct measurement of country-of-origin stereotypes, utilizing Stereotype Content Model proposed by Fiske et al. (2002). Finally, I use Japan as a case to test my theory, where prejudice against immigrants is more likely to stem from an immigrant's country of origin than other identity-based classification such as race or ethnicity as in North America or Europe.

I argue that how natives weigh individuating information depends on stereotypes that natives have about where the immigrants come from. In this sense, country-of-origin stereotypes moderate how immigrant attributes are translated into immigrant acceptance. Specifically, country-of-origin stereotypes condition how natives process information about immigrant attributes when evaluating which immigrants they prefer to accept majorly in two ways: natives may reflexively rely on country-of-origin stereotypes upon encountering the country-of-origin cues regardless of individuating information of an immigrant, or use stereotypes

selectively if natives' inferences about an immigrant can be enhanced along with available individuating information.

To examine in which of the two ways country-of-origin stereotypes shape attitudes towards immigrants, I conducted a pre-registered choice-based conjoint experiment in Japan in March 2020. Japan provides a suitable context to test how stereotypes associated with an immigrant's country of origin affect natives' preferences for immigrant acceptance due to three reasons. First, the proportion of the foreign-born population in Japan remains low compared to other developed countries (UN 2015; Green and Kadoya 2015). This implies that Japanese people may experience less interaction with immigrants, thus forming their attitudes based on stereotypes rather than actual experiences or observations of immigrants. Second, a large portion of immigrants in Japan is from other Asian countries, lessening the concern for confounding the stereotypes of race with those of country of origin. Finally, different social groups are acknowledged predominantly based on nationality-based classification.

Leveraging an explicit measure of stereotypes, which directly asks respondents to report their attitudes towards people of a certain group along with either warmth (i.e., how friendly and trustworthy the group appears) or competence (i.e., how capable and intelligent the group appears) dimension (Fiske et al. 2002), I find that Japanese natives do not reflexively use country-of-origin stereotypes to evaluate which immigrant to accept when individuating information is available. While natives overwhelmingly rely on their pre-existing beliefs about an immigrant's country of origin when they hold negative stereotypes (low competence and low warmth), their preferences for immigrant acceptance are more nuanced when natives hold positive stereotypes (high competence and high warmth). Specifically, immigrants with desirable personal attributes are more likely to be welcomed than those with undesirable personal attributes when natives associate an immigrant's origin country with high warmth, but not when with high competence.

My findings provide contributions to larger debate about personal perception and comparative political behavior in three ways. First, my results suggest that individuals may

respond differently to the same immigrants based on their pre-existing beliefs regarding an immigrant’s country of origin. These findings speak to recent studies that underscore the role of prejudice as a moderating factor in explaining attitudes towards immigrants (Bohman, Hjerm and Eger 2019; Clayton, Ferwerda and Horiuchi 2019; Newman and Malhotra 2019). Second, my results imply that individuals are often reluctant to accept new information. In this regard, I call into question the implicit perspectives in the studies using conjoint analysis that individuals automatically accept new information upon presentation. Third, I add to the growing literature on attitudes towards specific immigrant groups, emphasizing how the public conceptualizes immigrant groups in countries with different immigration contexts. Although previous studies based on North America or Western Europe countries overwhelmingly report that prejudice against immigrants is origin-blind (e.g. Hainmueller and Hopkins 2015), my results suggest that, in the Japanese context in which an immigrant group is perceived based on an immigrant’s country of origin, immigrants’ origins may affect their reception.

1 Desirable Immigrant Attributes for Natives

Prior studies on public attitudes towards immigrants in North American and Western European countries have converged on the conclusion that immigrants with “desirable” personal attributes (e.g., high-skill jobs, high education, high language proficiency, and more job experiences) are favored to those with “undesirable” personal attributes (e.g., low-skill jobs, low education, low language proficiency, and less job experiences) because such desirable attributes signal less threats to national identity and norms and more contribution to the national economy and culture (see the following recent review articles: Hainmueller and Hopkins 2014; Ceobanu and Escandell 2010).

An important limitation of these studies, however, is that they do not sufficiently consider that people may be different in their way to interpret immigrant attributes when evaluating

acceptability of an immigrant. In effect, we know from the past scholarship on the impact of individual-level backgrounds and experience that some segment of natives may be disproportionately receptive to the cues of harms and threats and thus natives do not assess immigrants equally. For example, studies find that natives respond differently to the same immigrant attributes depending on their education level (Chandler and Tsai 2001), partisanship (Knoll, Redlawsk and Sanborn 2011), immigrant exposure (Clayton, Ferwerda and Horiuchi 2019), race/ethnicity (Albertson and Gadarian 2013), and prejudice (Sniderman, Hagendoorn and Prior 2004).

My study adds to the growing literature on attitudes heterogeneity among natives on immigrant acceptance by focusing on stereotypes applied to an immigrant's country of origin and how it influences the way that individuals perceive and evaluate different immigrant attributes, thereby operating as a moderator. Certainly, there are prior studies examining the effect of stereotypes on attitudes towards immigrants. Prejudice and stereotypes associated to immigrants may exaggerate cultural distinctiveness between the immigrants and natives (Bordalo et al. 2016). In effect, prior studies find that having undifferentiated prejudice against immigrants in general (i.e., ethnocentrism) (Kinder and Kam 2009) has been consistently connected with negative attitudes towards immigrants (Brader, Valentino and Suhay 2008; Sniderman et al. 2002). In contrast to the consistent findings about the impact of prejudice against immigrants as an undifferentiated mass, however, existing research disagrees about whether and how group-specific stereotypes, especially of an immigrant's country of origin, affect attitudes towards immigrants (Ostfeld 2017; Hainmueller and Hangartner 2013; but Hainmueller and Hopkins 2015).

The disagreement on the importance of group-specific stereotypes may be due to several theoretical and empirical problems. First, existing research does not articulate precisely how pre-existing beliefs about a specific country-of-origin affect attitudes towards immigrants. The experimental design used in these studies aims to isolate the effect of country-of-origin stereotypes from other influential explanations such as expectations of economic contribu-

tions or adherence to national identity. However, the design does not account for another possible process through which country-of-origin stereotypes may operate – how natives respond differently to information about immigrants depending on pre-existing beliefs about an immigrant’s country of origin. Second, the effect of stereotypes associated with an immigrant’s origin has frequently been measured indirectly using an immigrant’s race or country of origin (Hainmueller and Hopkins 2015; Hainmueller and Hangartner 2013; Valentino, Brader and Jardina 2013; Iyengar et al. 2013). The measurement through race or nationality, however, may reflect not only beliefs about typical characteristics of a given racial or national group but also economic and cultural expectations related to the group such as personal income, educational attainment, and native language proficiency. In addition, using such measure assumes that individuals in a society hold similar stereotypes against a given race or nationality. Lastly, existing studies predominantly focus on North American and Western European attitudes where immigrants are relatively heterogeneous in terms of their phenotypical or physical features because they are coming from different regions of the world. This regional context suggests that previous research may not have successfully distinguished the impact of stereotypes based on one attribute (e.g., race) from another (e.g., country of origin).

To address these limitations, this paper outlines how country-of-origin stereotypes influence how natives process information about immigrant attributes. Then, in the study design section, I overcome empirical limitations by measuring group-specific stereotypes with a more direct and explicit measurement of stereotypes based on Fiske et al. (2002) and by testing my theoretical implications in a Japanese context where different social groups are recognized mainly based on nationality.

2 How Country-of-Origin Stereotypes Work as a Moderator

Natives determine their preferences for immigrant acceptance in part based on country-of-origin stereotypes, i.e., their beliefs about certain characteristics or feelings associated with nations and their members (Barbarossa, De Pelsmacker and Moons 2018). When exposed to a country-of-origin cue, stereotypes related to the specific country can be activated without conscious effort to achieve them (Liu, Johnson and Johnson 2005), which in turn affect individual evaluations towards different groups (Cuddy, Fiske and Glick 2008). For example, Americans may associate Japanese people with being hardworking (Stokes 2015*a*), and thus expect that individuals coming from Japan they encounter will have these qualities.

Evaluating prospective immigrants, however, is not solely based on the automatic reflection of country-of-origin stereotypes. According to a dual process model of stereotyping, stereotypes influence judgments and behaviors through two distinct cognitive processes: automatic (i.e., theory-driven) and controlled (i.e., data-driven) processing (Devine 1989; Blair and Banaji 1996). On the one hand, individuals may perceive and respond to the world automatically, using preconceived notions and ideas outside of conscious awareness. On the other hand, individuals may also perceive and respond to the world by deliberately taking into account other factors. In forming opinions and attitudes, these two processes work together to ultimately determine the attitudes of an individual.

During the past several decades, researchers have predominantly considered stereotypical responses to be the consequence of automatic processing because they involve drawing a quick inference from what we (think) already know of a certain social category to interpret new information (e.g., Banaji and Hardin 1996; McCrea, Wieber and Myers 2012). Activated automatically with little effort, automatic processing may influence individual judgments outside of consciousness, regardless of their relevance to information or context (Hamilton and Sherman 1996; Goren 2003). For example, Chen and Bargh (1997) showed in

their laboratory experiment that a very quick exposure to photographs of a Black face activated stereotypes of Black people among white subjects, leading them to behave aggressively toward the next person they encountered even if that person was white. In other words, this model suggests that, when natives perceive an immigrant, salient stereotypes pertaining to an immigrant's country of origin will be activated automatically. The activated stereotypes then guide immigrant evaluation, even when information about immigrant attributes goes against the pre-existing beliefs. Based on this logic, I posit that natives interpret information on immigrant attributes in a way that conforms to stereotypes associated with an immigrant's country of origin. Specifically, I expect that negative stereotypes associated with an immigrant's country of origin are likely to result in negative evaluations of the immigrant, while positive images of the country will lead to positive evaluations of the immigrant, regardless of specific information on the immigrant desirability based on their attribute values.

Absolute Stereotype Hypothesis: Regardless of information on immigrant desirability, immigrants will be more (less) likely to be accepted when natives hold positive (negative) stereotypes of their country of origin than when natives hold neutral views towards it.

However, recent scholarship in social psychology emphasizes that stereotypes have not only automatic but also controlled processing components (Payne 2001; Huntsinger et al. 2010). Rather than allowing stereotypes pervade all evaluations, people may engage in deliberate a decision-making process relying on the information of a specific case (Fiske and Neuberg 1990). This suggest that stereotypes may change the interpretation of individuating information when evaluating immigrant acceptance. That said, because controlled processing requires more cognitive resources and take more time to produce a response, it can be utilized only selectively to elaborate on information that has the potential to significantly increase decision quality (Nadler and Voyles 2020).

Two major cases – in which both automatic and controlled processes simultaneously contribute to individual judgements and behaviors – can be identified as ways of enhancing decision quality about immigrant acceptance. First, automatically activated stereotypes

upon encountering a member of a specific immigrant group may dominate the evaluation of an immigrant when holding negative stereotypes, but not when holding positive ones. This is because the consequences of not meeting negative stereotypes are greater than that of not meeting positive stereotypes. Failing to meet the positive stereotypes, by assessing negatively an immigrant attribute, is only disappointing but not harmful. However, failing to meet the negative stereotypes, by assessing positively an immigrant attribute, can result in threats to in-group members (Baumeister et al. 2001). In other words, natives may ignore information from immigrant attributes and rely extensively on pre-existing beliefs when they have negative stereotypes because such negative affect may signal a potential threat to the immediate environment and a necessity to address such threat (Schwarz and Clore 1983). This implies that the effect of immigrant attributes on preference for immigrant acceptance differs by stereotype valence. Specifically, this leads to an expectation that natives with negative stereotypes towards an immigrant's country of origin may impose tougher standards for immigrants than those with neutral views, whereas natives with positive stereotypes may not employ more lenient standards for immigrants than those with neutral views.

Valence Hypothesis: Regardless of information on immigrant desirability, immigrants will be less preferred to be accepted when natives hold negative stereotypes than when natives hold a neutral view towards an immigrant's country of origin. However, immigrant acceptability will not differ between natives with positive stereotypes and those with a neutral view.

Second, natives may attend to an immigrant's individuating information that is stereotype-consistent but ignore information that is stereotype-inconsistent. Since individuals turn to stereotypes because it is an easier method of processing and requires less cognitive resources, they need motivations in order to re-examine their initial beliefs. In particular, studies find that people tend to rely less on automatic processing and more on controlled processing when the information at hand does not fit stereotypes (Huddy and Terkildsen 1993). Indeed, there is evidence in the racial stereotype literature that individual political judgments depend on whether the information at hand matches the existing stereotypes on race (Bobo

and Kluegel 1993; Sniderman and Carmines 1997). Also, a classic study by Darley and Gross (1983) demonstrate that people evaluate a child’s intellectual abilities differently depending on whether they had been led to believe that the child came from a high or low socioeconomic background, even though they saw the same video of the child taking an academic test. This leads to an expectation that the effect of immigrant attributes on preference for immigrant acceptance depends on whether stereotypes aligns with the immigrant desirability inferred from immigrant attributes.

Attribute Matching Hypothesis: Preference for immigrant acceptance will depend on whether the information from immigrant attributes matches prior beliefs about an immigrant’s country of origin. In other words, immigrants with desirable (undesirable) attributes will receive a stronger (weaker) preference for acceptance when natives hold positive (negative) stereotypes than when natives hold a neutral view.

2.1 Observing Moderation by Country-of-Origin Stereotypes

I can test the above-mentioned three hypotheses by comparing the attitudes of natives holding positive or negative stereotypes against an immigrant’s country of origin with those holding neutral views, at varying individuating information. Specifically, I do so by looking at six quantities of interest as shown in Panel A of Table 1. The letter in each cell corresponds to the average preference for immigrant acceptance across natives with the stereotypes (denoted in the columns) that are confronted with individuating information (denoted in the rows). In Panel B of Table 1, I show how these quantities of interests map into expectations from each of my hypotheses.

If there is no moderating effect of country-of-origin stereotypes, then I expect to observe that the mean preference for immigrant acceptance facing desirable individuating information under positive stereotypes (denoted POS_D) should be equal to the mean preference for immigrant acceptance facing the same information under neutral views (denoted NTR_D). Following similar logic, the mean preference facing undesirable individuating information under positive stereotypes (denoted POS_U) should be equal to the mean preference facing

Table 1: Necessary Data and Hypotheses for Observing the Moderating Effect of Stereotypes

| A. Necessary Data | | Preferences for Immigrant acceptance under: | | | Expectation |
|--------------------------------|-------------|---|---------|----------------------|------------------------|
| | | Positive stereotypes | Neutral | Negative stereotypes | |
| Individuating Information | Desirable | POS_D | NTR_D | NEG_D | |
| | Undesirable | POS_U | NTR_U | NEG_U | |
| B. Hypotheses | | | | | |
| No Effect (Null) | | POS_D | $=$ | NTR_D | $POS_D - NTR_D = 0$ |
| | | | | $NTR_D = NEG_D$ | $NEG_D - NTR_D = 0$ |
| | | POS_U | $=$ | NTR_U | $POS_U - NTR_U = 0$ |
| | | | | $NTR_U = NEG_U$ | $NEG_U - NTR_U = 0$ |
| Absolute Stereotype Hypothesis | | POS_D | $>$ | NTR_D | $POS_D - NTR_D > 0$ |
| | | | | $NTR_D > NEG_D$ | $NEG_D - NTR_D < 0$ |
| | | POS_U | $>$ | NTR_U | $POS_U - NTR_U > 0$ |
| | | | | $NTR_U > NEG_U$ | $NEG_U - NTR_U < 0$ |
| Valence Hypothesis | | POS_D | \geq | NTR_D | $POS_D - NTR_D \geq 0$ |
| | | | | $NTR_D > NEG_D$ | $NEG_D - NTR_D < 0$ |
| | | POS_U | \geq | NTR_U | $POS_U - NTR_U \geq 0$ |
| | | | | $NTR_U > NEG_U$ | $NEG_U - NTR_U < 0$ |
| Attribute Matching Hypothesis | | POS_D | $>$ | NTR_D | $POS_D - NTR_D > 0$ |
| | | | | $NTR_D \geq NEG_D$ | $NEG_D - NTR_D \leq 0$ |
| | | POS_U | \geq | NTR_U | $POS_U - NTR_U \geq 0$ |
| | | | | $NTR_U > NEG_U$ | $NEG_U - NTR_U < 0$ |

the same information under neutral views (denoted NTR_U). The same should be true for negative stereotypes: NTR_D should be equal to NEG_D , and NTR_U should be equal to NEG_U .

Alternatively, the absolute stereotype hypothesis proposes that natives automatically rely on stereotypes upon encountering the country-of-origin cues and thus pre-existing beliefs about an immigrant's country of origin dominate their judgments and attitudes. If this is true, then regardless of the desirability of individuating information, natives with positive stereotypes should show higher preferences for immigrant acceptance than those with neutral views: POS_D should be significantly larger than NTR_D , and POS_U should be larger than NTR_U . The same logic applies to negative stereotypes. Natives with negative stereotypes should always show less preference for immigrant acceptance than those with neutral views:

NTR_D should be larger than NEG_D , and NTR_U should be larger than NEG_U .

If the valence of stereotypes matters for individuals to decide whether to follow pre-existing beliefs about an immigrant's country of origin when evaluating the importance of immigrant attribute values on immigrant acceptability, then it is expected that POS_D would be greater than or equal to NTR_D , and that POS_U would be greater than or equal to NTR_U . In other words, positive stereotypes may or may not have a significant influence on how natives process information about immigrant attributes because the consequences of not meeting such stereotypes are insubstantial. In contrast, due to deleterious consequences when failing to meet the negative expectation, I expect to observe NTR_D greater than NEG_D , and NTR_U greater than NEG_U .

Stereotypes may have a significant effect when individuating information matches pre-existing beliefs on an immigrant's country of origin, as the Attributes Matching Hypothesis proposes. In this case, immigrants with individuating information that align with positive (negative) country-of-origin stereotypes receive more (less) support for acceptance: POS_D should be greater than NTR_D and NTR_U should be greater than NEG_U . However, because dual processing models do not suggest any specific prediction about how stereotypes work when immigrant attribute values contradict stereotypes, I hold simply that NTR_D should be greater than or equal to NEG_D , and POS_U should be greater than or equal to NTR_U .

3 Empirical Design

As explained in the previous section, I seek to assess how country-of-origin stereotypes moderate the effect of immigrant attributes on attitudes towards immigrants, by examining how natives interpret an immigrant's individuating information differently depending on pre-existing beliefs related to an immigrant's country of origin. I do so using a conjoint experimental design in a survey conducted in Japan.

3.1 Case Selection

Japan presents a theoretically useful case to advance our understanding of immigrant attitudes based on stereotypes of an immigrant's country of origin. Although there is a growing interest in immigration in Japan due to the fast-aging society, Japan is still relatively closed to immigrants. In effect, the proportion of the foreign-born population compared to the population in Japan is less than 2%, which is far less than other traditional destination countries such as the U.S. (about 14%) or Germany (about 15%) (UN 2015). This implies that Japanese people have less actual contact with immigrants, which gives me confidence that the responses from Japanese people will be less likely coming from their real experience or observation of immigrants who are already in Japan, but from their *stereotypes* on different immigrant groups.

Also, according to the Statistics Bureau of Japan, about 74% of foreign residents in Japan as of 2019 come from Brazil or other Asian countries, particularly from China, South Korea, Vietnam, the Philippines, and Nepal.¹ The physical similarity of these Asian immigrants to Japan indicates that ascriptive characteristics such as race or ethnicity do not provide a useful category to divide immigrants into groups. This suggests that there would be less concerns about triggering stereotypes of race and ethnicity when an immigrant's country of origin is presented.

Finally, negative attitudes based on an immigrant's country of origin are widespread in Japan. Although both China and Korea are culturally most similar compared to any other countries in Asia, sharing similar language structure, race, ethnicity, and religions, Japanese attitudes towards the two countries are predominately negative due to geographic and historical disputes (Stokes 2015*b*). Other evidence also suggests that there is substantial variation in Japanese attitudes towards foreigners depending on their origin countries, even among immigrants from similar regions (Zhang 2018).

In sum, the case of Japan allows me to test the role of stereotypes in a context where the

¹Statistics Bureau of Japan, Retrieved September 01, 2021, from <https://www.stat.go.jp/>

impact of actual immigrant exposures and interactions on native attitudes is limited, yet the immigration issue is still visible and salient. Also, Japanese natives hold different attitudes towards immigrant groups depending on their country of origin, providing an appropriate context to test whether individual stereotypes towards an immigrant’s country of origin hold the potential to moderate immigrant acceptance preferences.

3.2 Sample

My data come from a nationally representative survey of Japanese citizens administered by Nikkei Research between 16 March 2020 to 25 March 2020.² Being an official survey firm of the Nikkei Newspaper, Nikkei Research is the largest survey firm in Japan and is internationally acclaimed for its large and high-quality online and offline panels. To obtain a reasonably good approximation of the general population, they recruited a sample using quotas on key demographic variables: age, gender, location, and income. The selected respondents were then asked to participate in the online survey, excluding those who were under 18 years of age and who were not Japanese natives. This yielded a total of 1,644 responses. Among those who responded to the survey, about 9 respondents did not provide their opinion on which hypothetical immigrant they prefer for at least one pair of immigrants. Excluding these responses, the resulting number of observations included in this study is 16,374.³ I provide descriptive statistics on the sample and details on survey administration in the Appendix C.

3.3 Survey Design

I use a choice-based conjoint experimental design in which respondents are asked to choose one immigrant, between each pair of immigrants, that they prefer to accept based on ran-

²For a more detailed discussion of the timing of the experiment and how it might substantially affect results, see the Appendix C.

³My conjoint experiment includes two profiles per task and five tasks. The number of observations expected, therefore, was $2 \text{ profiles} \times 5 \text{ tasks} \times 1,644 \text{ respondents} = 16,440$. However, 66 observations were dropped due to no response for preferred immigrant on at least one hypothetical pair of immigrants. This yields the resulting number of observations of $16,440 - 66 = 16,374$ observations. I show the relationship between the number of respondents and statistical significance in the pre-registered plan registered at OSF.

domly generated values of attributes. Specifically, each of the theoretically-chosen immigrant attributes is manipulated within a table comparing two pairs of immigrants. After respondents read about the details of two immigrant profiles displayed in a table, they are then asked to indicate which of the two immigrants they would prefer to come to Japan.

The use of a choice-based conjoint design provides several advantages. First, it allows me to account for a range of theoretically relevant immigrant attributes. Contrary to traditional factorial experimental approaches where only one or two immigrant attributes are manipulated, a conjoint design manipulates many attributes at once, which reduces the concerns about potential confounding attributes that can be left out in the experiment (Hainmueller, Hopkins and Yamamoto 2014). Second, it simplifies the decision tasks for respondents by forcing them to select someone to accept and someone else to reject. This decreases the possibility of interpreting the meaning of scale points differently, which may lead to different responses even though respondents may have similar underlying attitudes (Krosnick and Presser 2009). Lastly, the design allows me to investigate the interactions between immigrant attributes and respondent characteristics. These interactions provide opportunities to test the main hypotheses of this paper, e.g., the effect of immigrant attributes on immigrant acceptability depending on their pre-existing beliefs about an immigrant's country of origin.

In the first part of the survey, respondents who consented to participate in the online survey were first directed to answer a series of demographic questions such as sex, age, and marital status. Next, questions regarding stereotypes on eleven countries, which are the same set of countries included in the conjoint experiment, were asked to capture pre-existing stereotypes against those countries. The order of countries was assigned randomly. Then, a host of questions about respondents' personalities, ethnocentrism, and perceptions of immigrant integration were asked before beginning the conjoint tasks.

In the last part of the survey, respondents were informed that they would be asked to compare five pairs of hypothetical immigrant profiles. In each case, the eight attributes for each profile were presented with randomization. Following Hainmueller and Hopkins (2015)'s

practice, the order of the attributes was also randomized across respondents to account for potential order effect, while remaining constant for each respondent. Following each conjoint table, respondents selected which of the two hypothetical immigrants they prefer to accept.⁴ By asking stereotype questions at the beginning of the survey and conjoint tasks at the end of the survey, I sought to reduce the chances that the preference for immigrants would be affected by country-of-origin stereotype questions.

3.4 Survey Instrument

Immigrant Preference My main dependent variable is *Immigrant Preference*, which is based on the following question “If you had to choose between the two immigrants, which one would you prefer to come to Japan?” It is coded 1 if a given immigrant profile is preferred and 0 otherwise. This question forces respondents to make a trade-off between specific attributes of immigrants, as one profile must be selected and the other rejected.

Immigrant Attributes. In the experiment, I manipulate eight attributes of an immigrant: *Profession, Highest education, Language skill, Number of native friends, Migration motivation, Gender, Religious affiliation, and Country of origin.* Each of the immigrant attributes chosen and the values within them were decided based on the existing literature addressing the factors influencing attitudes towards immigrants (e.g. Hainmueller and Hopkins 2015). The eight attributes about immigrants are presented to respondents with values randomly chosen from their potential value sets.⁵ Table 2 provides the full list of attributes and values. Details of each attribute are also discussed in the Appendix C.

Moderator: Country-of-Origin Stereotypes. I measure country-of-origin stereotypes following the Stereotype Content Model. While a stereotype associated with a country can be diverse, ranging from social qualities such as amicable or active to economic qualities such

⁴See the Appendix C for a sample conjoint table presented to respondents.

⁵To rule out seemingly atypical profiles in the real-world setting, I include randomization constraints on implausible combinations of immigrant attributes. See the Appendix C.

Table 2: Attributes for Immigrant Profiles in Conjoint Experiment

| Attributes | Values |
|--------------------------|--|
| Profession | Cleaner/Helper |
| | Construction worker |
| | Waiter |
| | Food processing worker |
| | School Teacher |
| | Hotel Staff |
| | Computer Programmer |
| | Professor |
| Highest Education | No formal education |
| | Middle school or lower |
| | High school |
| | Two year college |
| | Four year college degree |
| Language skill | A Graduate degree |
| | Cannot speak Japanese at all |
| | Cannot speak well and sometimes incomprehensible |
| | Can speak, but with broken Japanese |
| | Can speak well |
| Number of native friends | Can speak very fluent Japanese |
| | None |
| | One to Two |
| | Three to Five |
| Migration motivation | More than Five |
| | To work in a better condition |
| | To live with spouse/partner |
| | To return home as a Japanese descendant |
| Gender | To escape political/religious persecution |
| | Male |
| Religious affiliation | Female |
| | No religion |
| | Buddhism |
| | Christianity |
| Country of Origin | Shinto (Folk Religion) |
| | Islam |
| | China |
| | South Korea |
| | Philippines |
| | Vietnam |
| | Brazil |
| | U.S. |
| | Germany |
| | Romania |
| | Turkey |
| Iran | |
| Nigeria | |

as hardworking or lazy, the SCM proposes that those various beliefs about a country can be grouped into two primary dimensions: warmth and competence (Fiske et al. 2002).

When people interact with others, they are mainly interested in finding out what others' goals are in relation to their goals (warmth) and whether they are capable of realizing those goals (competence). In this regard, country-of-origin warmth refers to an immigrant country's intentions, and includes the notions of good-naturedness, friendliness, and kindness (Fiske, Cuddy and Glick 2007). Country-of-origin competence, on the other hand, describes an immigrant country's ability, and is captured by notions such as capability, efficiency, and intelligence (Barbarossa, De Pelsmacker and Moons 2018). Although the two dimensions of warmth and competence are not all-encompassing, scholars have shown their applicability to a variety of contexts (Aaker, Vohs and Mogilner 2010) and their stability across different countries (Cuddy, Fiske and Glick 2008), describing warmth and competence as the "fundamental" dimensions of intergroup perceptions (Cuddy, Fiske and Glick 2007).

I use survey items proposed by Fiske et al. (2002) to measure the degree of perceived competence and warmth regarding eleven countries of origin selected for the hypothetical immigrant profiles. Specifically, following Fiske et al. (2002)'s practice, respondents were instructed to rate, using 5-point scales (1 = *not at all* to 5 = *extremely*), on how each country is viewed by most people in Japan regarding attributes about competence and warmth. The competence-related attributes included *Capable*, *Efficient*, *Intelligent*, and *Competent*, while the warmth-related attributes were *Friendly*, *Good-natured*, *Kind*, and *Warm*. I code the responses to the items in a categorical variable, *Competence* or *Warmth*, which is *High* if the average of attributes related to the presented country of origin in a profile is scored higher than 3, *Neutral* if the average is equal to 3, and *Low* if the average is less than 3. I use 3 = *moderately* as the standard to classify the degree of competence and warmth because it represents neither favorable nor unfavorable opinions about the given attributes. The answer options include *Don't know*, which would separate the respondents who would be indifferent in answering the questions from those who have neutral opinions. The resulting distribution

of competence and warmth by countries of origin as well as demographic distributions of respondents by these measures are shown in the Appendix C.

To further test the robustness of the results using the median-based allocation of respondents into high, neutral, and low groups, I also conduct analyses using an alternative grouping measure that classifies respondents into the three groups based on the first component of principal component analysis from the original categorical variables.

3.5 Analysis

I analyze the effect of stereotypes on immigrant preferences by comparing preferences across different subgroups based on perceived competence and warmth.⁶ As noted in recent studies, presenting the differences in the Average Marginal Component Effect for subgroups analysis would yield a misleading representation of the patterns of preferences because the differences may be sensitive to which reference category is chosen (Leeper, Hobolt and Tilley 2020; Clayton, Ferwerda and Horiuchi 2019). To avoid this problem, I calculate marginal means, which indicate the mean preference for selecting immigrant profiles with a particular attribute value, for each subgroup and take their differences. This is done by first dividing respondents into subgroups based on moderator variables, i.e., perceived competence and warmth toward an immigrant’s country of origin. Then, I calculate marginal means for each subgroup and each attribute value by taking an average of the level of preference for a particular attribute value. I then take the differences in these marginal means between subgroups and calculate confidence intervals using OLS clustered standard errors by the respondent.

⁶I also calculate the Average Marginal Component Effect (AMCE) for each attribute and level (Hainmueller, Hopkins and Yamamoto 2014). The ACME for each immigrant attribute is how the characteristic affects the immigrant’s probability of being preferred for acceptance. The results shown in the Appendix C indicate that the aggregated preferences among Japanese are similar to those among North Americans or Western Europeans.

4 Results

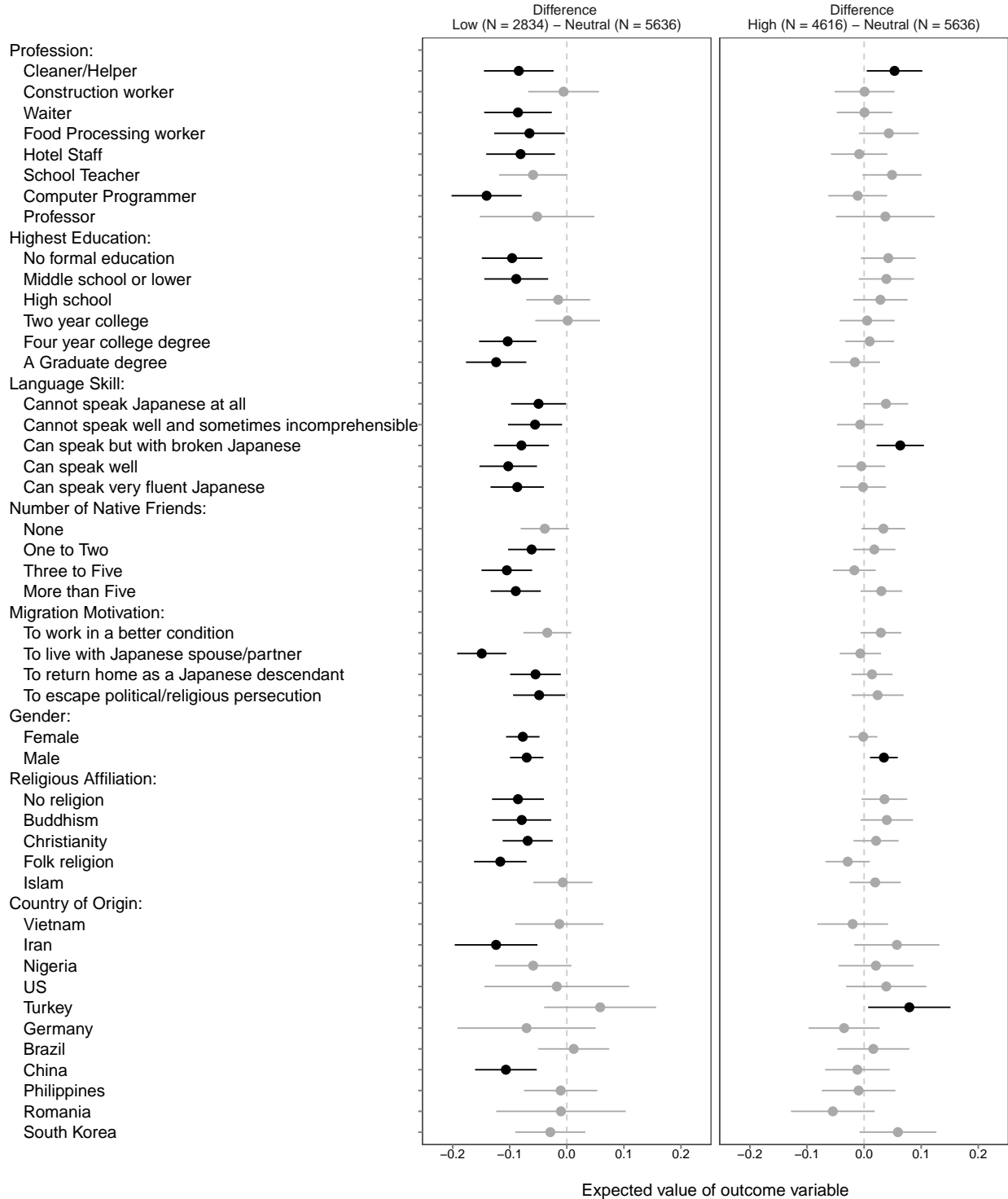
I show how Japanese preferences for immigrant acceptance differ by their country-of-origin stereotypes, using the level of perceived competence and warmth associated with an immigrant's country of origin.

4.1 Perceived Competence

I first test the measure that approximates the stereotypes related to an immigrant country's competence. I split the respondents according to whether they show above-median, median, or below-median level of perceived competence towards an immigrant's country of origin. Since the median level indicates a neutral perception, i.e., no particular stereotypes, I use the median level as a baseline to compare the influence of being stereotyped as highly competent (above-median, or positive stereotypes) or not competent (below-median, or negative stereotypes). Figure 1 presents the differences in the estimated marginal means for each subsample of respondents. Specifically, each panel shows the difference between the probability of selecting immigrant profiles with a particular attribute-level for respondents who hold negative stereotypes and neutral view (left panel), and those who hold positive stereotypes and neutral view (right panel). In this plot, estimates above zero (to the right of the dashed line) indicate that respondents associating the immigrant's country of origin with low or high competence prefer to accept immigrants with the given attribute-level more often than respondents reporting neutral view in competence. Conversely, the estimates below zero (to the left of the dashed line) indicate the opposite – respondents with low or high competence prefer less to accept immigrants with the attribute-level. Estimates that are statistically significant at the 0.05 level are marked in black.

As Figure 1 shows, I find clear differences in preferences between respondents with low and neutral competence across most of the immigrant attribute values. Respondents who evaluated low on competence for the presented immigrant's country of origin show generally

Figure 1: Differences in immigrant attribute preferences among respondents with a low (below median), neutral (median), and high (above median) perceived competence towards an immigrant's country of origin. The differences which are statistically significant at the 0.05 level are highlighted in black. Observations with no response to country-specific stereotype questions are not included in the analysis.



a lower average likelihood of selecting a profile with most of the given attribute values. This indicates that respondents holding negative views on the origin country's competence impose a penalty for immigrant acceptance regardless of specific information based on individual immigrant's attribute values.

Contrary to the results comparing subgroups with low and neutral competence, there are only a few differences between respondents with high and neutral competence. Figure 1 indicates that respondents who evaluate the immigrant's country of origin as highly competent do not differ too much in their preference to those with neutral competence for most of the immigrant attribute values. That said, there are some immigrant characteristics that show statistically significant differences. For example, respondents with high competence prefer immigrants who are cleaner or helper, speak broken Japanese, and are male more than other respondents. As I discuss in the robustness check section, however, these immigrant attributes do not appear to be significantly different from a random selection, suggesting that the pattern may be due to chance.

It is worth mentioning that, while the country of origin attribute in general does not show significant differences between respondents who hold any preconceptions (either negative or positive) and those who do not hold particular preconceptions about competence of an immigrant's country of origin, there are still some countries that matter for respondents' evaluation even after taking into account the country-of-origin stereotypes. In particular, respondents with negative stereotypes against China's competence show lower preferences for a Chinese immigrant compared to those with neutral view towards China's competence. The difference is robust to other alternative specification, which I demonstrate in the robustness check section as well as in the appendix. This result indicates that country-of-origin effect is not entirely attributed to country-of-origin stereotypes – while the perceived warmth and perceived competence dimensions of country-of-origin stereotypes underlie country-of-origin effects, there may be other factors such as cultural orientation, expertise, or ethnocentrism that are incorporated into immigrant's country-of-origin effect. In this regard, this study

highlights the importance of the direct measurement of country-of-origin stereotypes in understanding the influence of country-of-origin stereotypes and their contents on immigrant evaluation.

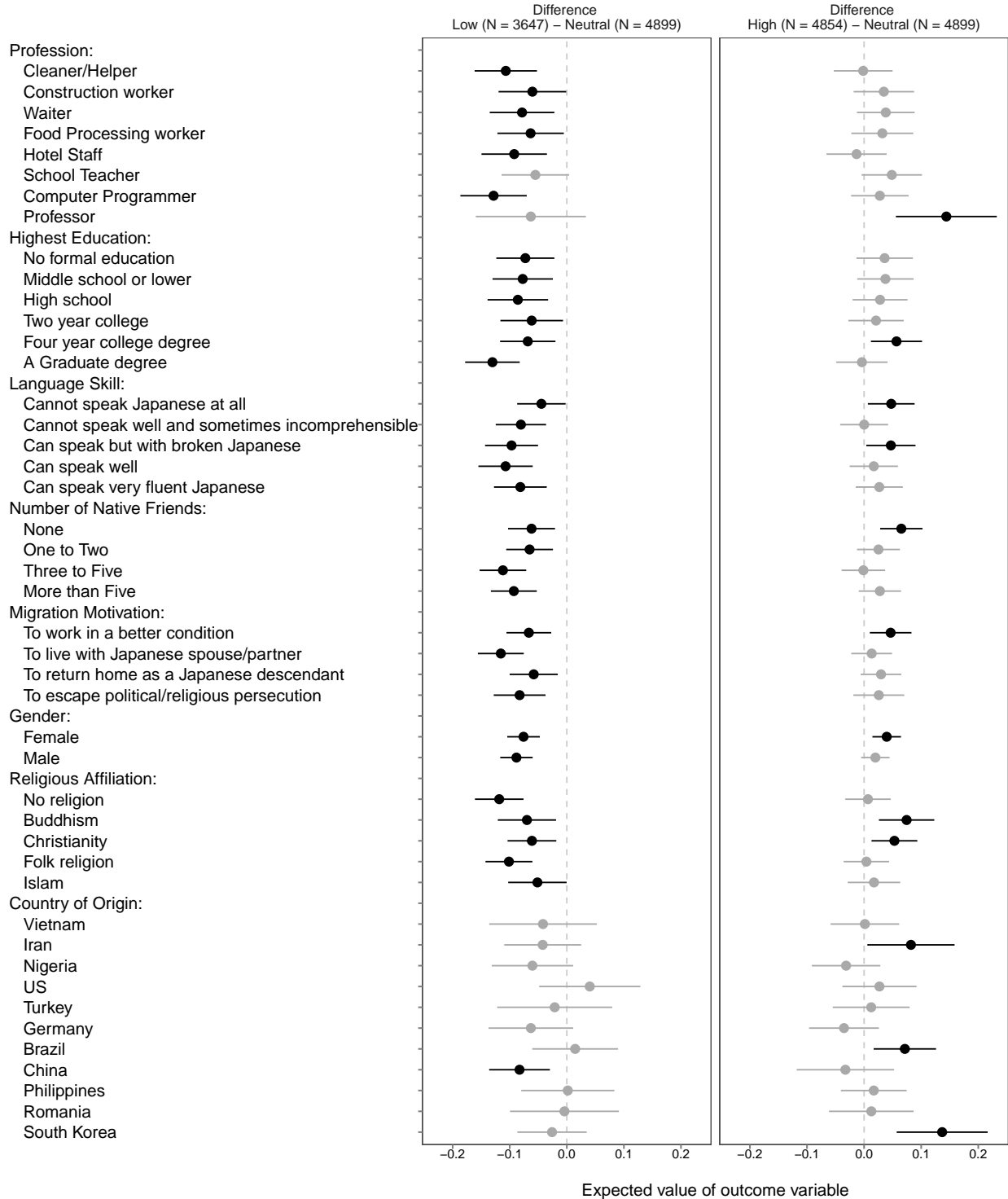
Taking together, these results from Figure 1 contradict the absolute stereotype hypothesis that automatically activated stereotypes guide the evaluations of immigrants entirely. Rather, the findings are consistent with the valence hypothesis – while the preference for immigrant acceptance under positive stereotypes on competence does not significantly differ from the preference under neutral stereotypes, negative stereotypes on competence lead to significantly less preference for immigrant acceptance on most of the attribute values than neutral stereotypes. In addition, the attribute matching hypothesis is not supported given that the alignment between the desirability of immigrant attribute values and the valence of stereotypes does not systematically increase or decrease the probability of being accepted.

4.2 Perceived Warmth

Next, I test the warmth dimension of country-of-origin stereotypes. Similarly to the analysis regarding the competence dimension, I first divide the respondents into three groups: high (above-median), neutral (median), and low (below-median) level of perceived warmth. As shown in the left panel in Figure 2, negative prior beliefs seem to have a significant effect on how natives interpret immigrant attributes when evaluating preference for acceptance over most attribute values. Respondents who associate an immigrant’s country of origin with low warmth choose immigrants at lower rates in most attributes values than respondents who hold neutral views on warmth. Consistent with the results from preferences between low versus neutral competence, this finding suggests that negative stereotypes generally lower the likelihood of immigrant acceptance regardless of information inferred from immigrant attributes.

In contrast, the right panel in Figure 2 shows that the differences in estimated marginal means between respondents with high and neutral warmth do not differ in many immigrant

Figure 2: Differences in immigrant attribute preferences among respondents with a low (below median), neutral (median), and high (above median) perceived warmth towards an immigrant's country of origin. The differences which are statistically significant at the 0.05 level are highlighted in black. Observations with no response to country-specific stereotype questions are not included in the analysis.



attribute values. That said, there is a particular pattern that Japanese natives who associate an immigrant's country of origin with high warmth – they seem to reward desirable individuating information. Respondents with high warmth prefer immigrants with a high-skill job such as a professor more than those with a neutral level of warmth. Similarly, natives with high warmth are more likely to prefer immigrants who are four-year college graduates, female, and Buddhist or Christian. I also find an opposite pattern of forgiving undesirable values in language, the number of native friends, migration motivation, and country of origin attributes. However, as I show in subsequent robustness checks, the differences in these attributes remain robust to alternative specifications only for the profession, the number of native friends, gender, and religion attributes. This indicates that the tendency for awarding desirable individuating information is rather robust compared to the tendency for forgiving undesirable individuating information.

Similarly to the stereotypes on competence, the difference between those who hold stereotypes warmth and those who do not is not significant. Although Japanese natives with stereotypes discriminate more against Chinese immigrants and favor more for Brazilian or South Korean immigrants, these results are not robust to alternative specifications. This suggests that country-of-origin effects are mostly explained by country-of-origin stereotypes.

The findings from the warmth dimension of stereotypes again show that natives do not blindly follow pre-existing beliefs about an immigrant's country of origin, rejecting the absolute stereotype hypothesis. Also, consistent to the competence dimension of stereotypes, the results support the valence hypothesis that negative stereotypes matter, whereas positive stereotypes generally do not. Positive prior beliefs on the warmth of an immigrant's country of origin have very limited influence over preferences for immigrant acceptance. One interesting difference from the competence dimension is, however, that when holding positive stereotypes of warmth, there seem to be a systematic increase in the probability of being accepted for immigrants with desirable individuating information. This evidence partially supports the attribute matching hypothesis – while there is no evidence that undesirable

individuating information of an immigrant when holding negative stereotypes lower preferences for immigrant acceptance, desirable individuating information of an immigrant when holding positive stereotypes induce greater preferences for immigrant acceptance compared to when holding neutral views.

4.3 Robustness Checks

These findings are robust to a variety of alternative specifications. First, I look at whether the results come about by chance by examining the relative salience of each attribute for each subgroup of respondents based on Clayton, Ferwerda and Horiuchi (2019)'s measure. According to this measure, a low (high) attribute salience means that the probability of choosing a profile is not so much (substantially) different from choosing one profile at random for most levels of a given attribute. I estimate attribute salience by subgroups of competence and warmth. As shown in Appendix C.1, the results corroborate the findings that negative stereotypes lower the probability of accepting immigrants regardless of immigrants characteristics. In both warmth and competence dimensions, many immigrant attributes are salient to those with negative stereotypes, compared to those with neutral views. In contrast, the salience of positive stereotypes in the warmth dimension show differences to those in the competence dimension. While perceiving an immigrant's country of origin as highly competent do not show significant increase in the probability of immigrant acceptance, Japanese natives who associate an immigrant's country of origin with high warmth place importance on attributes of religion, profession, gender, and the number of native friends when considering immigrant acceptance, as compared to natives with neutral warmth.

In addition to the attribute salience analysis, I use alternative classifications of high, neutral, and low competence (warmth) groups to reassure the heterogeneity in immigrant acceptance. Although the main findings suggest that the levels of competence and warmth affect preferences for immigrant acceptance, it is possible that the results may be driven by how high, neutral, and low levels are measured. To see whether the main results were

found mainly due to the way the moderator variable was constructed, I implement two additional analyses to examine heterogeneous effects using alternative indicators of the levels of competence and warmth.

First, I conduct analyses using the first component of the competence and warmth scores as an alternative moderator. By simply taking the average of four individual item ratings, the original stereotype scores assume that the four items are measuring for one underlying factor, the perceived competence (or warmth) of the presented country of origin. The principal component analysis show that the items measuring each dimension are very closely related – the percentage of variance explained for the first component was approximately 83%. Also, the results using the first component value as a new measure hold the same as the main findings, as shown in Appendix C.2.

Second, I run an OLS regression on the first principal component score using some variables as independent variables, which are expected to be related to natives' levels of stereotypes. These include demographic variables such as gender, age, subjective income level, and education as well as attitudinal variables such as ideology and number of foreign friends. I then take the residual of this regression model to construct another stereotype measure. Since this variable utilizes the variation in stereotype scores after taking a handful of key demographic variables into account to construct the new measures, the residual-based measure indicates the unexplained variation in stereotype scores that are not captured by other important predictors. As Appendix C.3 shows, the results using this new measure are almost identical to the previous findings in the main result as well as those using the first component values.

Lastly, I also test whether other respondent characteristics explain the differences in the main findings. In particular, some respondent characteristics such as educational attainment, age, contact with foreigners may be correlated to the level of stereotypes. To rule out this possibility, I run the same specification with these key variables. I find that, as reported in Appendix C.4, other key respondent characteristics do not have the same moderating

effect – there is no statistically discernible differences in attribute preference between high education versus low education respondents, as well as high foreign contact versus low foreign contact respondents. This corroborate the main finding that it is country-of-origin stereotypes that moderate how natives evaluate an immigrant’s individuating information, not other correlates of stereotypes.

5 Conclusion

This paper explores how stereotypes of an immigrant’s country of origin moderate Japanese natives’ preferences for immigrant acceptance. Drawing on the dual processing models of stereotyping, I develop a set of hypotheses about the way pre-existing beliefs about an immigrant’s country of origin may affect attitudes towards immigrants. I collect the data using a conjoint experiment in Japan, which offers the benefits of having immigration as a salient issue yet still has a small number of immigrants who are racially and ethnically distinct.

I find that Japanese natives tend to consider country-of-origin stereotypes in evaluating immigrants. Specifically, while natives holding negative stereotypes of an immigrant’s country of origin penalize the immigrant regardless of specific immigrant attributes, those having positive stereotypes have a less salient influence on preferences for immigrant acceptance – respondents who evaluate an immigrant’s country of origin with high competence do not show significantly different preferences for most attribute values compared to those with neutral competence, but respondents who view an immigrant’s country of origin with high warmth show more support for immigrants with desirable attribute values than those with neutral warmth.

While it is beyond this paper’s aim, existing studies shed light on why we observe different patterns depending on the content of stereotypes, i.e., competence or warmth, when respondents hold positive stereotypes of an immigrant’s country of origin. While the pres-

ence of positive information about outgroup members, even in the absence of actual contact, is found to reduce bias or increase positive stereotyping of outgroup members (Ensari and Miller 2002), natives may incorporate such information differently depending on the content of stereotypes. In effect, studies find that, when it comes to high-ability traits, such as intelligence or scientifically minded, perceivers may require more information before they describe a target person with a desirable trait because they might assume that the target with the desirable traits is more likely to engage in trait-inconsistent behaviors than one with undesirable traits (Rothbart and Park 1986). Hence, natives are likely to dismiss the information about desirable immigrant attributes, even when holding positive stereotypes. I acknowledge, however, that my study does not allow me to directly test natives' use of information contingent upon the content of stereotypes. Hence, future research could investigate how natives consider stereotype content in forming their attitudes towards immigrants.

The findings of this study provide several important implications for enhancing immigrant acceptance. First, this research emphasizes the influence of negative stereotypes on the acceptance of immigrants, thereby raising awareness about negative stereotypical images or narratives about a specific country in the content of television commercials, magazine advertisements, movies, and other media. Second, my findings also imply that promoting positive stereotypes about an immigrant's country of origin may increase immigrant acceptance among natives. This is in line with recent studies on the effect of positive stereotypes, which find that positive stereotypes induce positive behavior for both perceivers and targets of the stereotypes (Czopp, Kay and Cheryan 2015). However, the consequence of encouraging positive stereotypes may differ by the content being emphasized – while emphasizing competence of an immigrant's country of origin may not have a significant effect on enhancing immigrant acceptance, promoting warmth towards an immigrant's country of origin may lead to more willingness to accept immigrants with favorable characteristics.

References

- Aaker, Jennifer, Kathleen D Vohs and Cassie Mogilner. 2010. "Nonprofits are seen as warm and for-profits as competent: Firm stereotypes matter." *Journal of Consumer Research* 37(2):224–237.
- Albertson, Bethany and Shana Kushner Gadarian. 2013. Who's Afraid of Immigration? In G. P. Freeman, R. Hansen, D. L. Leal (Eds.). In *Immigration and public opinion in liberal democracies*. New York:Routledge pp. 286–306.
- Banaji, Mahzarin R and Curtis D Hardin. 1996. "Automatic stereotyping." *Psychological science* 7(3):136–141.
- Bansak, Kirk, Jens Hainmueller and Dominik Hangartner. 2016. "How economic, humanitarian, and religious concerns shape European attitudes toward asylum seekers." *Science* 354(6309):217–222.
- Barbarossa, Camilla, Patrick De Pelsmacker and Ingrid Moons. 2018. "Effects of country-of-origin stereotypes on consumer responses to product-harm crises." *International Marketing Review* .
- Baumeister, Roy F, Ellen Bratslavsky, Catrin Finkenauer and Kathleen D Vohs. 2001. "Bad is stronger than good." *Review of general psychology* 5(4):323–370.
- Blair, Irene V and Mahzarin R Banaji. 1996. "Automatic and controlled processes in stereotype priming." *Journal of personality and social psychology* 70(6):1142.
- Bobo, Lawrence and James R Kluegel. 1993. "Opposition to race-targeting: self-interest, stratification ideology, or racial attitudes?" *American Sociological Review* pp. 443–464.
- Bohman, Andrea, Mikael Hjerm and Maureen A Eger. 2019. "Politics and prejudice: how political discussion with peers is related to attitudes about immigrants during adolescence." *Frontiers in Sociology* 4:70.
- Bordalo, Pedro, Katherine Coffman, Nicola Gennaioli and Andrei Shleifer. 2016. "Stereotypes." *The Quarterly Journal of Economics* 131(4):1753–1794.
- Brader, Ted, Nicholas A Valentino and Elizabeth Suhay. 2008. "What triggers public opposition to immigration? Anxiety, group cues, and immigration threat." *American Journal of Political Science* 52(4):959–978.
- Ceobanu, Alin M and Xavier Escandell. 2010. "Comparative analyses of public attitudes toward immigrants and immigration using multinational survey data: A review of theories and research." *Annual review of sociology* 36:309–328.
- Chandler, Charles R and Yung-mei Tsai. 2001. "Social factors influencing immigration attitudes: an analysis of data from the General Social Survey." *The Social Science Journal* 38(2):177–188.

- Chen, Mark and John A Bargh. 1997. "Nonconscious behavioral confirmation processes: The self-fulfilling consequences of automatic stereotype activation." *Journal of Experimental Social Psychology* 33(5):541–560.
- Clayton, Katherine, Jeremy Ferwerda and Yusaku Horiuchi. 2019. "Exposure to immigration and admission preferences: Evidence from France." *Political Behavior* pp. 1–26.
- Cuddy, Amy JC, Susan T Fiske and Peter Glick. 2007. "The BIAS map: behaviors from intergroup affect and stereotypes." *Journal of personality and social psychology* 92(4):631.
- Cuddy, Amy JC, Susan T Fiske and Peter Glick. 2008. "Warmth and competence as universal dimensions of social perception: The stereotype content model and the BIAS map." *Advances in experimental social psychology* 40:61–149.
- Czopp, Alexander M, Aaron C Kay and Sapna Cheryan. 2015. "Positive stereotypes are pervasive and powerful." *Perspectives on Psychological Science* 10(4):451–463.
- Darley, John M and Paget H Gross. 1983. "A hypothesis-confirming bias in labeling effects." *Journal of Personality and Social Psychology* 44(1):20.
- Devine, Patricia G. 1989. "Stereotypes and prejudice: Their automatic and controlled components." *Journal of personality and social psychology* 56(1):5.
- Dustmann, Christian and Ian P Preston. 2007. "Racial and economic factors in attitudes to immigration." *The BE Journal of Economic Analysis & Policy* 7(1).
- Ensari, Nurcan and Norman Miller. 2002. "The out-group must not be so bad after all: the effects of disclosure, typicality, and salience on intergroup bias." *Journal of personality and social psychology* 83(2):313.
- Fiske, Susan T, Amy JC Cuddy and Peter Glick. 2007. "Universal dimensions of social cognition: Warmth and competence." *Trends in cognitive sciences* 11(2):77–83.
- Fiske, Susan T, Amy JC Cuddy, Peter Glick and Jun Xu. 2002. "A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition." *Journal of personality and social psychology* 82(6):878.
- Fiske, Susan T and Steven L Neuberg. 1990. "A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation." *Advances in experimental social psychology* 23:1–74.
- Ford, Robert. 2011. "Acceptable and unacceptable immigrants: How opposition to immigration in Britain is affected by migrants' region of origin." *Journal of Ethnic and Migration studies* 37(7):1017–1037.
- Ford, Robert, Gareth Morrell and Anthony Heath. 2012. "Fewer but better? Public views about immigration." *British social attitudes: The 29th report* pp. 26–44.
- Goren, Paul. 2003. "Race, sophistication, and white opinion on government spending." *Political Behavior* 25(3):201–220.

- Green, David and Yoshihiko Kadoya. 2015. "Contact and threat: Factors affecting views on increasing immigration in Japan." *Politics & Policy* 43(1):59–93.
- Hainmueller, Jens and Daniel J Hopkins. 2014. "Public attitudes toward immigration." *Annual Review of Political Science* 17:225–249.
- Hainmueller, Jens and Daniel J Hopkins. 2015. "The hidden American immigration consensus: A conjoint analysis of attitudes toward immigrants." *American Journal of Political Science* 59(3):529–548.
- Hainmueller, Jens, Daniel J Hopkins and Teppei Yamamoto. 2014. "Causal inference in conjoint analysis: Understanding multidimensional choices via stated preference experiments." *Political analysis* 22(1):1–30.
- Hainmueller, Jens and Dominik Hangartner. 2013. "Who gets a Swiss passport? A natural experiment in immigrant discrimination." *American political science review* 107(1):159–187.
- Hainmueller, Jens and Michael J Hiscox. 2007. "Educated preferences: Explaining attitudes toward immigration in Europe." *International organization* 61(2):399–442.
- Hainmueller, Jens and Michael J Hiscox. 2010. "Attitudes toward highly skilled and low-skilled immigration: Evidence from a survey experiment." *American political science review* 104(1):61–84.
- Hainmueller, Jens, Michael J Hiscox and Yotam Margalit. 2015. "Do concerns about labor market competition shape attitudes toward immigration? New evidence." *Journal of International Economics* 97(1):193–207.
- Hamilton, David L and Steven J Sherman. 1996. "Perceiving persons and groups." *Psychological review* 103(2):336.
- Hopkins, Daniel J. 2015. "The upside of accents: Language, inter-group difference, and attitudes toward immigration." *British Journal of Political Science* 45(3):531–557.
- Huddy, Leonie and Nayda Terkildsen. 1993. "Gender stereotypes and the perception of male and female candidates." *American journal of political science* pp. 119–147.
- Huntsinger, Jeffrey R, Stacey Sinclair, Elizabeth Dunn and Gerald L Clore. 2010. "Affective regulation of stereotype activation: It's the (accessible) thought that counts." *Personality and Social Psychology Bulletin* 36(4):564–577.
- Iyengar, Shanto, Simon Jackman, Solomon Messing, Nicholas Valentino, Toril Aalberg, Raymond Duch, Kyu S Hahn, Stuart Soroka, Allison Harell and Tetsuro Kobayashi. 2013. "Do attitudes about immigration predict willingness to admit individual immigrants? A cross-national test of the person-positivity bias." *Public opinion quarterly* 77(3):641–665.
- Kinder, Donald R and Cindy Kam. 2009. "Us and Them: Ethnocentric Foundations of American Opinion."

- Knoll, Benjamin R, David P Redlawsk and Howard Sanborn. 2011. "Framing labels and immigration policy attitudes in the Iowa caucuses: "Trying to out-Tancredo Tancredo"" *Political Behavior* 33(3):433–454.
- Krosnick, JA and Stanley Presser. 2009. "Question and Questionnaire Design. Handbook of Survey Research. (Eds). Wright, J. D. and Marsden, PV."
- Leeper, Thomas J, Sara B Hobolt and James Tilley. 2020. "Measuring subgroup preferences in conjoint experiments." *Political Analysis* 28(2):207–221.
- Liu, Scott S, Keith F Johnson and Keith F Johnson. 2005. "The automatic country-of-origin effects on brand judgments." *Journal of advertising* 34(1):87–97.
- McCrea, Sean M, Frank Wieber and Andrea L Myers. 2012. "Construal level mind-sets moderate self-and social stereotyping." *Journal of personality and social psychology* 102(1):51.
- Nadler, Joel T and Elora C (eds.) Voyles. 2020. *Stereotypes: The incidence and impacts of bias*. Santa Barbara: ABC-CLIO.
- Nagel, Joane. 2001. "Racial, ethnic, and national boundaries: sexual intersections and symbolic interactions." *Symbolic Interaction* 24(2):123–139.
- Navarrete, Carlos David, Melissa M McDonald, Ludwin E Molina and Jim Sidanius. 2010. "Prejudice at the nexus of race and gender: an outgroup male target hypothesis." *Journal of personality and social psychology* 98(6):933.
- Newman, Benjamin J and Neil Malhotra. 2019. "Economic reasoning with a racial hue: is the immigration consensus purely race neutral?" *The Journal of Politics* 81(1):153–166.
- Ostfeld, Mara. 2017. "The backyard politics of attitudes toward immigration." *Political Psychology* 38(1):21–37.
- Payne, B Keith. 2001. "Prejudice and perception: the role of automatic and controlled processes in misperceiving a weapon." *Journal of personality and social psychology* 81(2):181.
- Plant, E Ashby, Joanna Goplen and Jonathan W Kunstman. 2011. "Selective responses to threat: The roles of race and gender in decisions to shoot." *Personality and Social Psychology Bulletin* 37(9):1274–1281.
- Quillian, Lincoln and Devah Pager. 2001. "Black neighbors, higher crime? The role of racial stereotypes in evaluations of neighborhood crime." *American journal of sociology* 107(3):717–767.
- Rothbart, Myron and Bernadette Park. 1986. "On the confirmability and disconfirmability of trait concepts." *Journal of personality and social psychology* 50(1):131.
- Savelkoul, Michael, Peer Scheepers, Jochem Tolsma and Louk Hagendoorn. 2010. "Anti-Muslim attitudes in the Netherlands: Tests of contradictory hypotheses derived from ethnic competition theory and intergroup contact theory." *European sociological review* 27(6):741–758.

- Schwarz, Norbert and Gerald L Clore. 1983. "Mood, misattribution, and judgments of well-being: informative and directive functions of affective states." *Journal of personality and social psychology* 45(3):513.
- Sniderman, Paul M and Edward G Carmines. 1997. "Reaching beyond race." *PS: Political Science & Politics* 30(3):466–471.
- Sniderman, Paul M, Louk Hagendoorn and Markus Prior. 2004. "Predisposing factors and situational triggers: Exclusionary reactions to immigrant minorities." *American political science review* 98(1):35–49.
- Sniderman, Paul M, Pierangelo Peri, Rui JP de Figueiredo Jr and Thomas Piazza. 2002. *The outsider: Prejudice and politics in Italy*. Princeton University Press.
- Stokes, Bruce. 2015a. "How Americans and Japanese see each other." *Pew Research Center*.
URL: <https://www.pewresearch.org/fact-tank/2015/04/09/how-americans-and-japanese-see-each-other/>
- Stokes, Bruce. 2015b. "How Asia-Pacific Publics See Each Other and Their National Leaders." *Pew Research Center*.
URL: <https://www.pewresearch.org/global/2015/09/02/how-asia-pacific-publics-see-each-other-and-their-national-leaders/>
- Strabac, Zan and Ola Listhaug. 2008. "Anti-Muslim prejudice in Europe: A multilevel analysis of survey data from 30 countries." *Social Science Research* 37(1):268–286.
- Theiss-Morse, Elizabeth. 2009. *Who counts as an American?: The boundaries of national identity*. Cambridge University Press.
- UN, Population Division. 2015. "Trends in international migrant stock: the 2015 revision."
- Valentino, Nicholas A, Ted Brader and Ashley E Jardina. 2013. "Immigration opposition among US Whites: General ethnocentrism or media priming of attitudes about Latinos?" *Political Psychology* 34(2):149–166.
- Ward, Dalston G. 2019. "Public attitudes toward young immigrant men." *The American Political Science Review* 113(1):264–269.
- Zhang, Jie. 2018. "The Less Favored Foreigners: Public Attitudes toward Chinese and South Korean Residents in Japan." (33):205–217.

Supplementary Online Appendices

The Effect of Country-of-Origin Stereotypes on Attitudes towards Immigrants

Contents

| | | |
|----------|---|-----------|
| A | Survey Information | 35 |
| A.1 | The timing of the survey | 35 |
| A.2 | Conjoint Randomization Details | 35 |
| A.3 | Details on Immigrant Attributes | 37 |
| A.4 | Sample Conjoint Table | 40 |
| A.5 | Demographic Variables and Descriptive Statistics | 41 |
| A.6 | Distribution by Competence and Warmth Measures | 41 |
| B | Effects of Immigrant Attributes on Preference for Acceptance | 42 |
| C | Robustness Checks | 44 |
| C.1 | Attribute Salience | 44 |
| C.2 | Results using the First Component of PCA | 48 |
| C.3 | Results using the OLS Residuals | 53 |
| C.4 | Results using other respondent characteristics | 59 |

A Survey Information

A.1 The timing of the survey

Given the unfortunate spread of the COVID-19 pandemic since January 2020, it is possible that there may be potential bias due to the timing of the survey. In February 2020, passengers in a cruise ship named the *Diamond Princess* tested positive for COVID-19. The ship was quarantined at Yokohama, Japan, and it drew attention from major news media around the world due to the diverse national background of passengers. It is, therefore, worthwhile to explore whether the attitudes towards China, which is generally understood to be the origin of the spread of the virus¹, were specifically exacerbated during the survey fielding period.

To do so, I measured the salience of COVID-19 and its association to China by tracking public interest in related terms using data from Google Trend. I extracted the search frequency of the term “Coronavirus” and “Covid”, as well as “China” and “Wuhan” in Japan from February 1, 2020 to March 31, 2020. If Japanese people associated the source of the virus with China, the frequency of search terms on both COVID-19-related terms (“Coronavirus” and “Covid”) and China-related terms (“China” and “Wuhan”) would have increased together. In this case, the attitudes towards China or Chinese immigrants may reflect the effect of survey time periods.

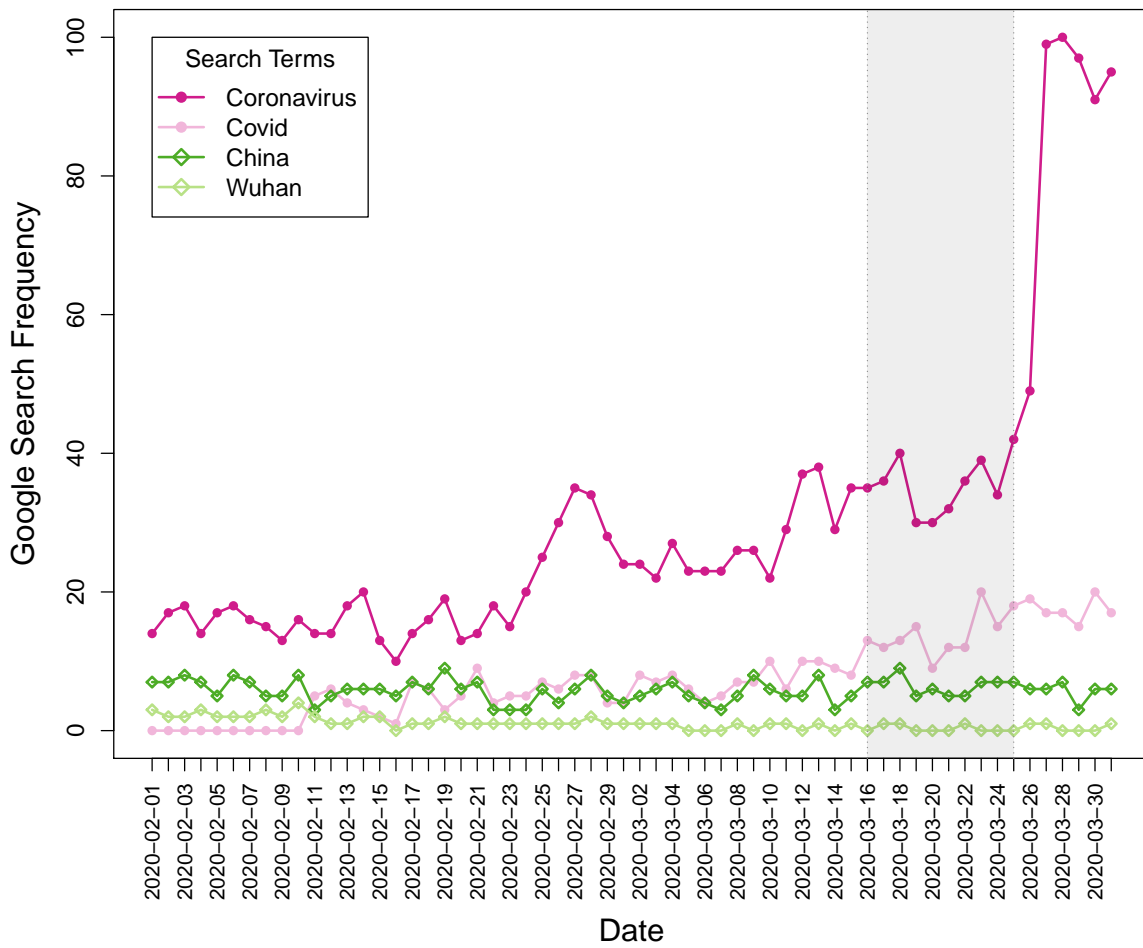
Figure A.2 depicts the trend in the popularity of COVID-19, with each point on the plot indicating the daily number of searches conducted in Google mentioning each search term. It suggests that, although there is a slight increase in search frequency on COVID-19-related terms after mid-February, the search trends for China-related terms remain relatively constant throughout February and March. Based on the plot, it could be argued that the study’s fielding did not coincide with COVID-19 salience that could potentially bias the findings on the attitudes towards immigrants, particularly towards Chinese immigrants.

A.2 Conjoint Randomization Details

Following the practice of Hainmueller and Hopkins (2015), I constrained the randomization to prevent an unrealistic or problematic combination of attributes from being generated. First, I restricted scenarios where immigrants have professions that require a certain level of education. Specifically, the profession of “Professor” is only allowed to appear when the highest education is more than “Four-year college degree.” Second, I prevented immigrants who are Buddhist from originating from countries that have less than 0.1% of the population

¹As WHO notes, Wuhan, Hubei Province in China, is the first place that reported the cluster of novel coronavirus cases. See <https://www.who.int/news/item/27-04-2020-who-timeline—covid-19>

Figure A.1: Trends in the popularity of the selected terms based on Google Trend data. The lines show Google search frequency for each search term from Feb 01 2020 to Mar 31 2020. The shaded area within the vertical lines indicate the date of my survey's fielding.



believing in Buddhism, i.e., “Turkey”, “Romania”, “Iran.” Third, I restricted immigrants whose motivation is “to escape political/religious persecution” to come from countries other than “US” and “Germany.” In addition, I further precluded the combination of “escaping political/religious persecution” with holding a religious belief that is mainstream in a given country of origin. For example, a Muslim individual from Turkey or Iran is unlikely to be persecuted due to their religious belief. Similarly, Christians in the Philippines or Romania, where more than 90% of the population are affiliated with Christianity, would generally not be likely to escape from religious persecution.

A.3 Details on Immigrant Attributes

In light of sociotropic economic concerns (Hainmueller and Hiscox 2007, 2010), two factors are often represented as an important factor in indicating immigrants’ potential contributions: skill level and education attainment. Workers with high skill-level are relatively rarer than those with low-skill, thus giving natives the impression that they will posit fewer economic threats and enhance nationwide benefits. The *Profession* attribute suggests the skill level of immigrants because a job is associated with a certain level of skill.² I include eight different professions considering plausibility and ISCO-88 skill-level. Specifically, the lowest skill-level jobs are *Cleaner/Helper* and *Construction worker* with ISCO-88 skill level one and the highest ones are *Computer Programmer* and *Professor* with the skill level four.

In addition to the *Profession*, *Highest education* is selected to indicate immigrants’ educational attainment. Well-educated immigrants are expected to fit better into host society by reducing the tax burden for natives and by taking high-income and/or high-payment jobs. The expectation is that natives will prefer to admit more immigrants with higher educational attainment. The level of education is randomly selected from six levels from *No formal education* to *A graduate degree*.

Second, explanations of threats to national identity and norm suggest that immigrants who demonstrate successful assimilation to host society may earn higher levels of support. Previous studies propose several relevant attributes that natives may consider to gauge immigrants’ adherence to host country norms: language skills and immigrants’ familiarity with the host country. Speaking native language signals that immigrants are from a culturally similar background and they uphold host country norms.³ Hence, natives are more likely to accept immigrants who can speak the host country language (Theiss-Morse 2009; Sniderman,

²While the job status may signal potential economic contributions, it can also represent adherence to norms about Japanese identity related to professional success (Hainmueller and Hopkins 2015).

³Lack of language skills may also instigate prejudice to the extent that language increases perceived cultural distance (Hopkins 2015).

Hagendoorn and Prior 2004; Hainmueller and Hopkins 2015). To account for this explanation, I include the *Language skill*, which represents the degree of Japanese fluency and takes a value randomly chosen from five different levels of Japanese language ability running from *Cannot speak Japanese at all* to *Can speak very fluent Japanese*.

Another implication from the identity- and norm-based explanation is that immigrants' familiarity to host country norms garners higher levels of support. The research on intergroup interaction leads to the expectation that natives will assume immigrants with more interaction history with the host country to be more open to learning or to be already familiar with host country culture (Hainmueller, Hiscox and Margalit 2015; Hainmueller and Hopkins 2014). The *Number of native friends* is especially a good attribute to represent this expectation because making a friend is primarily of voluntary action – it illustrates the experience and understanding of host norms based on active interests in the host culture. For Japanese society often criticized for its exclusiveness, I range the number of Japanese friends from *None* to *More than Five*. In addition, natives may consider that having a family member who already has appropriate knowledge of host society culture may help the newcomer to assimilate successfully. Thus, I include *Migration motivation* attribute with values representing kinship ties to the host country through marriage or blood, *To live with spouse/partner* and *To return home as a Japanese descendant*. Work and security motivation of immigrants are incorporated as well to see the effect of perceived unfamiliarity to host society.

Lastly, I use three attributes to account for the theoretical approach focusing on generalized predispositions: *Gender*, *Religious affiliation*, and *Country of origin*. These attributes are often pointed out as natives' source of prejudice, relating to how natives will evaluate immigrant assimilation based on the expectation of sharing the same group membership. For example, studies find that male immigrant is perceived as more dangerous than female immigrants, often seen as posing a danger to women in the host country (Ward 2019; Plant, Goplen and Kunstman 2011; Navarrete et al. 2010; Quillian and Pager 2001; Nagel 2001). The implication from the gender hypothesis is that natives will more likely to accept immigrant women than immigrant men because of less security and cultural threats.

Similarly, research conducted in Europe reports that the perceived Islamic threat increase opposition towards Muslims in particular rather than immigrants in general (Savelkoul et al. 2010; Strabac and Listhaug 2008). Since it is possible that immigrants with noticeably different religious affiliations, not just Islam but any different religious affiliation, may elicit low preference for acceptance, five different religious affiliations are included as values to see whether the religious affiliation matters only for Muslims or for other religions as well.

Another important source of prejudice is *Country of origin*. There is considerable evidence that public preferences varies with an immigrant's country of origin because of stereo-

types associated with different countries of origin (Ford 2011; Ford, Morrell and Heath 2012; Dustmann and Preston 2007; Hainmueller and Hangartner 2013). To account for this, countries are selected such that a country both represents different regions in the world and is one of the top-sending countries in the region. Altogether, the 11 countries presented compose of about 77% of all foreign residents in Japan in 2018.⁴

⁴Author calculation based on data retrieved from UNSTAT (<https://unstats.un.org/unsd/methodology/m49/>).

A.4 Sample Conjoint Table

Figure A.2: Sample conjoint table in Japanese. This figure is a sample conjoint table used in the experiment. The attributes are in bold in the left-hand column, and the randomly generated levels are shown in the second and third column.

パターン1

| | 移民 1 | 移民 2 |
|--------------------|--------------|-----------------|
| 職業 | IT エンジニア | 食品加工員 |
| 最終学歴 | 4 年制大学卒 | 4 年制大学卒 |
| 日本語の語学力 | 堪能 | まったく話せない |
| 宗教 | 仏教 | 仏教 |
| 自国出身の友達の数 | なし | なし |
| 日本への移住のきっかけ | 日本人として帰化するため | 日本人のパートナーと暮らすため |
| 性別 | 男性 | 女性 |
| 出身国 | 韓国 | 中国 |

どちらの方が、日本社会で成功を収めるとおもいますか。

1

2

どちらの方が、日本社会への適応力が高いとおもいますか。

1

2

あなたは、どちらの方に、日本に移住してほしいですか。

1

2

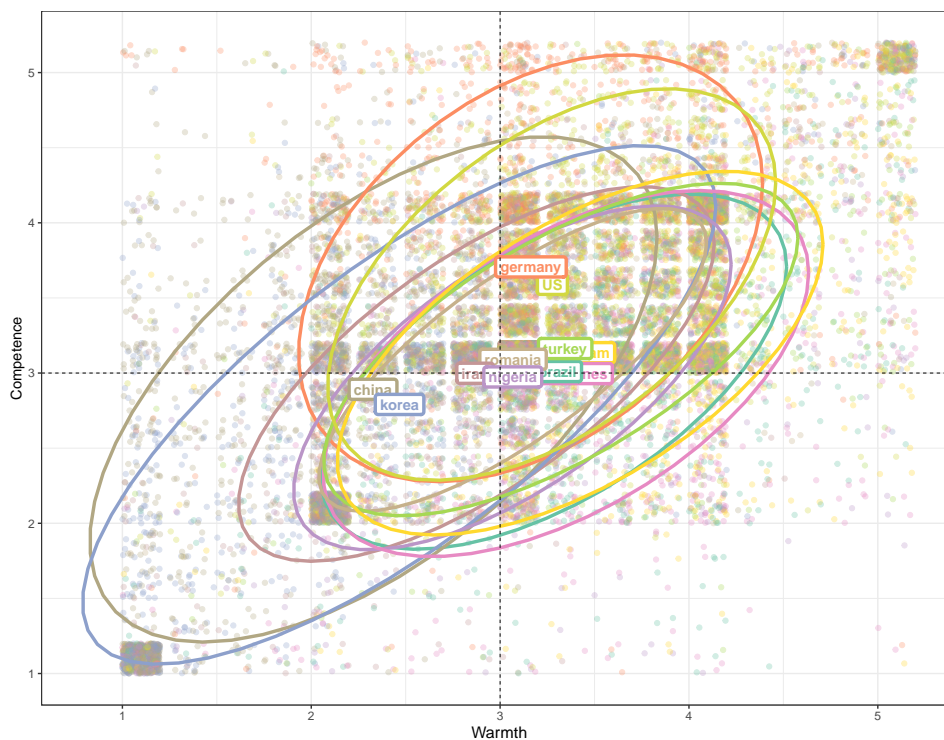
A.5 Demographic Variables and Descriptive Statistics

Table A.1: Descriptive Statistics for Selected Demographic Variables

| Statistic | N | Mean | St. Dev. | Min | Pctl(25) | Pctl(75) | Max |
|-----------------------|--------|--------|----------|-----|----------|----------|-----|
| Gender | 16,374 | 1.502 | 0.500 | 1 | 1 | 2 | 2 |
| Location of residence | 16,374 | 2.731 | 1.713 | 1 | 1 | 4 | 6 |
| Age | 16,374 | 46.896 | 14.067 | 18 | 36 | 58 | 84 |
| Education level | 15,196 | 5.887 | 1.484 | 2 | 4 | 7 | 8 |
| Marital Status | 16,374 | 2.505 | 2.191 | 1 | 1 | 6 | 6 |
| Employment | 16,374 | 7.606 | 2.206 | 1 | 6 | 9 | 10 |
| Subjective income | 16,374 | 4.356 | 2.123 | 1 | 3 | 6 | 10 |
| Religion | 16,374 | 2.968 | 2.515 | 1 | 1 | 6 | 12 |
| Political Ideology | 16,374 | 3.909 | 1.103 | 1 | 3 | 4 | 7 |

A.6 Distribution by Competence and Warmth Measures

Figure A.3: Distribution of Competence and Warmth by Countries of origin. Dashed lines are drawn at neutral opinion (3 = *moderately*) in 5-point scale. The country names are presented at their mean value.

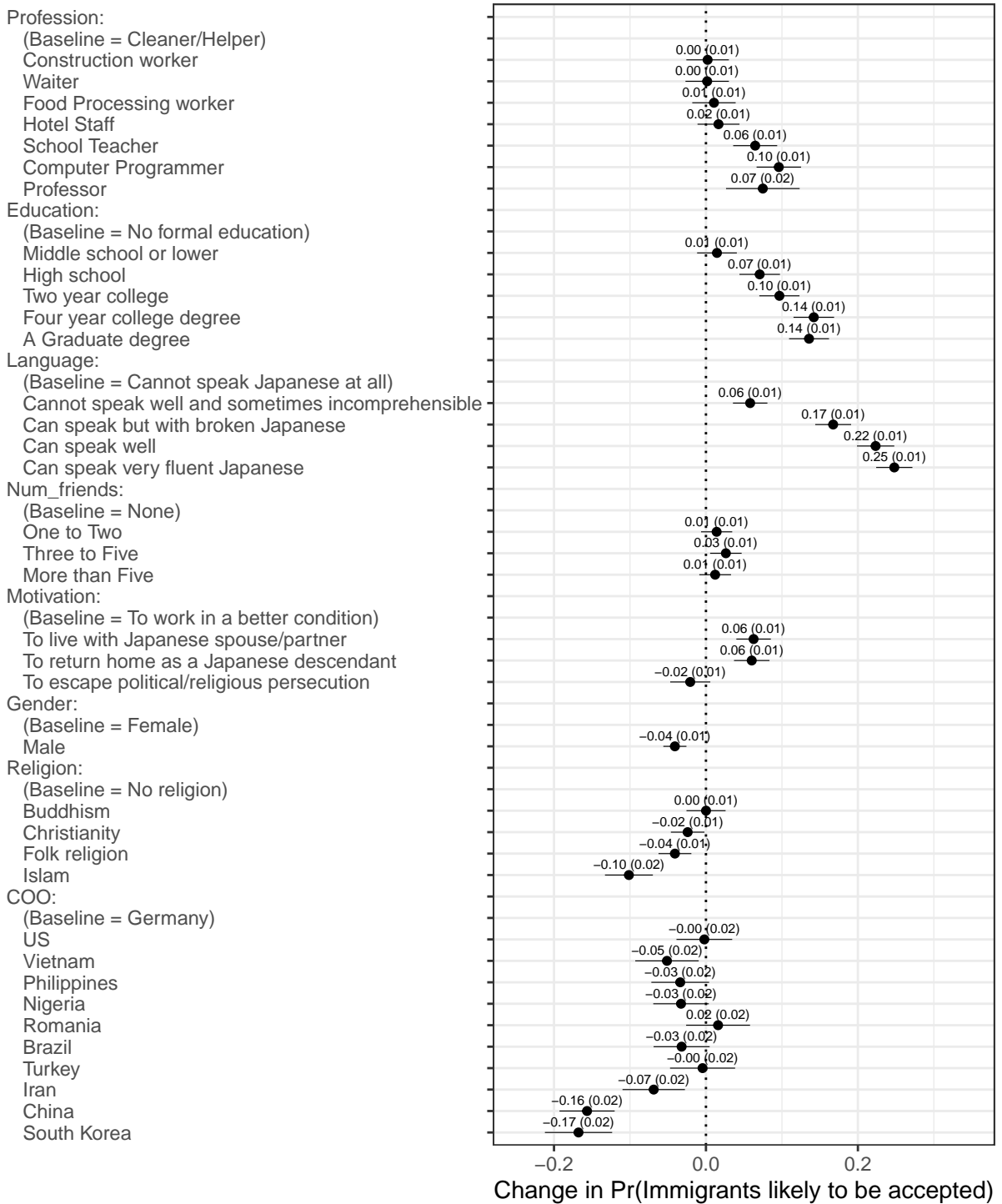


B Effects of Immigrant Attributes on Preference for Acceptance

Figure B.4 shows the AMCEs of immigrant attributes across all respondents. The results suggest that Japanese respondents hold a similar pattern of preferences for immigrant attributes as North American or Western European respondents do (Clayton, Ferwerda and Horiuchi 2019; Hainmueller and Hopkins 2015; Bansak, Hainmueller and Hangartner 2016). As the overall variation in *Profession* and *Education* present, Japanese natives are more supportive of immigrants who possess attribute-levels that emphasize potential economic contribution. For example, the higher the job status or education level the immigrants have, the greater the acceptance. In addition, they are more likely to prefer immigrants who show familiarity with Japanese identity and norms – natives prefer immigrants with strong Japanese proficiency and with the purpose to claim family ties already in Japan, as compared to the immigrant who cannot speak Japanese at all or those who come to Japan seeking a better job. The friend ties, on the other hand, do not show a monotonic effect. While immigrants who have few (one to two) or a lot (more than five) of Japanese friends do not win more support, those who have a moderate number of Japanese friends (three to five) are more preferred to those who do not have Japanese friends at all.

I also find that immigrant characteristics regarding prejudice-based discrimination receive strong support. There is a penalty for being a male and for having any kind of religious affiliation except Buddhism. Moreover, immigrants coming from certain Middle Eastern and Asian countries such as Iran, Vietnam, China, and South Korea are less likely to be preferred compared to those from Western countries such as Germany and the U.S. These findings differ from Hainmueller and Hopkins (2015)’s conclusion that prejudice-based argument yields little support in the U.S. The difference may reflect different contexts of destination countries. As discussed in the main text, Japan’s geopolitical and historical conflict between South Korea and China may be behind the negative attitudes towards them. Also, Japan’s foreign-born population is still small compared to other developed countries (UN 2015) such that their perceptions towards Iran may be mainly driven by the threats related to terrorism in the Middle East. The lack of contact opportunities with immigrants implies that Japanese people may form their preferences primarily based on their pre-existing beliefs, rather than actual experiences or observations regarding immigrants in Japan. In effect, Clayton, Ferwerda and Horiuchi (2019) found that French natives who engage in more social interaction with immigrants tend to put less emphasis on an immigrant’s country of origin than those who do not frequently interact with immigrants.

Figure B.4: The Average Marginal Component effect (AMCE) of immigrant attribute on preference for immigrant acceptance for all respondents. The numbers above points are the estimated coefficients. The horizontal bars represent the 95% confidence intervals, and standard errors are shown within parenthesis above the bars.



C Robustness Checks

C.1 Attribute Saliency

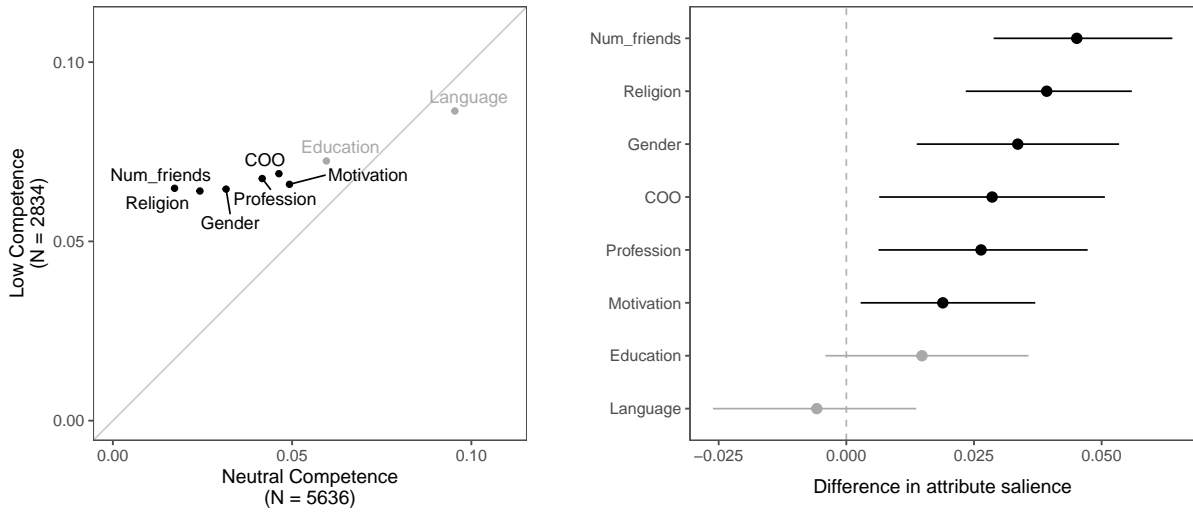
I examine whether the main results are driven mostly by chance, using Clayton, Ferwerda and Horiuchi (2019)'s measure of attribute saliency. This measure was built on the idea that, if the chosen attribute has a salient influence over respondents' preferences, the probability of choosing one profile over another should be statistically different from 50%, which is the probability of choosing at random between two profiles in a task. According to this measure, a low attribute saliency means that the probability of choosing a profile is not so much different from choosing one profile at random for most levels of a given attribute. In contrast, a high attribute saliency indicates that on average for all levels in a given attribute, the probability of choosing a profile deviates substantially from a random choice of a profile. Attribute saliency for each subgroup is calculated as follows. First, the probability of choosing a profile with a particular attribute-level is calculated. Second, for the chosen attribute value, the absolute value of the differences between the probability calculated in the first step and random choice probability (50%) are calculated. Third, the differences are averaged over all levels of the chosen attributes. Lastly, the bootstrapped confidence intervals for each difference are added to see whether the attribute saliency differs between subgroups of interest.

Figure C.5 and Figure C.6 present plots of attribute saliency by subgroups of competence and warmth, respectively. In the left-hand panels, the deviation from the 45° line indicates how the attribute saliency differs by the level of perceived competence or warmth. The right-hand panels show the differences in the saliency for a given attribute between the two subgroups of interest. Any statistically significant differences at the 0.05 level are marked in black, otherwise in gray.

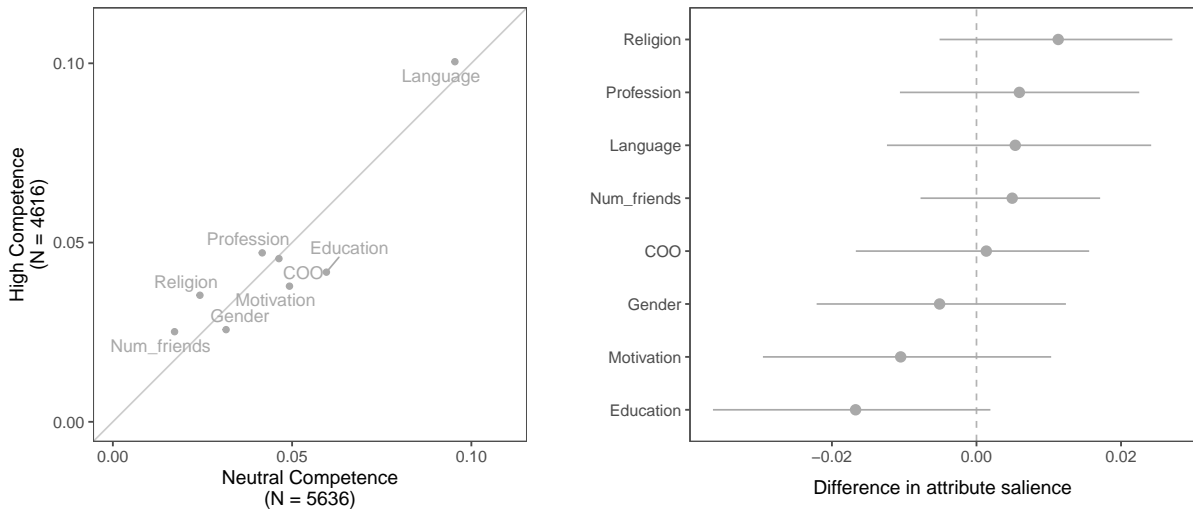
As shown in the top panels in Figure C.5, the difference is highly significant for subgroups of low versus neutral competence. Japanese natives who associate an immigrant's country of origin with low competence may place a greater weight on five attributes, number of Japanese friends, religion, gender, country of origin, and profession. The saliency of these attributes is consistent across alternative specifications. In contrast, most attributes do not appear to be more meaningful for natives with a high level of perceived competence as compared to those with a neutral level of perceived competence. As the bottom panels show, the attributes are clustered around the 45° line in the top-left panel and none of the differences seem to be statistically significant at the 0.05 level in the top-right panel.

The results based on the warmth dimension, as seen from the top panels in Figure C.6, corroborate the findings that negative stereotypes lower the probability of accepting immi-

Figure C.5: Attribute salience between subgroups of competence. The left panel shows the differences in salience of each attribute between two subgroups. The right panel shows the difference and its 95% confidence interval for each attribute. The differences which are statistically significant at the 0.05 level are highlighted in black.

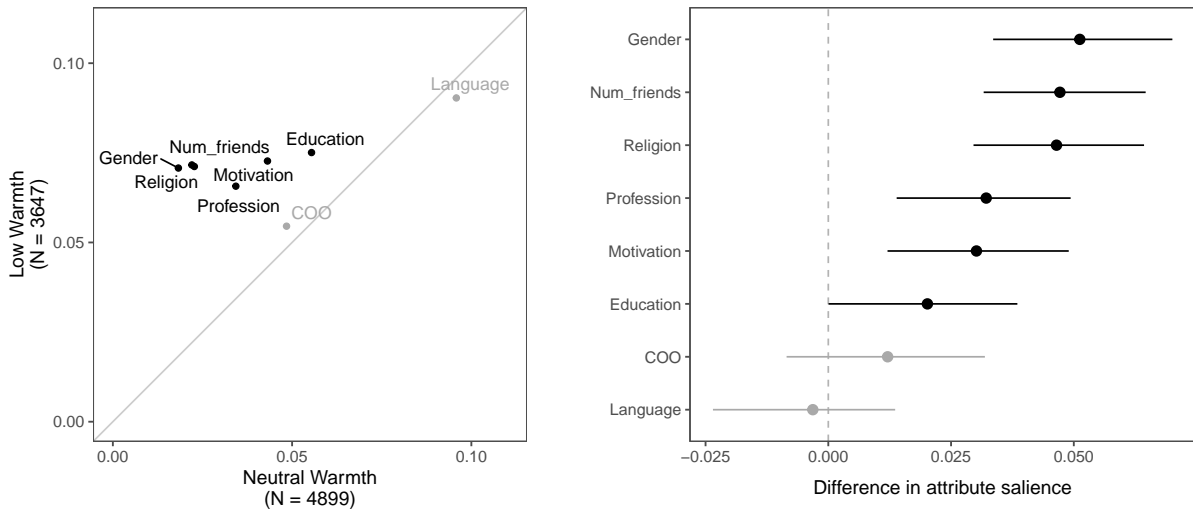


(a) Low versus Neutral Competence

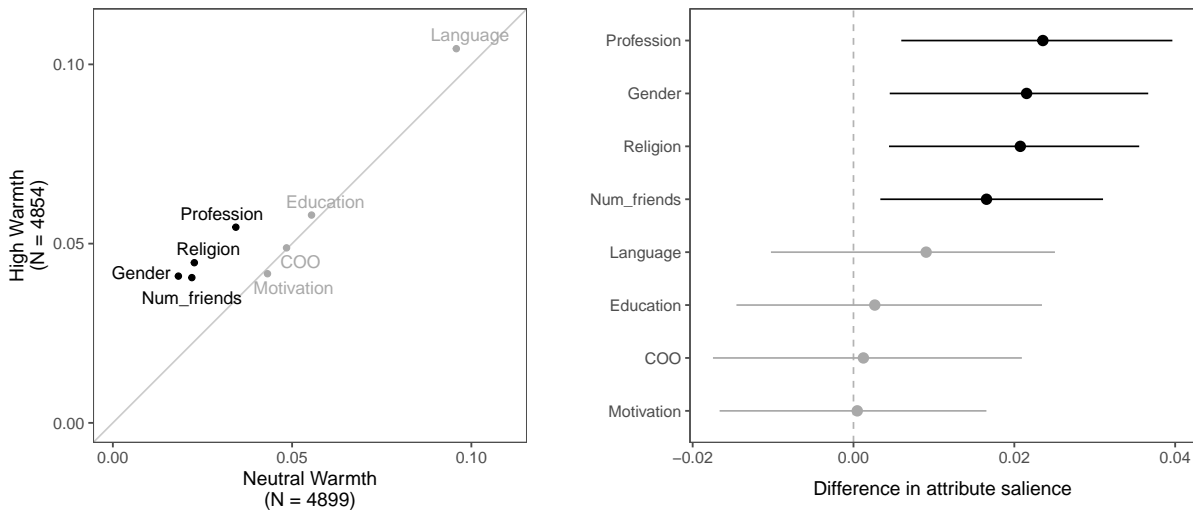


(b) High versus Neutral Competence

Figure C.6: Attribute salience between subgroups of warmth. The left panel shows the differences in salience of each attribute between two subgroups. The right panel shows the difference and its 95% confidence interval for each attribute. The differences which are statistically significant at the 0.05 level are highlighted in black.



(a) Low versus Neutral Warmth



(b) High versus Neutral Warmth

grants regardless of immigrants characteristics. Many immigrant attributes are salient to those with negative stereotypes of an immigrant's warmth, except for country of origin, language, and education.⁵ In addition, for all levels in these attributes, natives associating an immigrant's country of origin with low warmth are less likely to favor immigrants, compared to those with no specific stereotypes in warmth. In other words, natives who perceive the source country with low warmth generally discredit other information they can infer from immigrant attribute values.

In contrast, the salience of positive stereotypes in the warmth dimension show differences to those in the competence dimension. While perceiving an immigrant's country of origin as highly competent do not show significant increase in the probability of immigrant acceptance, the bottom panels in Figure C.6 show that Japanese natives who associate an immigrant's country of origin with high warmth place importance on attributes of religion, profession, gender, and the number of native friends when considering immigrant acceptance, as compared to natives with neutral warmth. Combined with the previous results on the matching attribute hypothesis, this finding suggests that respondents with positive stereotypes tend to select an immigrant who already possesses favorable traits at a significantly higher rate than respondents with no particular pre-existing stereotypes, especially focusing on these four attributes.⁶

⁵The salience of education attribute is less consistent in other specifications. See the Appendix C.

⁶Although the number of native friend attribute does not match the pattern of rewarding favorable characteristics in ??, the differences on a more favorable level, i.e., more than five, become also statistically significant when using an alternative measure for warm based on OLS residuals. See the Appendix C.

C.2 Results using the First Component of PCA

I conduct analyses using the first component of the competence and warmth scores as an alternative moderator. By simply taking the average of four individual item ratings, the original stereotype scores assume that the four items are measuring for one underlying factor, the perceived competence (or warmth) of the presented country of origin. The results from a principal component analysis propose that four items are very closely related – the percentage of variance explained for the first component was approximately 83%.

I also investigated the heterogeneity of preferences for immigrant acceptances by creating a measure using the first component value. For the analysis, I divide respondents into three subgroups based on whether their first component score is above (high), the same as (neutral), or below the median (low). As reported in the Appendix C, the results remain consistent with the main findings. Natives with negative stereotypes of competence and warmth devalue most immigrant attributes related to norm adherence and prejudice, such as profession, number of native friends, gender, religion, and country of origin. In contrast, natives with positive stereotypes show different patterns. Those viewing an immigrant’s country of origin with high competence report higher preference towards immigrants with undesirable values such as having low language proficiency, no native friends, and being male. None of these attributes, however, appear to be more meaningful for people with no particular stereotypes. On the contrary, natives associating an immigrant’s origin country with low competence show more favorable attitudes towards immigrants with desirable values such as having a high-skill job, identifying as a Buddhist or Christian, and being a female.

Figure C.7: Immigrant attribute preference among respondents with a high (above median) versus neutral (median) perceived competence towards an immigrant's country of origin, based on the scores of the PCA first component. The differences (High–Neutral) which are statistically significant at the 0.05 level are highlighted in black.

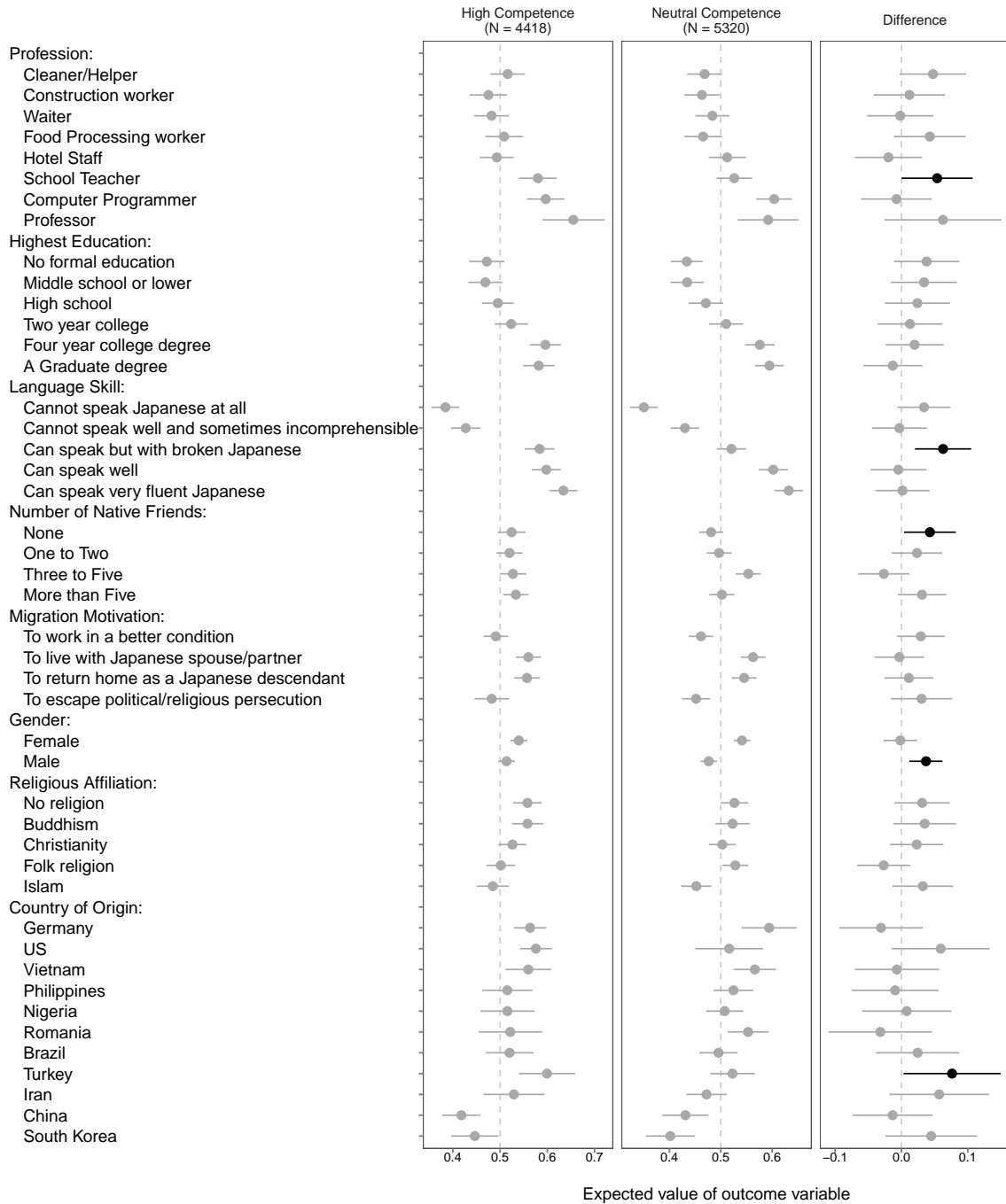


Figure C.8: Immigrant attribute preference among respondents with a low (below median) versus neutral (median) perceived competence towards an immigrant’s country of origin, based on the scores of the PCA first component. The differences (Low–Neutral) which are statistically significant at the 0.05 level are highlighted in black.

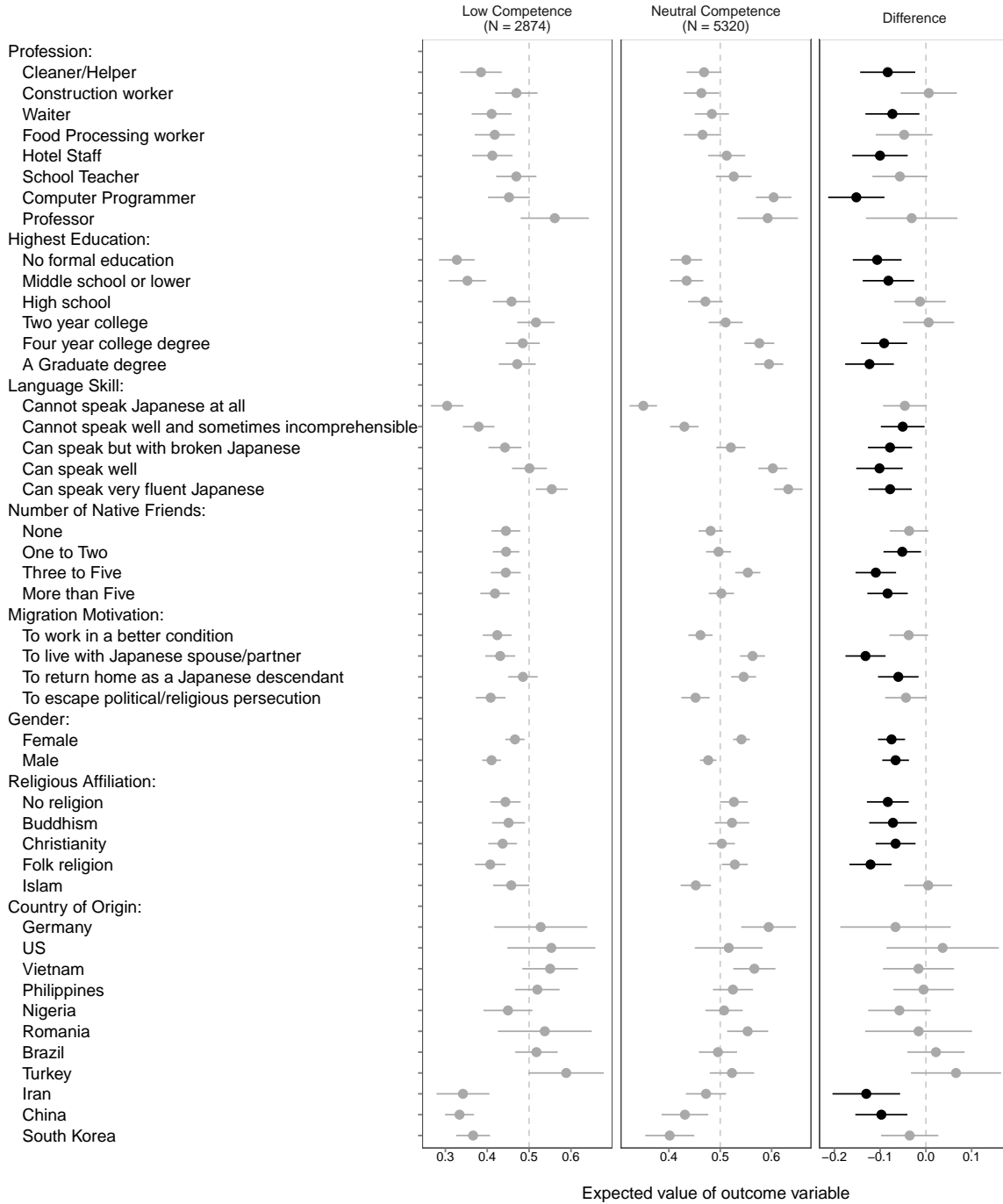


Figure C.9: Immigrant attribute preference among respondents with a high (above median) versus neutral (median) perceived warmth towards an immigrant’s country of origin, based on the scores of the PCA first component. The differences (High–Neutral) which are statistically significant at the 0.05 level are highlighted in black.

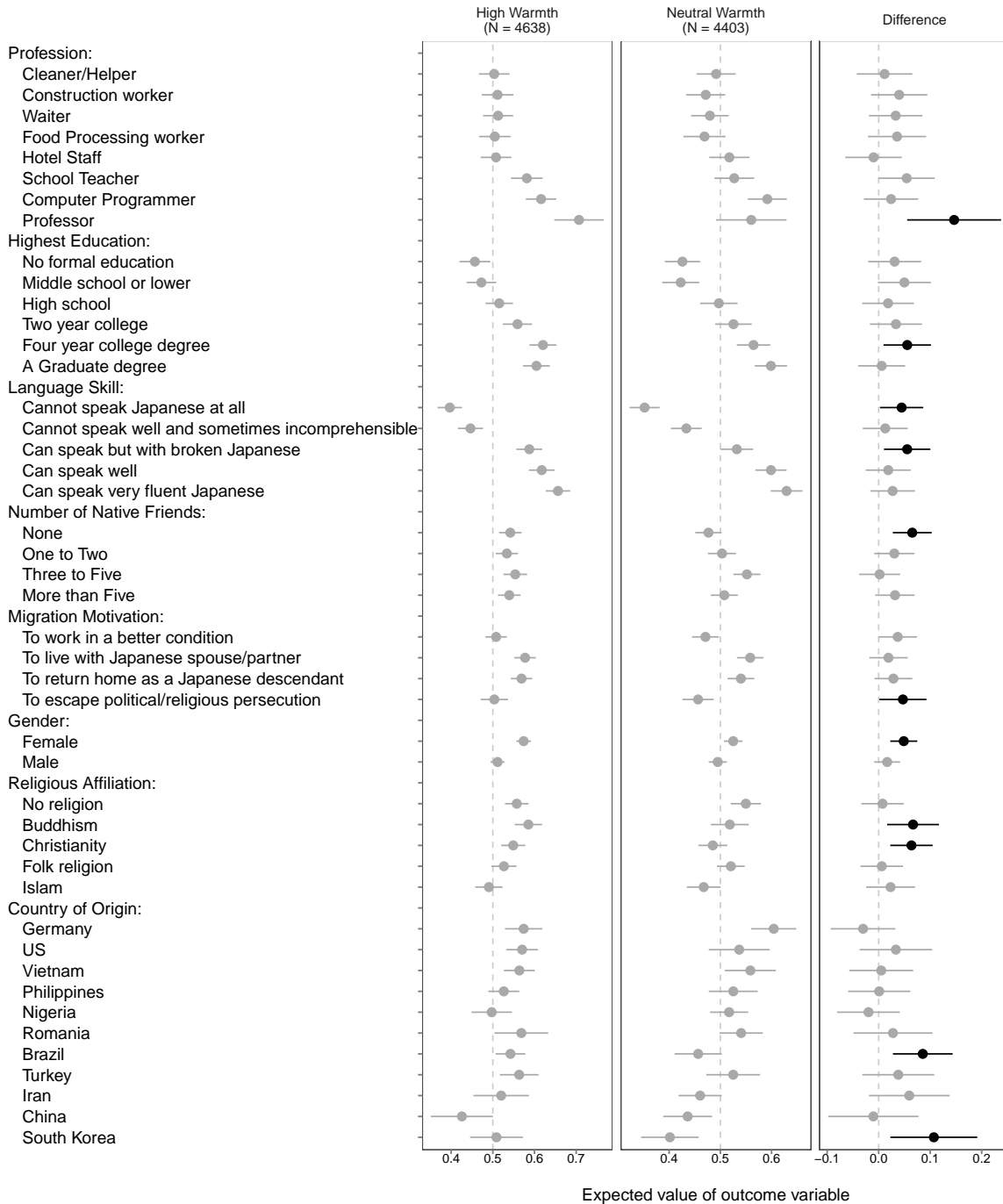
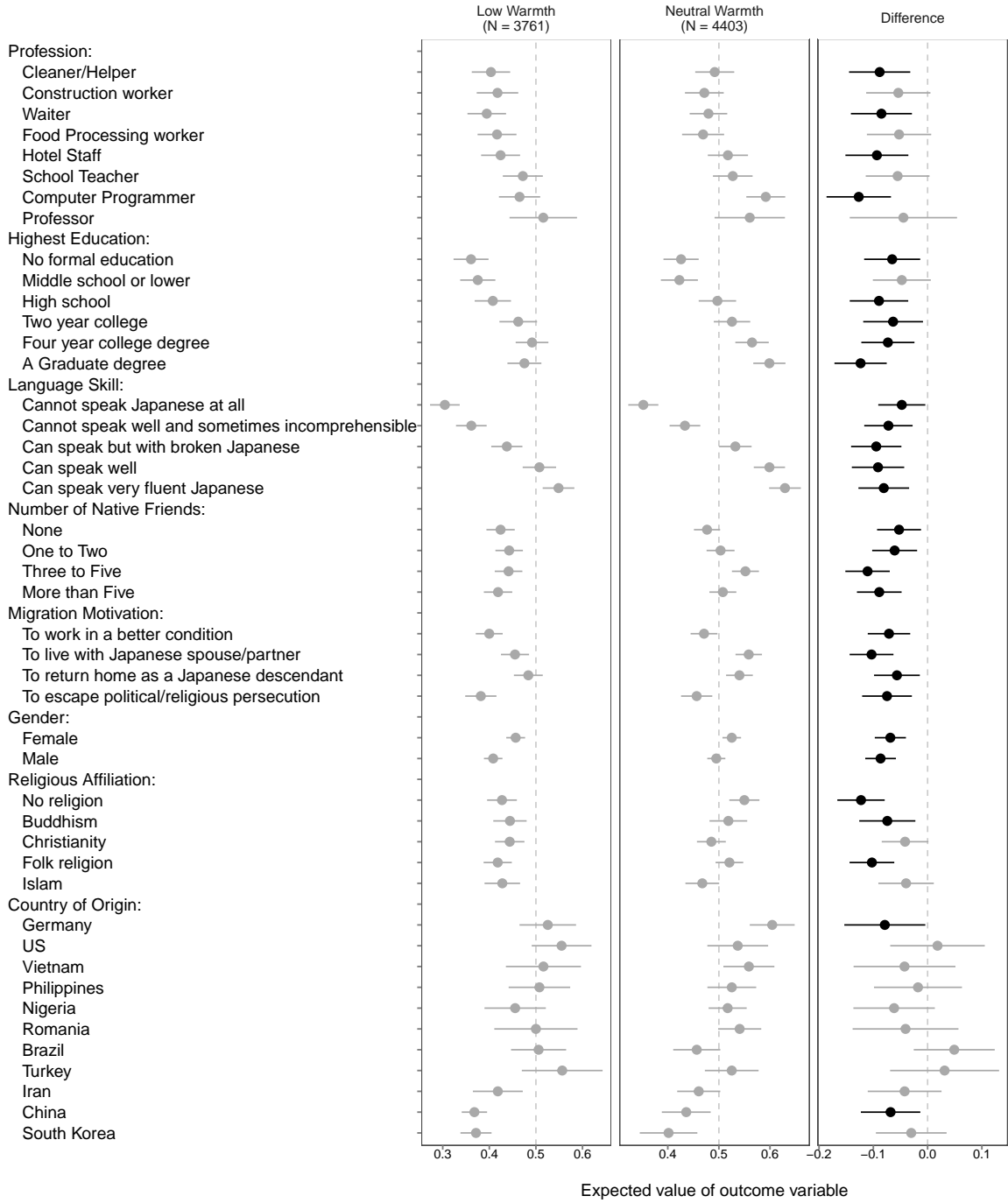


Figure C.10: Immigrant attribute preference among respondents with a low (below median) versus neutral (median) perceived warmth towards an immigrant’s country of origin, based on the scores of the PCA first component. The differences (Low–Neutral) which are statistically significant at the 0.05 level are highlighted in black.



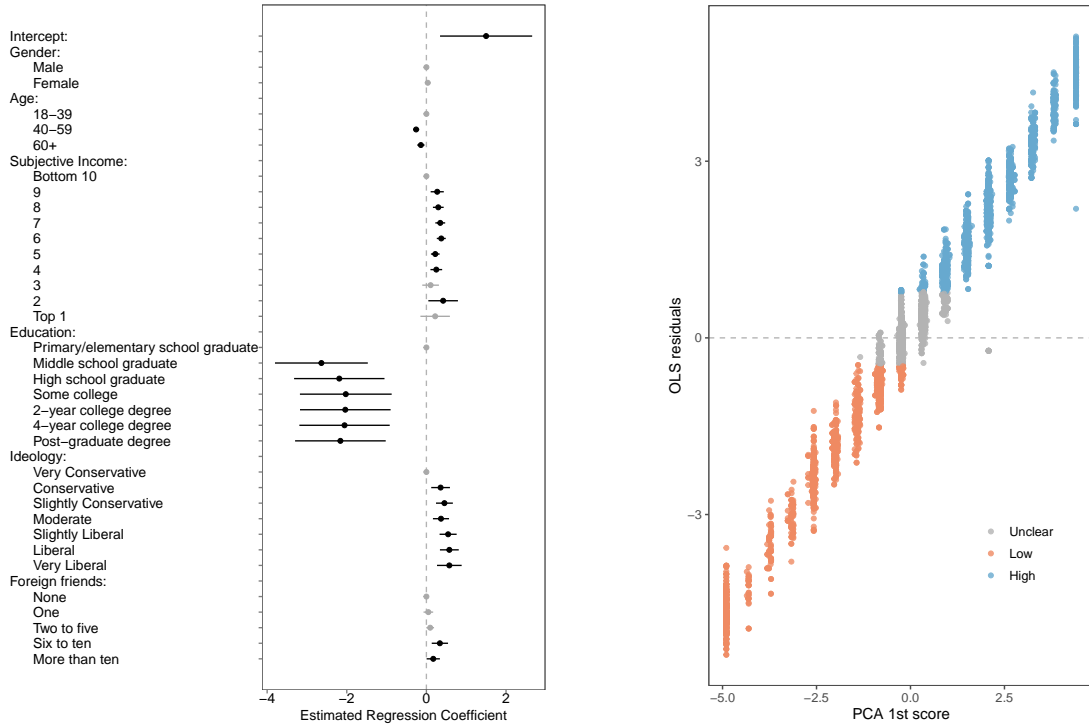
C.3 Results using the OLS Residuals

I use residuals from an OLS regression to implement an additional analysis to examine the heterogeneous preferences by the level of perceived competence and warmth. The explanatory variables I included are gender, age, subjective income level, education, ideology, and the number of foreign friends. As the top-left panel in Figure C.11 shows, those who consider themselves as having a middle-level (4-6) and low-level income (7-9) are more likely to have higher prior beliefs on immigrant country's competence. Also, natives become to hold beliefs of high competence as they lean towards more liberal ideology and as they more frequent contact with foreigners as measured by having more foreign friends. In contrast, respondents who are older than 40 years old are less likely to have higher perceived competence regarding an immigrant's country of origin. In addition, surprisingly, respondents who have middle- (middle school and high school graduates) or a high-level education (more than some college degree), compared to those with low-level of education (primary or elementary school graduates), tend to associate an immigrant's country of origin with low competence.

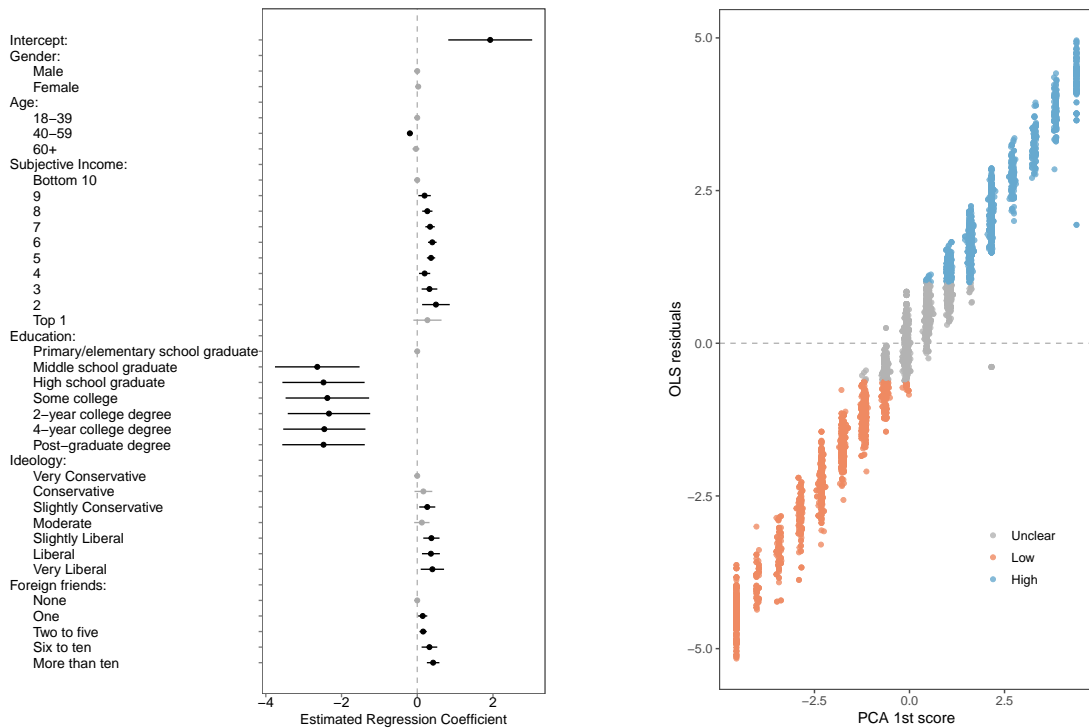
The regression results using perceived warmth as a dependent variable show almost similar patterns found in the results using perceived competence. As shown in the bottom-left panel in Figure C.11 shows, perceived warmth are high among the middle-age group (40-59), across most of the income-level groups, people with more liberal ideology, and those having more contact with foreigners by having more foreign friends.

The important thing is that, as the top-right and bottom-right panels in Figure C.11 reveal, the OLS residual is still positively correlated with the dependent variables, i.e., the score from the first component from the principal component analysis, after controlling for all these key variables. The fact that the variation in the dependent variable is not explained enough with the independent variables leaves the possibility that the variation could correlate with each respondent's level of stereotypes.

Figure C.11: OLS regression results (left) and residual plots (right) by competence and warmth. The left panels show the coefficients with their 95% confidence interval. The coefficients that are statistically significant at the 0.05 level are highlighted in black. The right panels plot the OLS residuals against the scores of the first principal component. The shading corresponds to low (below 25%), neutral (25%-75%), and high (above 75%) level of stereotypes used for the robustness checks.



(a) Competence



(b) Warmth

Figure C.12: Immigrant attribute preference among respondents with a high (above median) versus neutral (median) perceived competence towards an immigrant's country of origin, based on the OLS residual. The differences (High–Neutral) which are statistically significant at the 0.05 level are highlighted in black.

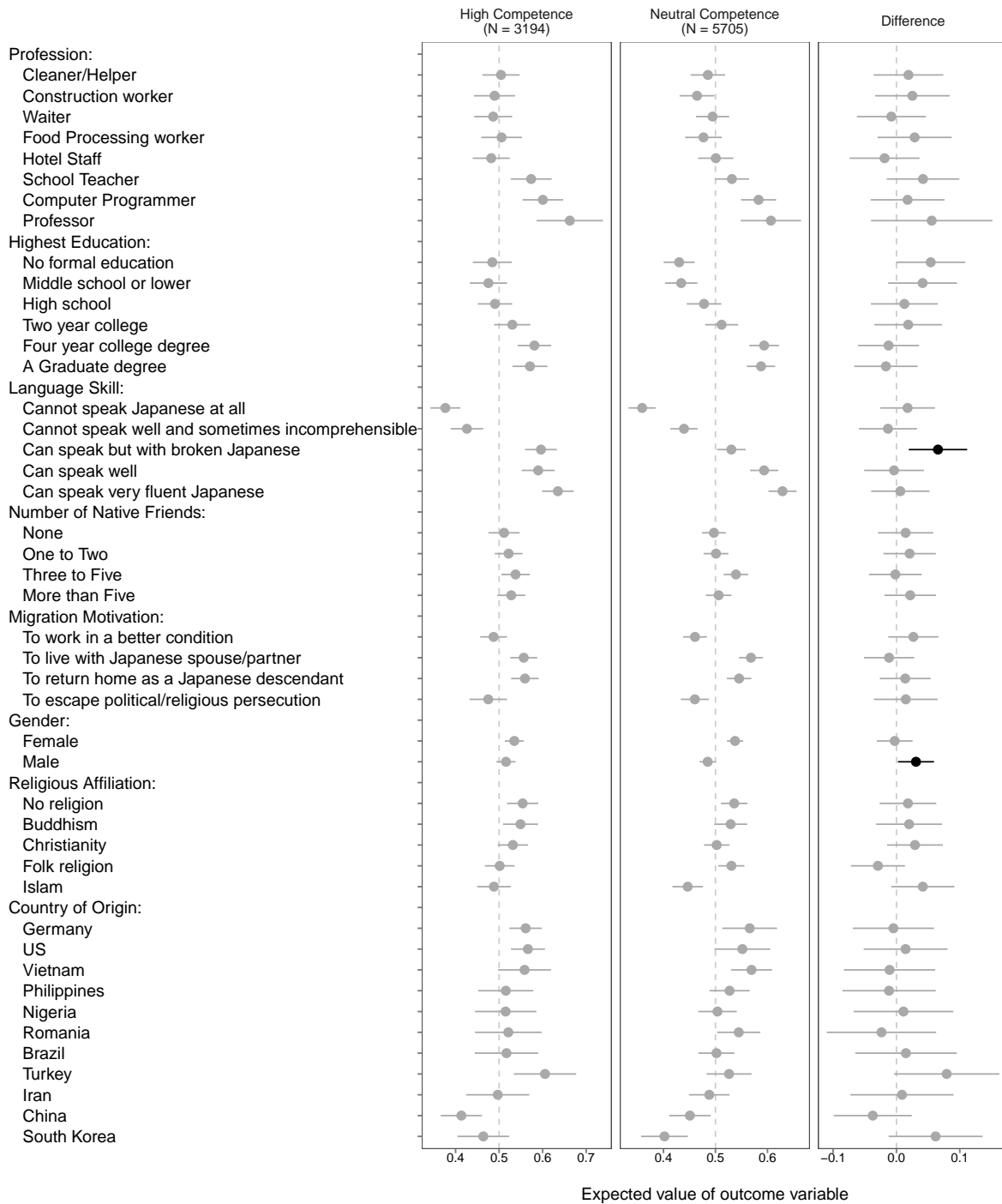


Figure C.13: Immigrant attribute preference among respondents with a low (below median) versus neutral (median) perceived competence towards an immigrant’s country of origin, based on the OLS residual. The differences (Low–Neutral) which are statistically significant at the 0.05 level are highlighted in black.

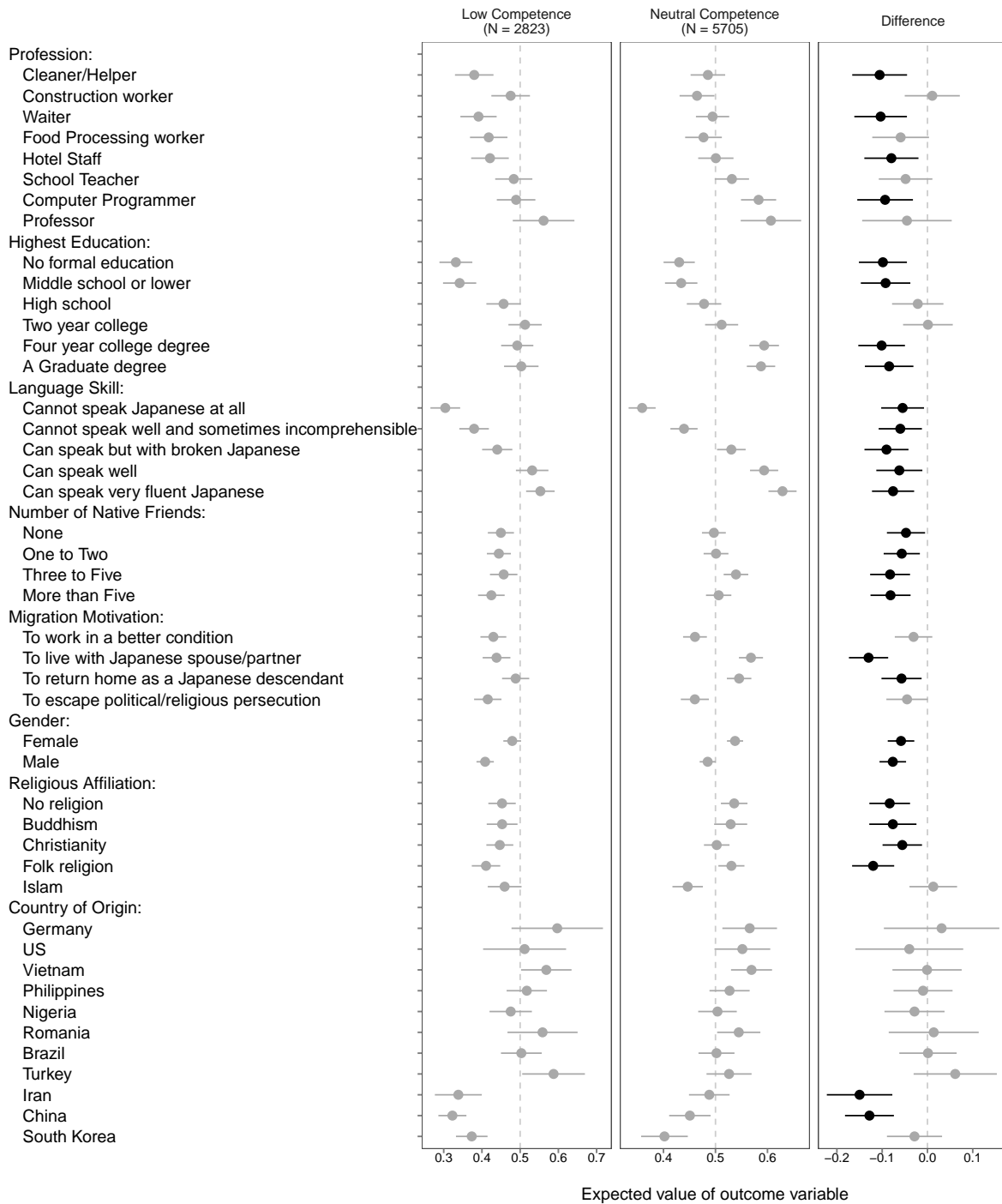


Figure C.14: Immigrant attribute preference among respondents with a high (above median) versus neutral (median) perceived warmth towards an immigrant's country of origin, based on the OLS residual. The differences (High–Neutral) which are statistically significant at the 0.05 level are highlighted in black.

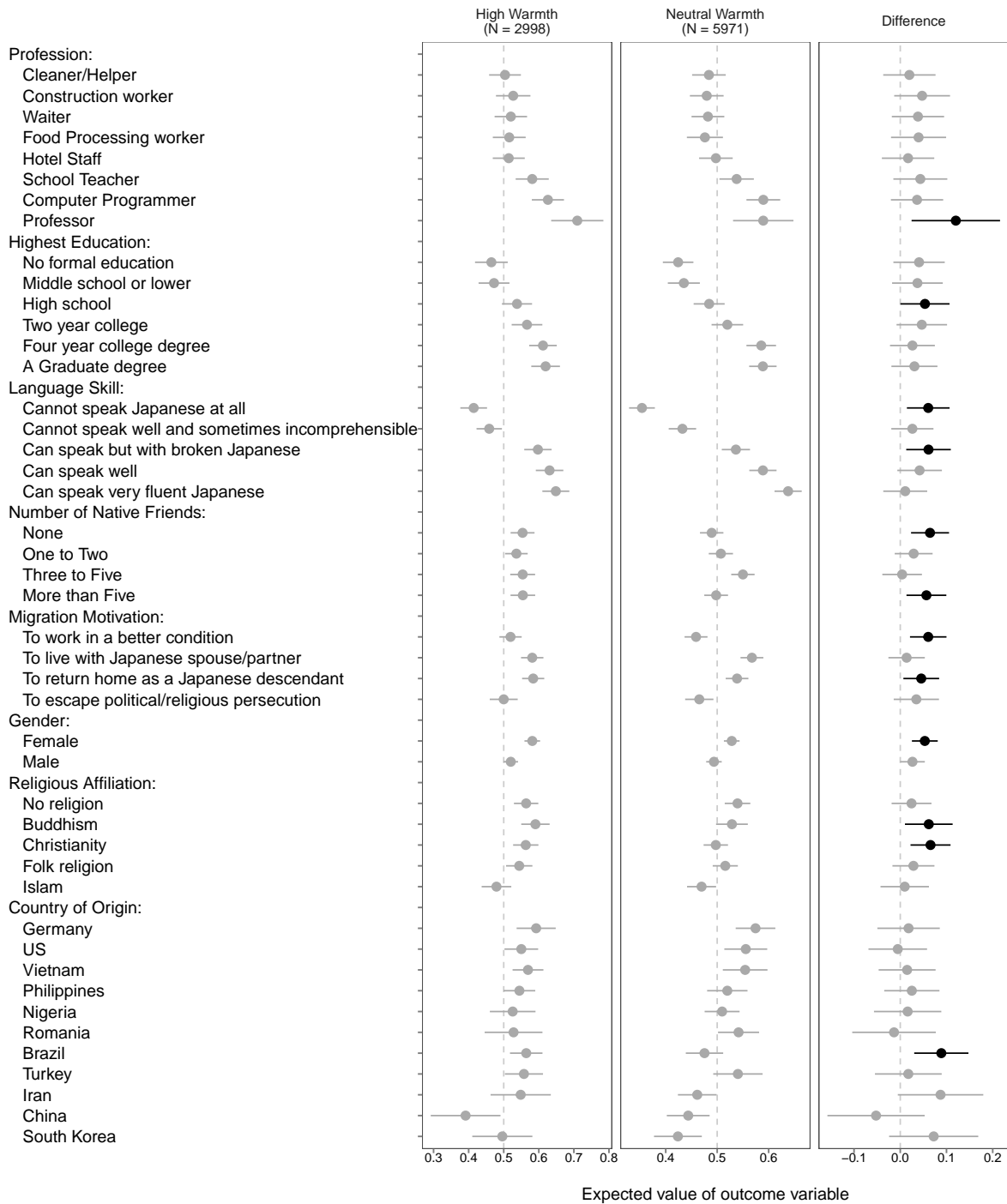
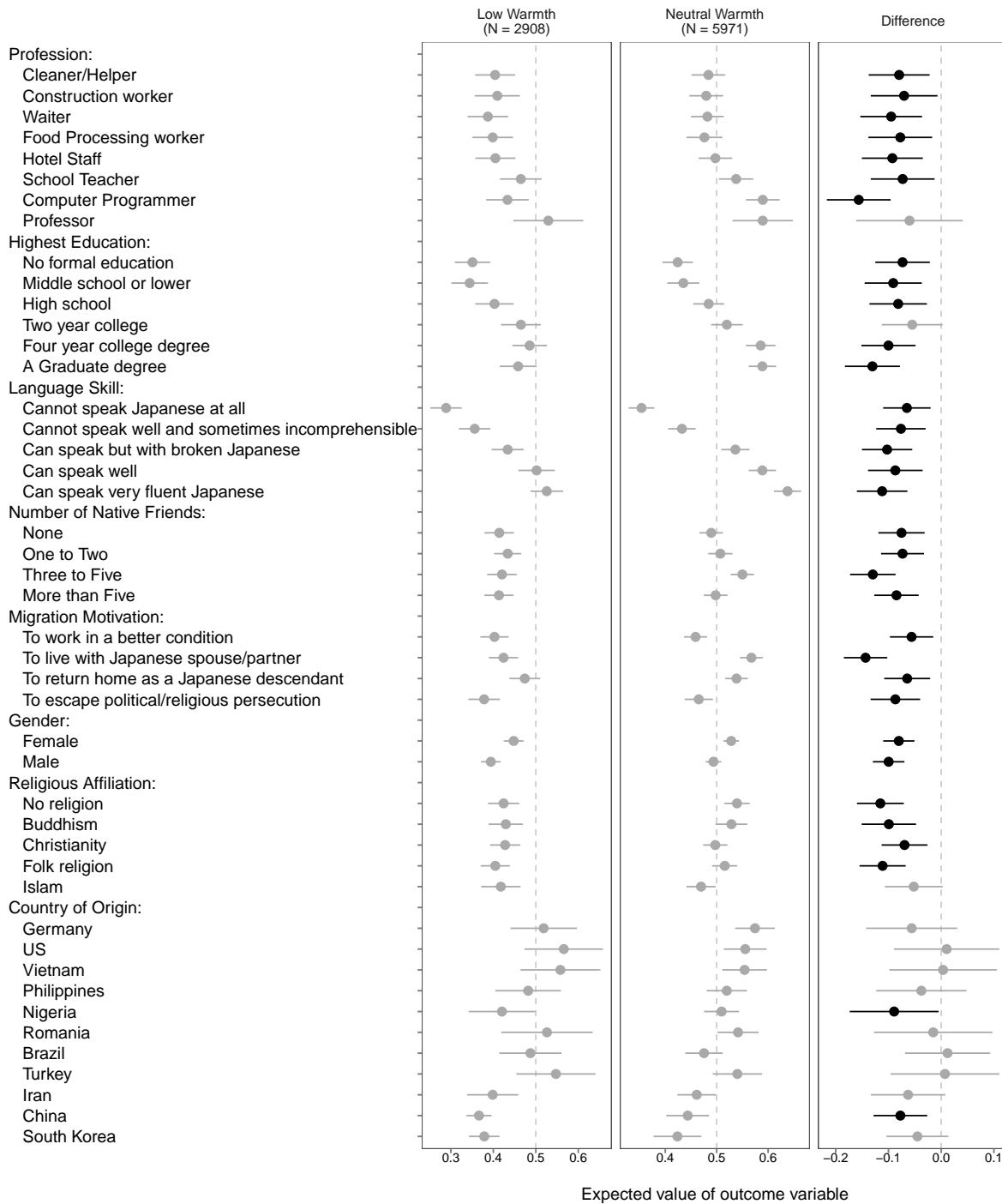


Figure C.15: Immigrant attribute preference among respondents with a low (below median) versus neutral (median) perceived warmth towards an immigrant's country of origin, based on the OLS residual. The differences (Low–Neutral) which are statistically significant at the 0.05 level are highlighted in black.



C.4 Results using other respondent characteristics

Figure C.16: Immigrant attribute preference among respondents with a high educational attainment versus low educational attainment. The differences (High–Low) which are statistically significant at the 0.05 level are highlighted in black.

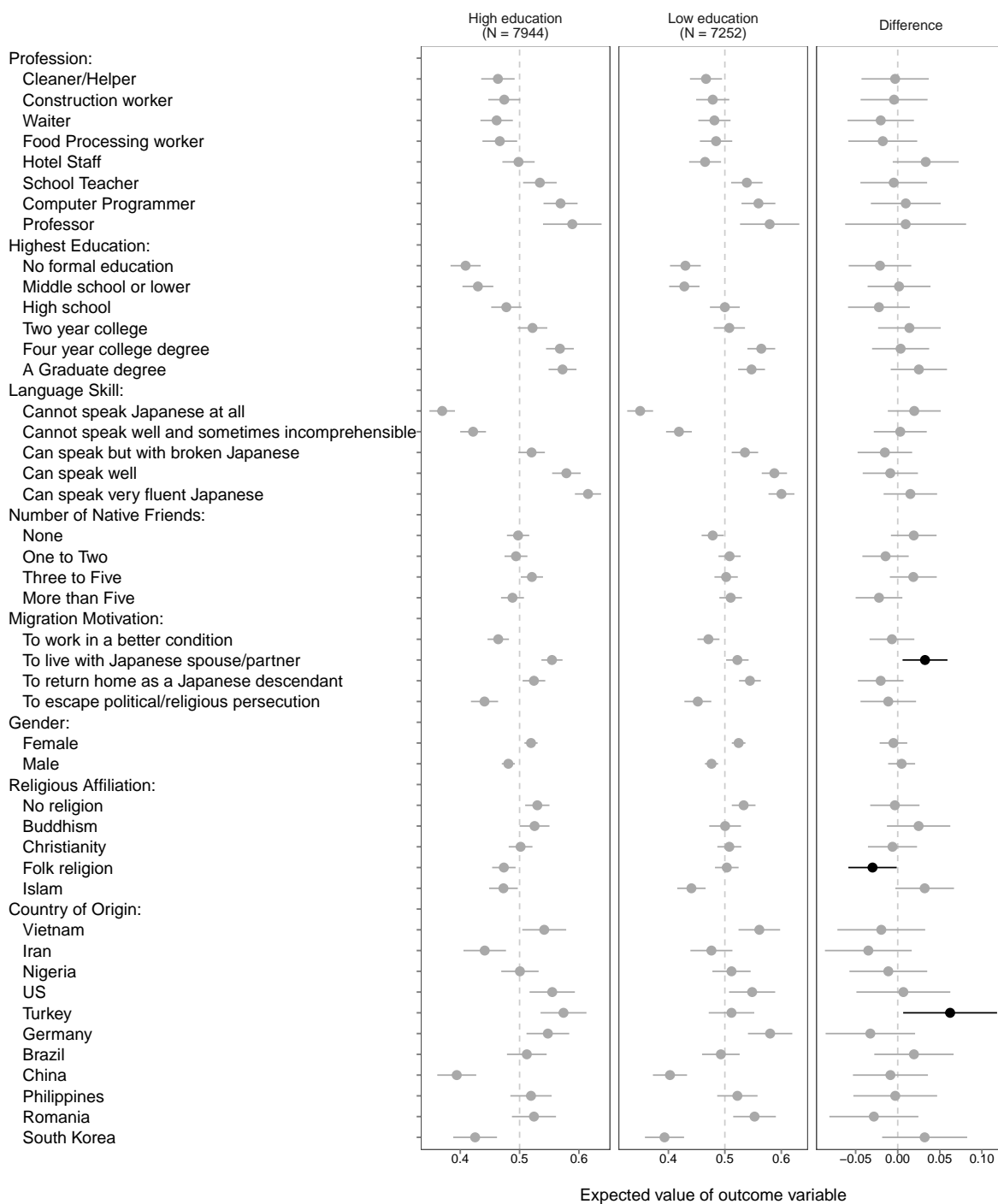


Figure C.17: Attribute salience between subgroups of educational attainment. The left panel shows the differences in salience of each attribute between two subgroups. The right panel shows the difference and its 95% confidence interval for each attribute. The differences which are statistically significant at the 0.05 level are highlighted in black.

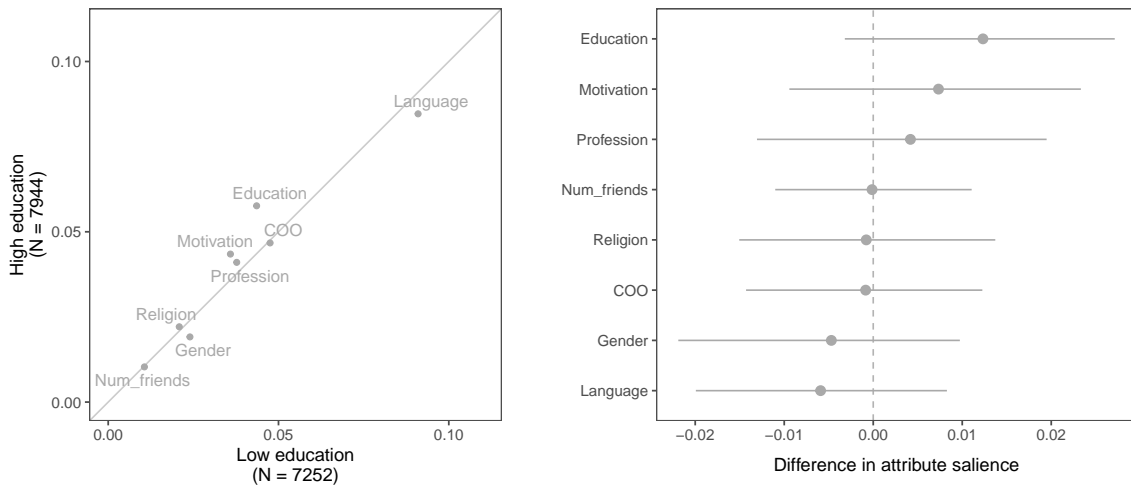


Figure C.18: Immigrant attribute preference among respondents with a high contact with foreigners versus low contact. The differences (High–Low) which are statistically significant at the 0.05 level are highlighted in black.

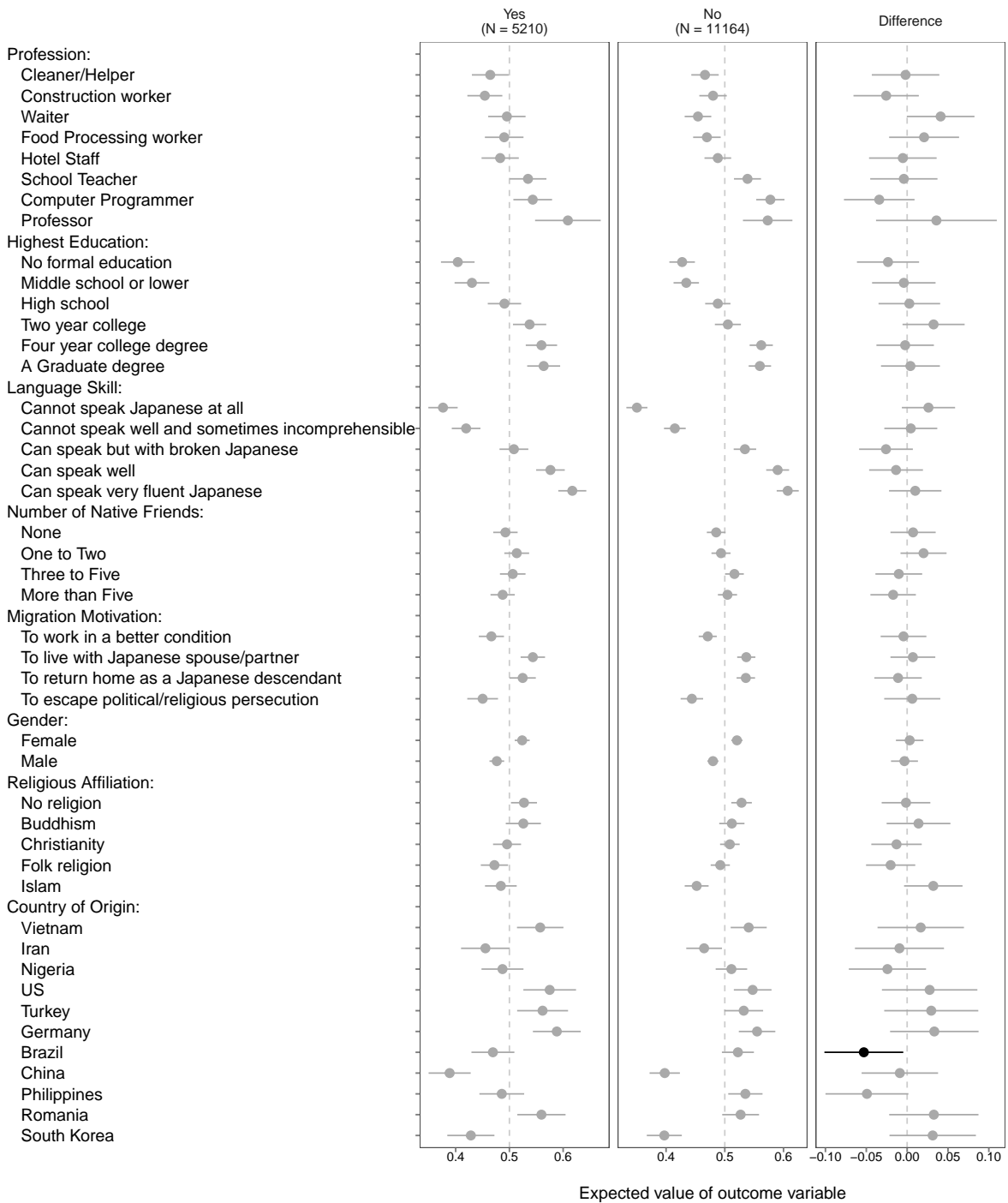


Figure C.19: Attribute salience between subgroups of foreign contact. The left panel shows the differences in salience of each attribute between two subgroups. The right panel shows the difference and its 95% confidence interval for each attribute. The differences which are statistically significant at the 0.05 level are highlighted in black.

