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#### **Conference Paper**

Labor Market Outcomes of Highly Educated Immigrants: Does Your Name Matter?

55th Congress of the European Regional Science Association: "World Renaissance: Changing roles for people and places", 25-28 August 2015, Lisbon, Portugal

#### **Provided in Cooperation with:**

European Regional Science Association (ERSA)

Suggested Citation: Xu, Dafeng (2015): Labor Market Outcomes of Highly Educated Immigrants: Does Your Name Matter?, 55th Congress of the European Regional Science Association: "World Renaissance: Changing roles for people and places", 25-28 August 2015, Lisbon, Portugal, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at: https://hdl.handle.net/10419/124567

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Labor Market Outcomes of Highly Educated

Immigrants: Does Your Name Matter?\*

(Very Preliminary Version)

Dafeng Xu<sup>†</sup>

#### Abstract

Prior empirical research shows that acculturation in the host country might be positively related to immigrants' labor market outcomes. However, whether acculturation helps highly educated immigrants in the labor market is in question, as they have completed a significant fraction of human capital accumulation in their home country. In this paper, I attempt to identify the effect of acculturation on labor market outcomes of Chinese students with bachelor's degrees in Chinese colleges and graduate degrees in US schools. Acculturation is measured by the use of Westernized names on the online social networking site. Various statistical models show no evidence that the use of Westernized names has significant impacts on labor market outcomes.

**Keywords**: acculturation; Westernized name; labor market outcomes; highly educated immigrants

<sup>\*</sup>I have benefited from the comments of Lawrence M. Kahn, Ravi Kanbur, Daniel T. Lichter, and seminar participants at Cornell University.

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## 1 Introduction

In his seminal work (1964), Gordon states that the earliest stage of assimilation is acculturation. This includes the process that new immigrants start to use language in the host country, and moreover, adopt language customs of the host society. Language skills play important roles in immigrants' lives (Van Tubergen and Kalmijn, 2005), and most studies show that language proficiency positively affects labor market outcomes (some examples include Carliner, 1981; Kossoudji, 1988; Tainer, 1988; Chiswick, 1991; Dustmann and Van Soest, 2002; Berman et al., 2003; Chiswick and Miller, 2003; Belot and Ederveen, 2012). Adopting language customs, however, is more than simply using the language. For immigrants of non-Western origins in the US, one new language custom is to adopt and use an English name instead of the original, ethnic-sounding name.

While not necessarily related to job skills, using the Westernized name is still likely to improve immigrants' labor market experiences because it is a way to prevent labor market discrimination. Indeed, names are found to provide signals of socioeconomic status (Fryer and Levitt, 2004); ethnic-sounding names might cause embarrassment (Shifman and Katz, 2005), and more seriously, labor market discrimination: using a field experiment, Bertrand and Mullainathan (2004) find that White names receive much more callbacks for job interviews than African-American names. Similar findings of name-based labor market discrimination are found in Israel (Rubinstein and Brenner, 2014) and the Netherlands (Blommaert et al., 2014).

Although there have been a few studies on the impact of names, no prior research pays special attention to highly educated immigrants, such as international graduate students. The impact of names on these immigrants might differ from the impact on the general immigrant population because of selection in the labor market: highly educated immigrants are more likely to have occupations with rare possibility of discrimination, e.g., professor. Thus, while previous studies find some evidence of

name-based discrimination, whether ethnic-sounding names harm highly educated immigrants is still in question; in other words, we need empirical conclusions about the effect of using Westernized names on highly educated immigrants.

In this paper, I analyze Chinese students who have bachelor's degrees in Chinese colleges and, right after graduation, attend graduate schools in the US. I use the data on Renren, which is widely recognized as the Chinese version of Facebook, to obtain information of the use of Westernized names and other personal characteristics. The user of this online social networking site is able to add his/her Westernized name as the suffix of the Chinese name. Unlike Facebook, Renren is a Chinese-based site, and most Renren accounts are created before users move to the US, those with the Westernized name suffix are generally active users of their Westernized names.

While Renren allows users to post residence and working information, most users choose not to do so. I then link the Renren data to LinkedIn accounts to obtain these immigrants' labor market outcomes. While the earnings data is not available, I am able to obtain the employer and the position of the matched observations. This allows me to study five types of labor market outcomes of an immigrant student: 1) whether he works in the US after graduation; 2) whether he works in a city which is the center for the industry he works in; 3) the prestige of his employer; 4) the prestige score of his occupation; and 5) his position level in the workplace.

Of course, personal backgrounds vary and might influence labor market outcomes. The schools a student attends, in both China and the US, have direct impacts on labor market outcomes because of human capital accumulation in school (Becker, 1962) and the signaling effect of education (Spence, 1973). The year of arrival is related to working experiences and macroeconomic conditions in the US, which are correlated with labor market outcomes. Cultural identity also affects labor market outcomes (Mason, 2004; Bisin et al., 2011). In the empirical analysis I control for these personal characteristics to account for heterogeneity in the labor market.

Including the above characteristics as covariates, however, cannot eliminate all statistical issues. The main empirical challenge is that using the Westernized name can be endogenous. I find three possible reasons why the endogeneity problem exists. First, labor market outcomes might affect the use of the Westernized name (i.e., reversal causality). Second, the user can add any English word (such as the name of person he admires) that are not his name as suffix on Renren, which might not be correctly identified in data collection (i.e., measurement error). Third, there might be unobservable individual attributes correlated with both the use of the Westernized name and labor market outcomes (i.e., omitted variables).

To tackle this problem, one standard solution is to find a source of exogenous variation in using the Westernized name. The randomized experiment is the effective approach (Heckman and Smith, 1995), which is not available in this study. Most Chinese students adopt English names in middle school English class, and English education is mandatory in Chinese college; whether to use these names is not controlled by social scientists. I, however, find a natural experiment to predict the use of the Westernized name: the difficulty of pronouncing the Chinese given name by Western speakers who do not know Chinese. This instrumental variable (IV) model is based on the idea that a student whose Chinese given name is with pronunciation difficulty is more likely to use Westernized name for convenience of non-Chinese speakers.

In this paper, I employ various statistical models (OLS, probit, and IV) to identify the name impact on labor market outcomes. In contrast to findings in prior research, I find no significant name effect on labor market outcomes of these highly educated immigrants. In particular, using a Westernized name cannot even improve the likelihood of staying in the US after graduation.

The remainder of the paper is organized as follows. Section 2 introduces the research background. Section 3 discusses the data set and the empirical strategies. This is followed by empirical results in Section 4. Section 5 concludes.

# 2 Background

## 2.1 Language Customs and Labor Market Outcomes

in progress.

### 2.2 The Adoption and the Use of Westernized Names

English is an important course in elementary and secondary education in China. Students are required to learn English in elementary, middle, and high school, and must take the English test in the National Higher Education Entrance Examination. In Chinese college, English learning is still mandatory, and many universities now hire native speakers from English-speaking countries as instructors of oral English courses<sup>1</sup>. The adoption of Westernized names plays an important role in the process of English learning (Gao et al., 2005; Edwards, 2006), which provides a comfortable way through which English speakers communicate with Chinese students.

While the adoption of Westernized names is common among Chinese colleges, not every student chooses to use the Westernized name. Some college students refuse to use Westernized names due to cultural identity, patriotism, or personal preferences. I restrict my observations to students who receive undergraduate education in China, and the use of the Westernized name in college life is acceptable but not necessary<sup>2</sup>. A further statistical issue is thus the use of the Westernized name might not be randomized. Hence, a simple OLS regression of any outcome variable on whether a Westernized name is shown on the social networking site might be biased. To solve this problem, I need to find a source of exogenous variation to predict the habit of using the Westernized name.

<sup>&</sup>lt;sup>1</sup>In large cities of China, even middle and high schools are usually able to hire native speakers as English teachers.

<sup>&</sup>lt;sup>2</sup>The fraction of students who use Westernized names is unsurprisingly much higher among Chinese students who attend US colleges after graduating from high school. While not discussed in detail in this paper, this is found in the Renren data set.

# 2.3 The Pronunciation Difficulty of Chinese Names

In this part, I propose an instrumental variable model to predict the use of the Westernized name based on exogenous variation. The basic idea is that *ceteris paribus*, a student with the difficult-to-pronounce given name (from the perspective of non-Chinese speakers) is more likely to use a Westernized name frequently. This is eventually reflected by the naming behavior on the social networking site.

Due to the linguistic difference between Chinese and English (and other Western languages), there are Chinese characters that are difficult to pronounce by non-Chinese speakers, especially for those who are without related "phonological knowledge" (Ho et al., 1997). Even with the Pinyin system that transcribes Chinese characters into the Latin alphabet (which is also called as *Romanization*), mispronunciations of Chinese characters (and thus Chinese given names) exist, because the pronunciation rule of Chinese characters cannot be precisely described by the Pinyin system (Bassetti, 2007). In Appendix A I list the Romanized Chinese characters whose pronunciation in Chinese is substantially different from that in English. In other words, these characters are with the pronunciation difficulty.

One direct consequence of mispronunciations is that embarrassment might occur. For example, one of the meanings of the character  $m\`eng$  is dream, which is widely used in given names for female. This character, however, is always pronounced similar with men by non-Chinese speakers<sup>3</sup>. Embarrassment might occur in situations where there are non-Chinese speakers, such as oral English classes or social activities with international students. A solution to this issue is thus to adopt and use a Westernized name. The Westernized name might then be used more widely in daily life, and finally be reflected by the presence of the name on the social networking site.

Here the pronunciation difficulty serves as the source of exogenous variation of

<sup>&</sup>lt;sup>3</sup>One similar example for male given names is shi, which has the meaning stone in Chinese. This character, however, is always pronounced as she by non-Chinese speakers.

the use of the Westernized name. Although naming (and thus the pronunciation difficulty) is a personal feature, it is exogenous with respect to the relationship between the name and the labor market outcome. Parents are unlikely to take the pronunciation difficulty for non-Chinese speakers into consideration when naming their child, and indeed, I find no system difference between Chinese students with and without the difficult-to-pronounce given name. This will be shown in the next section.

#### 2.4 School Quality and Prestige

in progress.

# 3 Data and Empirical Strategies

#### 3.1 Social Network Data Sets

This paper relies on data on two online social networking sites: Renren and LinkedIn. Founded in 2005, Renren is the biggest Chinese online social networking site and is widely recognized as the Chinese version of Facebook. Also, Chinese college students have almost no other option because Facebook is blocked in China.

Based on Renren sample, I collect a randomized subsample set of Chinese college students who continue graduate education in the US right after obtaining bachelor's degrees in China. In the Renren profile, I am able to retrieve information about the name and schools (in China and the US), as well as some other networking attributes, such as the number of friends.

Table 1 presents the descriptive statistics, as well as the comparison between two groups of observations. Panel A shows the attributes retrieved on Renren. As shown in Column 1, in full sample, over 50% students graduate from member schools of Project 985, which includes all Tier 1 and Tier 2 schools in China. About 22.9% of all students graduate from C9 members, which are nine top universities in China (i.e.,

Tier 1 schools). There are slightly more students going to Tier 2 and above schools in the US, classified by the Association of American Universities (AAU). However, only about 10% of all students are able to attend Top 13 US schools<sup>4</sup>, which constitute US Tier 1 universities. On average, a Renren user in the sample set has 555 friends, and the personal webpage has been visited for nearly 10,000 times. About half of the observations are male, and the average year since moving to the US (i.e., graduating from Chinese colleges) is 5.36 years.

Table 1: Descriptive Statistics

|                         | (1)                | (2)               | (3)               | (4)    |
|-------------------------|--------------------|-------------------|-------------------|--------|
|                         | Full Sample        | With no PD        | With PD           | t test |
| A: Renren Profile       |                    |                   |                   |        |
| % of Project 985        | $0.516 \ (0.500)$  | $0.530 \ (0.499)$ | 0.499 (0.500)     | 0.2322 |
| % of C9 League          | 0.229 (0.420)      | $0.231\ (0.422)$  | $0.226 \ (0.418)$ | 0.8188 |
| % of AAU                | $0.676 \ (0.468)$  | $0.680 \ (0.467)$ | 0.672 (0.470)     | 0.7422 |
| % of Top 13 US Schools  | $0.108 \; (0.311)$ | $0.086 \ (0.280)$ | 0.135 (0.342)     | 0.0023 |
| # of Renren friends     | 555 (322)          | 551 (329)         | 561 (314)         | 0.5509 |
| # of Visitors on Renren | 9146 (11794)       | 9382 (13245)      | 8854 (9718)       | 0.3887 |
| Male                    | $0.492 \ (0.500)$  | 0.475 (0.500)     | $0.513 \ (0.500)$ | 0.1435 |
| Year since Arrival      | 5.360 (1.688)      | 5.415 (1.713)     | $5.291\ (1.654)$  | 0.1571 |
| West. Name Suffix       | $0.146 \ (0.353)$  | $0.082 \ (0.275)$ | 0.225 (0.418)     | 0.0001 |
| B: LinkedIn Profile     |                    |                   |                   |        |
| Stay in the US          | $0.652 \ (0.476)$  | 0.634 (0.482)     | 0.675 (0.469)     | 0.0975 |
| Observations            | 1499               | 826               | 673               | _      |

<sup>&</sup>quot;PD" on the top row is the abbreviation of "Pronunciation Difficulty".

One concern is that there are systematic differences between students with and without the difficult-to-pronounce given name (besides the likelihood of adding the Westernized name as suffix). In Column 2 and 3 I report the descriptive statistics of students with and without the difficult-to-pronounce given name, and in Column 4,

C9 League and Project 985 represent Tier 1 and Tier 2 and above schools in China.

Top 13 US Schools and AAU represent Tier 1 and Tier 2 and above schools in the US. Standard deviations are in parentheses.

<sup>&</sup>lt;sup>4</sup>The selection is based on 2015 US News Ranking of Global Universities: I include American universities in the list of top ten universities, plus all other Ivy League member schools. These universities are: Harvard University, Massachusetts Institute of Technology, University of California at Berkeley, Stanford, California Institute of Technology, University of California at Los Angeles, University of Chicago, Columbia University, Yale University, University of Pennsylvania, Cornell University, Brown University, and Dartmouth College.

I show the unpaired t test results. Attributes of two groups of observations, shown in Column 2 and 3, have no significant difference except for the fraction of students attending Top 13 US schools. This, however, might be due to the sample size problem.

Finally, I turn to the fraction of students who add Westernized names after their Chinese names on Renren. In general, there are approximately 15% of all students with Westernized name presented as suffix. The fraction, however, is significantly higher among students with difficult-to-pronounce Chinese given names, which is consistent with our previous qualitative analysis. Matching Renren accounts with LinkedIn profiles, I report information about labor market outcomes in Panel B. In general, about 65% of all observations reside and work in the US after leaving US graduate schools. Students with difficult-to-pronounce given names are slightly more likely to work in the US, but the difference is not very significant.

## 3.2 Empirical Strategies

In this part, I introduce my empirical strategies to analyze the name effect. I start with the simple OLS regression of the labor market outcome on the name variable and other covariates:

$$A_i = \alpha n_i + \beta' \mathbf{S}_i + \gamma' \mathbf{X}_i + \mu' \mathbf{Y}_i + \varepsilon_i$$
 (1)

where i indexes individual.  $A_i$  is the outcome variable obtained from the LinkedIn profile, and  $n_i$  is the main regressor: a dummy describes whether the individual has a Westernized name as suffix on Renren.  $\mathbf{S}_i$  is a vector containing school tier fixed effects that account for the influence of quality and prestige of colleges and graduate schools.  $\mathbf{X}_i$  is the vector of personal characteristics,  $\mathbf{Y}_i$  is the vector of year (of attending US graduate schools) fixed effects, and  $\varepsilon_i$  is the error term.  $\alpha$  reflects the effect of using the Westernized name on the labor market outcome. In case that  $A_i$  is

a dummy variable (e.g., whether the current location is the US), Equation 1 presents a linear probability model (LPM). It is, however, easy to rewrite a similar equation for probit or logit regression.

As discussed in Section 1, the variable  $n_i$  might be endogenous. To identify the causal effect of  $n_i$  on  $A_i$ , we have three issues with OLS. The first issue is reversal causality: while naming affects labor market outcomes, it can also be affected on the other way around. For example, a person who stays in the US are more likely to use a Westernized name, and finally present it on the social networking site. While most Renren accounts are created prior to moving to the US, because user's name can be changed once on Renren, and the time the change happens is not observable, reversal causality is still possible. The second issue is measurement error: own Westernized name is not the only thing that can be added behind the Chinese name. A Renren user can add English words other than his name (such as the name of his idol), but the words are identified as the name. Another possibility is that a user uses an uncommon name but are not identified as the name. Finally, there might be omitted variables, such as personalities and hometown information. That said, with the above three issues, the OLS estimate of the effect of using the Westernized name might be biased, and we even do not know whether it is upward or downward biased.

To provide an alternative empirical approach, I employ an instrumental variable model, using the pronunciation difficulty as the source of exogenous variation to predict the use of the Westernized name. To proceed this, I run the first-stage regression as follows.

$$n_i = \delta P D_i + \lambda' \mathbf{S}_i + \theta' \mathbf{X}_i + \tau' \mathbf{Y}_i + \epsilon_i \tag{2}$$

where  $PD_i$  is a dummy variable indicating whether individual i has a difficult-topronounce given name. I then use the predicted value of  $n_i$  to run the second-stage regression shown in Equation 1, and obtain the IV estimate of the effect of using the Westernized name on labor market outcomes.

## 4 Results

#### 4.1 Location

In this part, I study the effect of using the Westernized name on whether the current location is the US. In the regression,  $A_i$  is the dummy variable indicating whether individual i currently stays in the US.

Table 2 shows the results of baseline estimations. In Column 1 I only run a simple regression of whether staying in the US on the name variable, and the name has no significant impact on the likelihood of working in the US. I add all other covariates in the regression of Column 2, and still no name effect is observed. This regression, however, does make sense for explaining some other variables that affect the labor market outcome: showing the US school identity instead of the Chinese one is positively related to the likelihood of staying in the US to work. Also, students from Tier 1 Chinese colleges are far more likely to stay in the US (with Tier 3 colleges as the reference group); students from Tier 2 Chinese colleges are also more likely to stay, but the magnitude of the coefficient is substantially smaller. Surprisingly, US school prestige appears to be a minor factor; this cannot be the multicollinearity problem because the result remains even dropping Chinese college dummies (not reported here). Finally, there is also no gender heterogeneity found in this basic regression.

In Column 3 I repeat the exercise using probit regression. The marginal effects, however, are numerically very similar with those reported in Column 2, indicating that the linear probability model works well in this case. In Column 4 I use the college and graduate school fixed effects, instead of school tier fixed effects, as the covariates on the right hand side. Similarly, while US school identity still improves the likelihood of staying in the US, whether using a Westernized name or not does not matter. In the last column I investigate if there is a name effect on whether the individual obtains a PhD degree in the US. Again, using the Westernized name

Table 2: Baseline Estimation: Whether Staying in the US

|                    | (1)                  | (2)       | (3)      | (4)      | (5)            |
|--------------------|----------------------|-----------|----------|----------|----------------|
|                    | $\hat{\mathrm{OLS}}$ | OLS       | Probit   | OLS      | OLS            |
| Westernized name   | 0.005                | -0.010    | -0.008   | 0.028    | -0.005         |
|                    | (0.035)              | (0.035)   | (0.035)  | (0.042)  | (0.048)        |
| US school identity |                      | 0.121***  | 0.120*** | 0.103*** | 0.045          |
|                    |                      | (0.025)   | (0.025)  | (0.030)  | (0.034)        |
| Tier 1 (China)     |                      | 0.367***  | 0.384*** |          | 0.452***       |
|                    |                      | (0.032)   | (0.032)  |          | (0.041)        |
| Tier 2 (China)     |                      | 0.135***  | 0.120*** |          | 0.136**        |
|                    |                      | (0.028)   | (0.027)  |          | (0.040)        |
| Tier 1 (US)        |                      | -0.059    | -0.054   |          | -0.076         |
|                    |                      | (0.044)   | (0.044)  |          | (0.043)        |
| Tier 2 (US)        |                      | -0.100*** | -0.093** |          | -0.174         |
|                    |                      | (0.028)   | (0.027)  |          | (0.115)        |
| Male               |                      | -0.038    | -0.035   | -0.021   | $0.062\dagger$ |
|                    |                      | (0.024)   | (0.024)  | (0.029)  | (0.034)        |
| Observations       | 1499                 | 1499      | 1499     | 1499     | 685            |
| Year Dummies       | No                   | Yes       | Yes      | Yes      | Yes            |
| Control Variables  | No                   | Yes       | Yes      | Yes      | Yes            |
| $\mathbb{R}^2$     | 0.000                | 0.108     | 0.090    | 0.391    | 0.265          |

Standard errors are in parentheses.

appears to have minor impact.

Subsequently, I proceed to the IV analysis on the name effect. To do so, I first run a reduced-form regression of whether the individual stays in the US on the pronunciation difficulty indicator and other covariates. This regression shows that having a difficult-to-pronounce given name does not necessarily affect labor market outcomes. The pronunciation difficulty is supposed to predict the use of the Westernized name, which can be verified by the first-stage regression presented in Column 2. Indeed, having a difficult-to-pronounce given name substantially improve the likelihood of showing the Westernized name on Renren. Moreover, unlike most regressions, school quality and prestige cannot predict the use of the Westernized name. The first-stage relationship, however, does not show that everyone with a difficult-to-pronounce given name does so. In other words, non-compliance exists in this natural experiment, and the IV estimate is the local average treatment effect (LATE) instead of the average

<sup>† :</sup> p < .10; \*: p < .05; \*\*: p < .01; \*\*\*: p < .001.

treatment effect (ATE).

Table 3: IV Estimation: Whether Staying in the US

| Table 3: IV Estimation: Whether Staying in the US |              |                    |            |             |         |  |  |
|---|--------------|--------------------|------------|-------------|---------|--|--|
|   | (1)          | (2)                | (3)        | (4)         | (5)     |  |  |
|   | Reduced-Form | First-Stage        | OLS        | IV          | IV      |  |  |
| PD  | 0.034        | 0.127***           |            |             |         |  |  |
|   | (0.024)      | (0.017)            |            |             |         |  |  |
| Westernized name                                  |              |                    | -0.010     | 0.262       | 0.309   |  |  |
|   |              |                    | (0.035)    | (0.192)     | (0.201) |  |  |
| US school identity                                | 0.116***     | 0.161***           | 0.121***   | $0.073^{+}$ | 0.038   |  |  |
|   | (0.024)      | (0.018)            | (0.025)    | (0.041)     | (0.042) |  |  |
| Tier 1 (China)                                    | 0.368***     | 0.008              | 0.367***   | 0.363***    | ,       |  |  |
| , ,   | (0.032)      | (0.023)            | (0.032)    | (0.033)     |         |  |  |
| Tier 2 (China)                                    | 0.138***     | 0.003              | 0.135***   | 0.136***    |         |  |  |
| ,   | (0.282)      | (0.020)            | (0.028)    | (0.029)     |         |  |  |
| Tier 1 (US)                                       | -0.056       | $-0.054^{\dagger}$ | -0.059     | -0.048      |         |  |  |
| ,   | (0.043)      | (0.031)            | (0.044)    | (0.044)     |         |  |  |
| Tier 2 (US)                                       | -0.097****   | -0.016             | -0.100**** | -0.097 **   |         |  |  |
| ,   | (0.027)      | (0.020)            | (0.028)    | (0.028)     |         |  |  |
| Male  | -0.038       | -0.052**           | -0.038     | -0.023      | 0.010   |  |  |
|   | (0.024)      | (0.017)            | (0.024)    | (0.026)     | (0.026) |  |  |
| Observations                                      | 1499         | 1499               | 1499       | 1499        | 1499    |  |  |
| Year Dummies                                      | No           | Yes                | Yes        | Yes         | Yes     |  |  |
| Control Variables                                 | No           | Yes                | Yes        | Yes         | Yes     |  |  |
| First-Stage F Stat                                | _            | 20.59              | _          | _           |         |  |  |
| $\mathbb{R}^2$                                    | 0.103        | 0.143              | 0.108      |             |         |  |  |

<sup>&</sup>quot;PD" on the top row is the abbreviation of "Pronunciation Difficulty".

From Column 3, I continue to verify the name effect on the labor market outcome. Column 3 repeats the OLS result shown in Table 2. Compared with this, the IV estimate in Column 4 shows distinct result in the sense of the sign and the magnitude. However, there is still no significant name effect found using the IV regression. In Column 5 I report the result of the IV regression based on college and graduate school fixed effects, instead of the school tier fixed effects. Again, I find no evidence that using the Westernized name can significantly increase the likelihood of staying in the US to work.

Standard errors are in parentheses.

 $<sup>\</sup>dagger: p < .10; *: p < .05; **: p < .01; ***: p < .001.$ 

#### 4.2 Other Labor Market Outcomes

in progress.

# 5 Concluding Remarks

in progress.

# Appendix A: Difficult-to-Pronounce Romanized Chinese Characters

in progress.

# References

- [1] Bassetti, Benedetta. 2007. "Effects of Hanyu Pinyin on Pronunciation in Learners of Chinese as a Foreign Language." In *The Cognition, Learning and Teaching of Chinese Characters*, ed. Guder, A. and Jiang, X. and Wan, Y., 201 234. Beijing, China: Beijing Language and Culture University Press.
- [2] Belot, Michèle, and Sjef Ederveen. 2012. "Cultural Barriers in Migration between OECD Countries." *Journal of Population Economics*, 25(3): 1077 1105.
- [3] Berman, Eli, Kevin Lang, and Erez Siniver. 2003. "Language-Skill Complementarity: Returns to Immigrant Language Acquisition." *Labour Economics*, 10(3): 265 290.
- [4] Bertrand, Marianne, and Sendhil Mullainathan. 2004. "Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination." American Economic Review, 94(4): 991 - 1013.

- [5] Bisin, Alberto, Eleonora Patacchini, Thierry Verdier, and Yves Zenou. 2011. "Ethnic Identity and Labor Market Outcomes of Immigrants in Europe." Economic Policy, 26(65): 57 92.
- [6] Bloommaert, Lieselotte, Marcel Coenders, and Frank Van Tubergen. 2014. "Discrimination of Arabic-Named Applicants in the Netherlands: An Internet-Based Field Experiment Examining Different Phases in Online Recruitment Procedures." Social Forces, 92(3): 957 982.
- [7] Carliner, Geoffrey. 1981. "Wage Differences by Language Group and the Market for Language Skills in Canada." *Journal of Human Resources*, 16(3): 384 399.
- [8] Chiswick, Barry R., and Paul W. Miller. 2003. "The Complementarity of Language and Other Human Capital: Immigrant Earnings in Canada." *Economics of Education Review*, 22(5): 469 - 480.
- [9] Chiswick, Barry R. 1991. "Speaking, Reading, and Earnings among Low-Skilled Immigrants." *Journal of Labor Economics*, 9(2): 149 170.
- [10] Dustmann, Christian, and Arthur Van Soest. 2002. "Language and the Earnings of Immigrants." *Industrial and Labor Relations Review*, 55(3): 473 492.
- [11] Edwards, Rachel. 2006. "What's in a Name? Chinese Learners and the Practice of Adopting 'English' Names." Language, Culture and Curriculum, 19(1): 90 -106.
- [12] Fryer, Roland G., and Stephen D. Levitt. 2004. "The Causes and Consequences of Distinctively Black Names." Quarterly Journal of Economics, 119(3): 767 -805.

- [13] Gao Yihong, Cheng Ying, Zhao Yuan, and Zhou Yan. 2005. "Self-Identity Changes and English Learning among Chinese Undergraduates." World Englishes, 24(1): 39 51.
- [14] Heckman, James J., and Jeffrey A. Smith. 1995. "Assessing the Case for Social Experiments." *Journal of Economic Perspectives*, 9(2): 85 110.
- [15] Ho, Connie Suk-Han, and Peter Bryant. 1997. "Phonological Skills Are Important in Learning to Read Chinese." *Developmental Psychology*, 33(6): 946 951.
- [16] Kossoudji, Sherrie A. 1988. "English Language Ability and the Labor Market Opportunities of Hispanic and East Asian Immigrant Men." Journal of Labor Economics, 6(2): 205 - 228.
- [17] Mason, Patrick L. 2004. "Annual Income, Hourly Wages, and Identity among Mexican Americans and Other Latinos." *Industrial Relations*, 43(4): 817 - 834.
- [18] Rubinstein, Yona, and Dror Brenner. 2014. "Pride and Prejudice: Using Ethnic-Sounding Names and Inter-Ethnic Marriages to Identify Labour Market Discrimination." Review of Economic Studies, 81(1): 389 425.
- [19] Shifman, Limor, and Elihu Katz. 2005. ""Just Call Me Adonai": A Case Study of Ethnic Humor and Immigrant Assimilation." American Sociological Review, 70(5): 843 - 859.
- [20] Tainer, Evelina. 1988. "English Language Proficiency and the Determination of Earnings among Foreign-Born Men." Journal of Human Resources, 23(1): 108
  - 122.
- [21] Van Tubergen, Frank, and Matthijs Kalmijn. 2005. "Destination-Language Proficiency in Cross-National Perspective: A Study of Immigrant Groups in Nine Western Countries." American Journal of Sociology, 110(5): 1412 1457.