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The Effect of Vietnamese Refugees on Wages in the San Francisco Bay Area

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THE EFFECT OF VIETNAMESE REFUGEES
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by
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Accepted by:
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Abstract

The issue of whether immigration can adversely impact the earnings of domestic workers in the receiving region is a hotly contested one, even amongst economists. In this paper, I analyze the effects Vietnamese refugees had on wages in nine counties of the San Francisco Bay Area in the first half of the 1980s. I exploit the existence of exogenous variation in Vietnamese refugee settlements across the San Francisco Bay Area counties and use a difference-in-difference design with continuous treatment to obtain my results. I find the arrival of Vietnamese refugees has a statistically significant positive effect on wages. Increased consumption, productivity, and specialization and the existence of government assistance programs all likely play roles in the manifestation of positive effects on wages due to the arrival of immigrants.

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Table of Contents

List of Tables

List of Figures

1. Introduction

"Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore.
Send these, the homeless, tempest-tost to me,
I lift my lamp beside the golden door!"
(Lazarus, 1883).

For the millions of immigrants arriving at Ellis Island in the first half of the twentieth century, these words cast on the plaque at the foot of the Statue of Liberty were a bold declaration of hospitality. Whether it was war, economic hardship, or persecution that led people to leave their home countries, this monument and its accompanying message was a testament to the idea that America was indeed a country of immigrants.

In today's political zeitgeist, it can be hard to imagine that there was ever a time in America's history when politicians were not chanting 'build a wall' or visiting neighboring countries to tell their citizens not to come. And while it would be disingenuous to describe America's past as having been a time of extreme acceptance of foreigners, the surprising truth is that the U.S. largely had open borders from its inception up until the 1920s (Gerber, 2011, pp. 17-64). There were a few notable exceptions to this norm (mainly, the Chinese exclusion act of 1882) that worked to stem the influx of immigrant groups that least resembled America's overwhelmingly white, protestant population at that time. Still, between 1860 and 1920, immigrants made up between 13-percent and 15-percent of the U.S. population (Batalova et al., 2021). In the 1920's, though, increasing nativist attitudes saw the creation of laws that curbed the flow of

1

immigrants into the United States. It wasn't until the 1970s that the immigrant share of the U.S. population would once again start to increase, after the Immigration and Nationality Act of 1965 reformed the immigration quotas set in the 1920s (Gjelten, 2015, pp. 79-94).

Today, the debate over immigration policy in America is as fierce as it has ever been. Those who oppose immigration often predict fiscal deficits, increases in violent crime, the erosion of cultural norms, and economic suffering for natives as some of the consequences of allowing foreigners into their lands. However, a study by the National Academy of Sciences concluded that the overall, long-run fiscal effect of new immigrants is actually positive (Blau and Mackie, 2017). Moreover, foreign born incarceration rates are over 25 percent lower than native-born incarceration rates (Landgrave and Nowrasteh, 2018). In fact, on any given year, an American is approximately twice as likely to be struck by lightning[1] than to die at the hands of a foreign-born terrorist on U.S. soil.[2] Finally, though first-generation immigrants, especially older and less educated ones, may have some difficulty in completely learning English and adopting 'American values,' this discrepancy all but disappears with second-generation immigrants. Second-generation immigrants attain English fluency at near-100-percent levels and have political beliefs that align with those of the average American from a non-immigrant household (Alba, 2004, p. 7; Nowrasteh and Wilson, 2017).

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[1] Based on averages from 2009 to 2018, an American's annual risk of being struck by lightning is 1/1,222,000 (National Weather Service, 2018).
[2] An analysis of the years 1975 to 2015 found that an American's annual risk of being killed by a foreign-born terrorist was 1/3,600,000 (Nowrasteh, 2016).

Nevertheless, many of the concerns surrounding immigration center around claims that immigrants negatively impact the economic well-being of residents of the receiving area. For this reason, my research objective is to analyze the effects that Vietnamese refugees had on the average quarterly wage in the early 1980s in the San Francisco Bay Area, or simply the "Bay Area," which comprises nine California counties.

1.1. Literature Review

Various studies have documented or estimated negative effects of immigration on the economic standing of natives. The simulated impacts of Mexican immigrants on the wages of native high school dropouts from 1980 to 2000 were negative; this negative impact was present even when simulating an adjustment to the rental price of capital (Borjas and Katz, 2005). However, the assumption made in these simulations that immigrant and native workers of the same education and experience background are perfectly substitutable has been criticized (e.g., Ottaviano and Peri, 2012). Nevertheless, a report on current immigration trends in the U.S. also concluded that immigration can have a depressing effect on the wages of prior immigrants and native high school dropouts, although the size of the negative effect is ambiguous (Blau and Mackie, 2017). Additionally, a study of Czech workers in Germany's border towns found that the labor supply shock decreased native wages and employment (Dustmann et al., 2016).

Still, there are numerous papers that have studied a range of economic outcomes following immigration and have found null or positive effects. Several papers have

investigated the economic effects of immigration into the U.S. from the late 19th century until the early 20th century, a period often known as the age of mass migration. The literature surrounding this topic has overwhelmingly found evidence showing immigration improving the incomes and employment standing of domestic workers (Tabellini, 2019; Sequeira et al., 2017). Tabellini (2019) instruments for immigration with a variable that predicts the flow of immigrants to U.S. cities based on pre-existing immigrant enclaves. Conversely, Sequiera et al. (2017) instruments for immigration with a variable that predicts immigrant flows based on which counties were connected to the railway system. Nevertheless, both studies find statistically significant positive effects on natives' incomes and employment because of immigration. Studies that utilized a difference-in-difference design to analyze the economic outcomes of the implementation of immigration quotas in the 1920s found that, in areas that suffered a sharp decrease in immigration, the incomes and employment rate of natives did not improve, and productivity growth actually declined (Abramitzky et al., 2019; Ager and Hansen, 2017).

Using difference-in-difference design as well, Clemens et al. (2018) investigated the economic effects of the termination of the Bracero Program in 1964, which resulted in a massive and immediate decline in seasonal agricultural laborers from Mexico. The findings showed that domestic seasonal agriculture workers did not experience a rise in real wages or employment. This occurred because farm owners adopted capital-intensive processes for their crop cultivation and decreased production for crops for which technology was not readily available.

Studies focused on immigration shocks comprising of refugees from developing countries have, for the most part, found promising evidence that these sorts of shocks do not negatively impact the economies of receiving regions. In 1980, in an event that came to be known as the Mariel Boatlift, about 60,000 Cuban immigrants settled in Miami after Castro said that Cubans were free to flee to the U.S. A study using data from the Current Population Survey found that the influx of 'Marielitos' had essentially no effect on the employment standing and wages of workers in the city (Card, 1990). Conversely, Borjas (2015) found contradicting results—that 'Marielitos' had in fact decreased the wages of native high-school dropouts in Miami. However, Clemens and Hunt (2017) and Peri and Yasenov (2017) cast doubt into Borjas' findings, citing large measurement error as a result of using a small dataset that compositionally did not mirror Miami's labor market. In a study using longitudinal data of Danish workers from 1991 to 2008 to investigate the effects refuges had on native workers, the results show that immigration positively impacted the wages, employment, and occupational mobility of native unskilled workers (Foged and Peri, 2015).

An overwhelming amount of the literature on immigration has found evidence that immigration is beneficial, or at least not harmful, for the receiving area. Although there are papers that find negative impacts, these results are usually confined to short time frames and apply only to a narrow segment of the labor market. However, no two instances of notable immigration shocks are completely alike. This diversity in immigration scenarios has allowed for variability in the methods used, the multitude and magnitude of threats to specification, and the results found in case studies. The case of

Vietnamese refugee settlement in the San Francisco Bay Area starting in 1980 presents a quasi-natural experiment that I exploit by using a difference-in-difference design to estimate the effects these immigrants had on local wages.

1.2. Background: Vietnamese Refugees in the San Francisco Bay Area

After years of mounting casualties and growing discontentment with the various military campaigns, the U.S. formally ended its involvement in the Vietnam conflict in 1973. Significant fighting between the communist North and the U.S.-backed South, however, continued until the North Vietnamese forces captured the capital of South Vietnam in 1975.

In the months preceding and following the fall of Saigon, about 125,000 Vietnamese fled to the United States (Niedzwiecki and Duong, 2004). Most of these refugees had been loyal to the South Vietnamese government and feared political persecution, although continued violence and poverty were additional motivators for relocation. For context, in the two decades preceding 1975, only about 18,000 immigrants from Vietnam arrived in the U.S. (Gordon, 1987).

In response to the situation, the U.S. government passed legislation which gave these refugees special status and allocated funds for resettlement efforts and other assistance provisions (Indochina Migration and Refugee Assistance Act, 1975). Initially, these refugees were deliberately scattered across all fifty states in an effort to avoid overwhelming any specific communities and seeing the creation of ethnic 'ghettos'

(Campi, 2005). However, 27,199, or approximately 20-percent, of the Vietnamese refugees were resettled in California—the most in any state by a wide margin (Nessen, 1976). The resettlement dispersal efforts were further rendered ineffective since many eventually moved to California shortly after arriving in the U.S. (Campi, 2005).

A few years after the initial wave of Vietnamese refugees, a second major exodus out of Vietnam followed. Repressive "reeducation camps," economic hardship, and the breakout of a new conflict between Vietnam and China were some of the causes that led so many to flee. Beginning in 1978 up until the mid-1980s, nearly 2 million Vietnamese left their home country (Campi, 2005). Nearly half fled by sea to nearby non-communist countries like Thailand, Hong-Kong, the Philippines, Malaysia, and Indonesia, earning them the nickname "Boat People." These countries of 'first asylum' were quickly overwhelmed by the sheer numbers of refugees, and so, in July of 1979, the United Nations convened the First Geneva Conference on Indochinese Refugees. At this conference, the United States and other western countries agreed to receive some of the refugees.

The unprecedented nature of this refugee crisis resulted in the U.S. passing The Refugee Act, which provided, "…comprehensive and uniform provisions for the effective resettlement and absorption of those refugees who are admitted [to the United States]" (1980). The number of refugees to the U.S. from Vietnam saw a gradual increase starting in 1978, peaked in 1980, and stabilized a couple of years afterward (Figure 1).

Figure 1 - Vietnamese Refugee Immigration to the United States, FY[i]   1975 - 1990
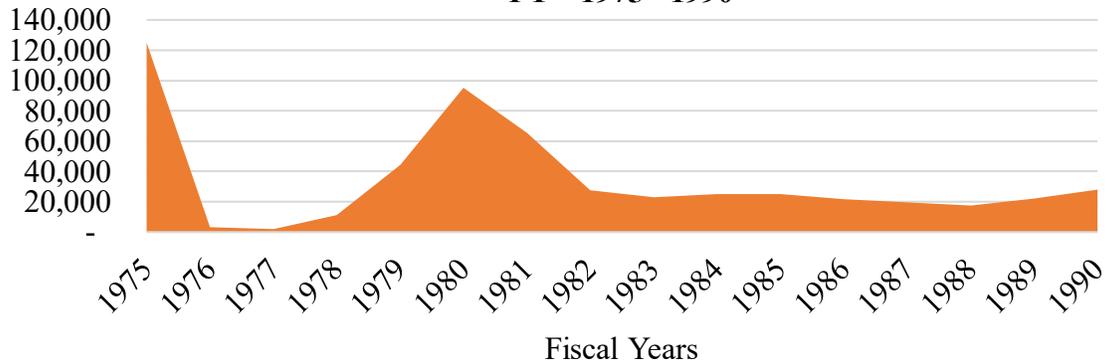
Fiscal Years

Source: (Niedzweiecki and Duong, 2004), pgs. 9-10
[i] Fiscal Years run from October to September. So, for example, Fiscal Year 1980 begins October 1, 1979 and ends September 30, 1980.

The Refugee Act of 1980 also created the Office of Refugee Resettlement (ORR), which provided annual reports on the refugee resettlement efforts. Although the reports group Vietnamese with other Southeast Asians, Vietnamese make up about 80-percent of the total group's composition (U.S. Department of Health and Human Services, 1981). In the 1980s, California was far and away the state that receive the most Southeast Asian refugees (U.S. Department of Health and Human Services, 1981). California consistently absorbed about 30 percent of the annual refugee arrivals, while the state to receive the second most, Texas, usually accepted only around 7 to 11 percent of the total (Table 1).

Table 1 - Number and Proportion[i] of New Southeast Asian Refugee Arrivals in California and Texas, FY 1980-1985[ii]

	FY 1980		FY 1981		FY 1982		FY 1983		FY 1984		FY 1985	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
CA	48,540	29	41,196	31	18,356	25	11,356	29	16,718	32	16,107	32
TX	12,251	7	11,866	9	7,586	11	4,078	10	4,510	9	4,219	8

Source: (U.S. Department of Health and Human Services, 1981:1986).

[i] Proportion refers to the percentage of Southeast Asian Refugees who were settled in the specific state, out of the total number of Southeast Asian Refugees who arrived in the United States in the fiscal year, rounded to the nearest whole number.

[ii] Fiscal Years run from October to September. So, for example, Fiscal Year 1980 begins October 1, 1979 and ends September 30, 1980.

Furthermore, California received many interstate migrants following their initial settlement in the U.S. In the 1980 fiscal year, California saw a net secondary migration inflow of 9,350 Southeast Asians, which constituted 67.8 percent of total net secondary Southeast Asian migrants during that time period (U.S. Department of Health and Human Services, 1981). California was a clear top destination for a few main reasons:

> [Vietnamese] refugees tended to prefer urban places with a warm climate and an existing Asian population… Movement tended to be toward the South and West, particularly into California. As ethnic communities began to form, secondary migration led to greater concentration of refugees.(Gordon, 1987, p. 165)

However, only nine counties in the San Francisco Bay Area had readily available decennial per-county counts of the Vietnamese population starting from 1980: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. Below, Table 2 displays the number and percentage of the population that was Vietnamese in these nine Bay Area counties. San Francisco, Alameda, and Santa Clara counties had significant Vietnamese enclaves in 1980, and the growth of the Vietnamese population in ten years in those counties reflects that. The other Bay Area counties, by

9

contrast, do not have significant Vietnamese communities, and thus serve as comparison

counties in my theoretical framework.

Table 2 - Vietnamese Populations, San Francisco Bay Area Counties, 1980 and 1990

	1980		1990		
Counties	Count	Percent[i]	Count	Percent	Percentage Point Increase, 1980 to 1990
Alameda	3,146	0.28	13,896	1.09	0.80
Contra Costa	936	0.14	2,747	0.34	0.20
Marin	462	0.21	640	0.28	0.07
Napa	20	0.02	112	0.10	0.08
San Francisco	5,078	0.75	8,952	1.24	0.49
San Mateo	628	0.11	2,070	0.32	0.21
Santa Clara	11,156	0.86	54,739	3.66	2.80
Solano	474	0.20	716	0.21	0.01
Sonoma	225	0.08	790	0.20	0.12

Source: (MTC and ABAG, 2010)
(http://www.bayareacensus.ca.gov/counties/counties.htm)
[i] Percent refers to the proportion of the county's population that was Vietnamese.

There are a couple main advantages to focusing my analysis on the second wave

rather than the first wave of Vietnamese refugees. First, the characteristics of the second

wave of immigrants more closely resemble the typical immigrant that immigration critics

worry negatively impact the economy. A disproportionate amount of the Vietnamese

refugees from the first wave had worked closely with Americans as South Vietnamese

government or military officials, interpreters, or direct employees of the United States

Government (Elliott, 2007). By virtue of their employment circumstances, they generally

had higher skills and greater English proficiency than the typical Vietnamese. By

contrast, the second-wave immigrants generally had, "…less English language capability

and fewer occupational skills transferable to the U.S. economy than earlier [Vietnamese] arrivals" (U.S. Department of Health and Human Services, 1982, p. ii). Immigration critics like to argue that low-skilled immigrants negatively impact the earnings of the receiving region's native workers, so focusing my analysis on the second-wave refugees will directly confront this argument.

Second, more Vietnamese refugees arrived in California in the second wave than in the first wave. 27,199 Southeast Asian refugees settled in California in FY 1975[3], while 57,890 settled in California in FY1980, including net secondary migrants. Furthermore, compared to first-wave Vietnamese refugees, the settlement choice for second-wave Vietnamese refugees is likely based less on local labor demand conditions.

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[3] Fiscal Years run from October to September. So, for example, Fiscal Year 1980 begins October 1, 1979, and ends September 30, 1980.

2. Methodology

2.1. Economic Arguments About Immigration

Standard economic models of a closed economy suggest that, "…increases in the relative supply of a particular group will lower the relative wages of that group, while raising average wages for workers as a whole" (Card, 2007, pg. 15). Still, evidence has been found to suggest the absolute level of wages of low-skilled workers in high-immigration cities is higher in comparison to low-immigration cities, even if wages of low-skilled native workers decrease because of the arrival of immigrants (Card, 2007). The exact effect immigration can have on the economic standing of natives can vary amongst different contexts because of the multitude of factors at play at any given time and place. The magnitude and speed of the immigrant inflow, the composition of skills in a labor pool, and how other factors of production adjust to changes in the labor supply are some of the main elements that determine how immigration affects wages (Blau and Mackie, 2017, pg. 197). The arguments for how immigration can positively impact total average wages revolve around the effects immigrants can have on the local demand for labor. For example, because immigrants are also consumers, not just workers, they can increase the demand for labor in industries supplying the goods and services they buy (Blau and Mackie, 2017). Increasing worker productivity, worker complementarity, and the specialization of labor provide additional, more subtle, mechanisms for how immigrants can increase demand for labor and thus increase the average wages of natives.

In a competitive market, firms respond to an increase in labor productivity by increasing wages (Tomlinson, 2007). There are various mechanisms through which immigrants can increase productivity. In the U.S. in the late 20th and early 21st century, Hispanic immigrants increased total factor productivity in part because they promoted firms to increase adoption of low-skill-biased technology (Peri, 2009). Furthermore, heterogeneity can expand overall productivity and efficiency, primarily through the increased variety in skills and ideas (Alesina and La Ferrara, 2005). Buchardi et al. (2020) found positive causal effects of immigration on increasing the number of patents per capita, the overall level of economic growth, and economic dynamism.[4] Also, the existence of relatively cheap but productive immigrant labor can spur the creation of businesses in the area, and so the flow of jobs to these areas, "…cushions the adverse effect of immigration on the wage of competing workers in those localities" (Borjas and Katz, 2005, p. 33).

Economic theory suggests that while wages should increase for native workers with skills that are complemented by the skills of immigrant workers, those workers who are easily substitutable by immigrant labor can see their wages fall as a result of immigration (Ottaviano and Peri, 2012; D'Amuri and Peri 2011). This is why some analyses of simulated and real-world immigration shocks have found negative effects on the wages of native high-school dropouts and prior immigrants (e.g., Borjas and Katz, 2005; Borjas

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[4] By economic dynamism, the authors mean creative destruction. Their measures of this included the job creation rate, the job destruction rate, the job growth skewness, and local wages. They find that a, "… one standard deviation increase in local immigration increases the job creation rate by 7%, the job destruction rate by 11%, the job growth skewness by 3%, and local wages by 3%, all expressed as changes relative to their mean" (Buchardi et al., 2020).

2015). However, in many immigration studies, there have been, "… small but significant values for the inverse of the native-immigrant elasticity implying less than perfect substitutability…" (Ottaviano and Peri, 2012, pg. 153). Immigrant and native workers of similar educational background, experience, and age can differ in skillsets, and native workers can have a competitive edge over immigrants because they are fluent in English, they are literate, and they understand the modern world (Ottoviano and Peri, 2012; D'Amuri and Peri 2011). Therefore, natives move away from occupations exposed to immigrant competition and upgrade to more complex and communication-intensive occupations (D'Amuri and Peri 2011; Tabellini, 2019, p. 3). This occupational upgrade is facilitated if firms expand in size, incorporate new technology, and increase the complexity of their practices as a response to an influx in immigrant labor.

Ultimately, there is no economic model that provides a universal answer to how immigration affects labor markets. There are simply too many ways in which the specific economic actors in a receiving region can react to immigration, and too many ways in which the context of the immigration scenario can differ. However, economic theory and prior research can shed a light into understanding the various mechanisms through which immigration can affect wages by increasing the supply and demand for labor.

2.2. Data Sources

In my analysis, I use quarter-by-year balanced panel data of the nine San Francisco Bay Area counties from 1975 to 1985. All of the data, except for population data, were

obtained from the U.S. Bureau of Labor Statistics' (BLS) Quarterly Census of Employment and Wages (QCEW) (U.S. Bureau of Labor Statistics, 2021a). The QCEW program has published quarterly counts of establishments and wages and monthly employment counts at the county level since 1975. The employment count includes filled jobs, both full- and part-time, regardless of whether the job is temporary or permanent. Since the data are derived from establishment surveys, it is likely that multi-job holders are counted multiple times in the QCEW data. The QCEW data come primarily from the Quarterly Contributions Report (QCR) that all private sector employers, as well as state and local governments covered under the unemployment insurance program, report. These reports provide the employment and wage data of each employer. These data are further supplemented and verified by the Annual Refiling Survey (ARS), which is conducted by the QCEW on approximately one-third of all private businesses, and the Multiple Worksite Report (MWR), which is collected quarterly from all multi-establishment employers. Completion of these surveys is required by California State law.

County population counts come from decennial censuses data of the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) (2010). This source also includes decennial county-level Vietnamese population counts in 1980, which are used to calculate the percent of each county's population that is Vietnamese (Table 2).

2.3. Variables

i.   Average Real Quarterly Wage

Quarterly wages are the total compensation paid, including bonuses, stock options, severance pay, profit distributions, the cash value of meals and lodging, tips and other gratuities, and employer contributions to certain deferred compensation plans (such as 401(k) plans), during the calendar quarter (U.S. Bureau of Labor Statistics, 2021a). Covered employers' contributions to old-age, survivors, and disability insurance; health insurance; unemployment Insurance; workers' compensation; and private pension and welfare funds are not reported as wages.

The QCEW dataset reports total quarterly wages and monthly employment counts. To get an average quarterly wage per job, the monthly employment counts are averaged for each quarter-by-year so that the employment variable matches the granularity of the rest of the data. Then, the total quarterly wage is divided by the average employment per quarter. The resulting average quarterly wage is adjusted for inflation using the fourth quarter of 1990 as the base year-quarter. The index used is the Consumer Price Index (CPI) for all items in San Francisco-Oakland-Hayward, CA, all urban consumers, not seasonally adjusted, not chained (U.S. Bureau of Labor Statistics, 2021b). The end result is an inflation-adjusted average quarterly wage per job. This variable or the natural logarithm of it is the dependent variable.

ii. $VietPercent80_c \times Post_t$

This interaction term is my variable of interest. It consists of the interaction between the percentage of the population in county *c* that is Vietnamese in 1980, as reported in the 1980 Census, with a 'Post' variable. The 'Post' variable takes the value of '0' for any year-quarter before 1980, and '1' for any year-quarter beginning with 1980. This variable, therefore, serves as a measure of the degree of treatment each county receives to the second wave of Vietnamese refugees.

2.4. Descriptive Statistics

Table 3 displays the descriptive statistics for the establishments per quarter, average monthly employments per quarter, and quarterly average wage variables per county. Figures 2, 3, and 4 illustrate the trends among the counties in establishments per quarter, average monthly employment per quarter, and average real quarterly wage, respectively.

Table 3 - Descriptive Statistics of Selected Economic Variables Per County, 1975-1985

		Establishments per Quarter		Average Monthly Employment, per Quarter		Average Real Quarterly Wage (U.S. Dollars)	
		Mean (Std. Dev.)	[Min, Max]	Mean (Std. Dev.)	[Min, Max]	Mean (Std. Dev.)	[Min, Max]
More Treated	Alameda (N=44)	21,400 (2,370)	[17,400, 25,500]	463,000 (45,700)	[379,000, 540,000]	7,050 (378)	[6,390, 7,740]
	San Francisco (N=44)	23,400 (2,610)	[19,100, 27,200]	519,000 (50,100)	[434,000, 573,000]	7,680 (365)	[6,900, 8,380]
	Santa Clara (N=44)	24,800 (3,710)	[18,200, 30,600]	633,000 (126,000)	[405,000, 797,000]	7,400 (319)	[6,710, 7,890]
Less Treated	Contra Costa (N=44)	11,300 (2,010)	[7,840, 14,600]	187,000 (34,400)	[126,000, 247,000]	6,650 (318)	[6,010, 7,250]
	San Mateo (N=44)	12,200 (1,420)	[9,680, 14,800]	235,000 (30,300)	[178,000, 279,000]	7,420 (346)	[6,720, 8,160]
	Marin (N=44)	5,880 (921)	[4,250, 7,300]	66,800 (13,400)	[42,600, 87,100]	6,010 (242)	[5,360, 6,400]
	Napa (N=44)	2,380 (347)	[1,620, 2,910]	30,800 (5,020)	[22,100, 38,000]	5,630 (434)	[4,860, 6,540]
	Solano (N=44)	3,490 (493)	[2,460, 4,340]	65,300 (10,200)	[44,000, 82,500]	6,610 (529)	[5,350, 7,500]
	Sonoma (N=44)	7,480 (1,290)	[4,760, 9,570]	89,000 (19,300)	[52,800, 119,000]	5,630 (308)	[5,070, 6,160]
	All Counties (N=396)	12,500 (8,440)	[1,620, 30,600]	254,000 (220,000)	[22,100, 797,000]	6,670 (821)	[4,860, 8,380]

18

Figure 2 – Establishments per Quarter, San Francisco Bay Area Counties, 1975-1985
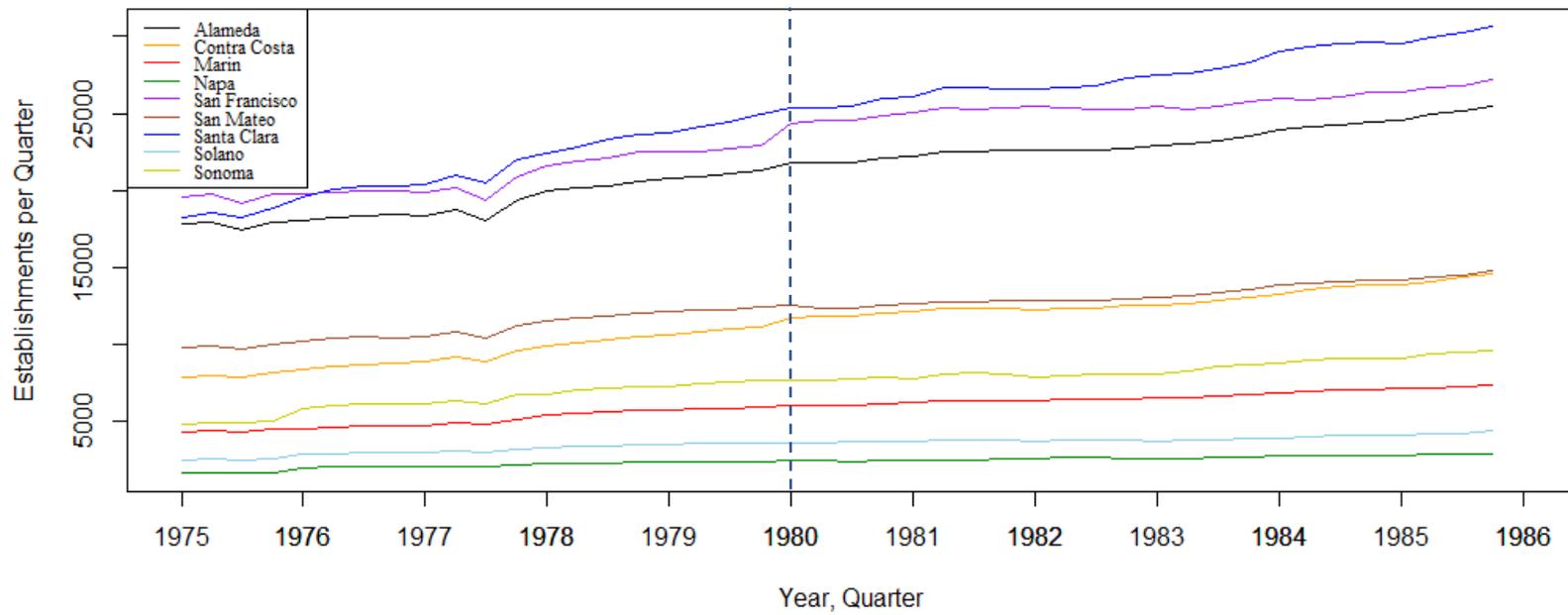
Figure 3 – Average Monthly Employments per Quarter, San Francisco Bay Area Counties, 1975-1985
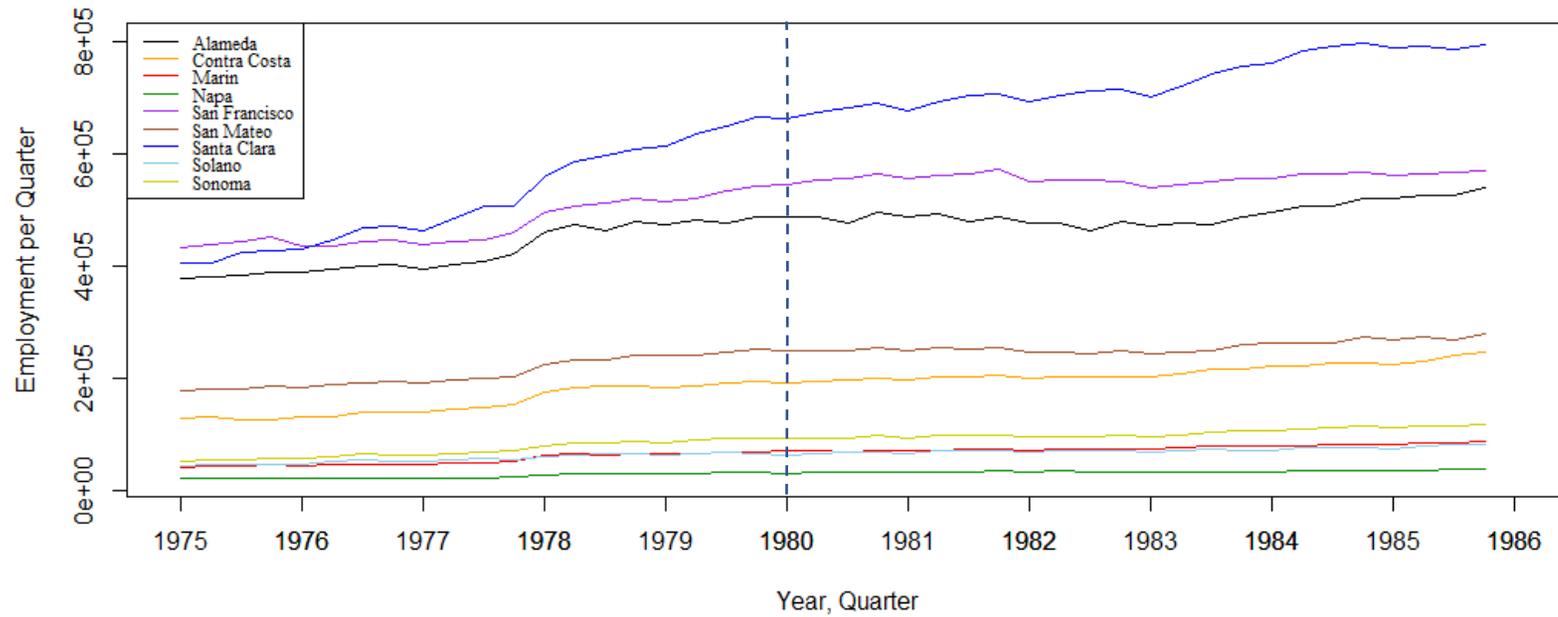
Figure 4 – Average Real Quarterly Wage, San Francisco Bay Area Counties, 1975-1985
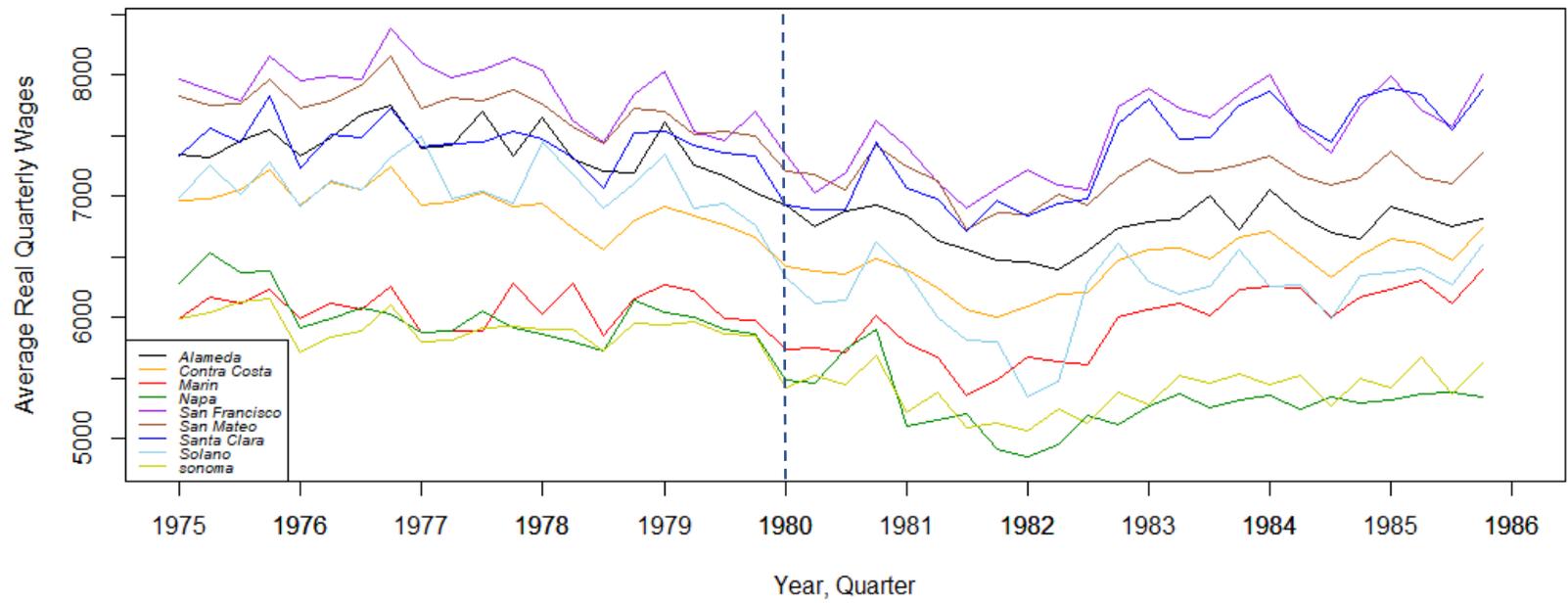
Visually, the trends for the number of jobs and establishments seem parallel among all counties—all counties see a gradual increase over time (Figures 2 and 3). However, San Francisco, Santa Clara, and Alameda plot significantly higher. These three counties are also the counties with significant Vietnamese populations in 1980 (Table 2). This makes it difficult to decipher a causal relationship between being a county that receives greater "treatment" of Vietnamese refugees and the average quarterly wage, because there are underlying differences in the characteristics between the counties. If these characteristics vary over time, they cannot be suitably controlled for by including county fixed effects in my econometric model.

In the case of real quarterly wages, there is no clear trend that all counties follow over time (Figure 4). San Francisco, Santa Clara, and Alameda are no longer as distant from the rest of the counties, though they are among the highest in wages. Furthermore, it is difficult to decipher any change in trends that could be attributed to the arrival of second-wave Vietnamese refugees. San Francisco and Santa Clara wages converge and are higher than in the other counties beginning around 1982, but Alameda wages no longer follow as similar a trend with San Francisco and Santa Clara beginning around 1980.

2.5. The Second Wave as an Exogenous Event

Determining the precise causal impact of immigration on various economic measures can be a particularly difficult task. The main reason being that migrants hardly ever make their destination decisions randomly, but instead choose to settle in areas that offer them

22

and their families the best economic prospects. The spurious correlation between immigration and local economic conditions can result in untrustworthy results. However, in my theoretical model, I make the key assumption that second-wave Vietnamese refugees make their settlement decisions primarily based on where there are already considerable Vietnamese enclaves—a decision that is arguably more exogenous to local labor market demand conditions (Card, 2001).

Immigrants, especially low-skilled ones, tend to locate in areas with high concentrations of immigrants of similar ethnicity or racial composition (Bartel, 1989; Dunlevy, 1991; Jaeger, 2000; Stuart and Taylor, 2019). The prevailing explanation for immigrant clustering is the existence of network externalities. Network externalities are benefits that, "…arise when previous immigrants provide shelter and work, assistance in obtaining credit, and/or generally reduce the stress of relocating to a foreign culture" (Bauer et al., 2002, p. 2). These network externalities are a pull-factor for immigrant flows of the same ethnicity that is plausibly unrelated, at least to some extent, to local demand for labor. This is why copious immigration analyses have studied the economic outcomes of large, exogenous immigration shocks using an approach that predicts or instruments for immigration based on existing ethnic enclaves (Card, 1990 and 2001; Abramitzky et al., 2019; Foged and Peri, 2015; Peri and Yasenov, 2017; Tabellini, 2019).

The choice of settlement for the second-wave refugees would have been more strongly influenced by the existence of enclaves than for the first-wave immigrants since Vietnamese presence in the U.S. was relatively weak prior to 1975. In the case of the second-wave Vietnamese refugees, "most… were being reunited with relatives already in

the United States, so that their destinations were predetermined," (Gordon, 1987, p. 164).

In 1980, Alameda, San Francisco, and Santa Clara had sizeable Vietnamese enclaves

(Table 2). The Vietnamese population counts in these three counties were the following:

3,146 in Alameda, 5,078 in San Francisco, and 11,156 in Santa Clara. Vietnamese people

also made up a relatively larger percentage of the population in these three counties

compared to the other six counties, where the Vietnamese population counts did not even

surpass a thousand. Population counts of these counties in 1990 clearly show how

Vietnamese communities substantially grew in Alameda, San Francisco, and especially

Santa Clara, while the increases were extremely modest in the other six counties. This

variation in the severity of exposure to Vietnamese refugee arrivals is what allows me to

evaluate the effect of these immigrants on wages as a quasi-natural experiment using a

difference-in-difference methodology. Alameda, San Francisco, and Santa Clara counties

are highly treated to the arrival of second-wave Vietnamese refugees, while the other six

counties serve as a comparison group because they receive less treatment.

2.6. Model Specification

I adopt a difference-in-difference specification with continuous treatment in my

econometric design, which is a popular approach when studying the effects of

immigration when there is substantial exogenous variation in immigration flows to

comparable areas (Clemens et al., 2018; Abramitzky et al., 2019; Ager and Hansen, 2017;

Foged and Peri 2015).

I estimate the following econometric equation:

$$(1) \quad QtrlyWage_{ct} = \alpha + \sum_{t=1}^{43} \beta_t \, QtrYr + \sum_{c=1}^{8} \gamma_c \, County_c$$

$$+ \delta \sum_{c=1}^{9} \sum_{t=21}^{44} VietPercent80_c \times Post_t + \varepsilon_{ct}$$

The dependent variable, $QtrlyWage_{ct}$, is the average real quarterly wage in county c in the quarter-by-year t. I control for unobservable, time-constant heterogeneity between counties with the inclusion of county indicators, and I control for unobservable, systematic differences between the time periods by including quarter-by-year indicators. $VietPercent80_c \times Post_t$ is my independent variable of interest. Assuming that quarterly wage trends would have been similar amongst the counties had there not been a second wave of Vietnamese refugees around 1980, the coefficient δ captures the effect of the Vietnamese refugees on average quarterly wages.

I also estimate a second specification in which I take the natural log of the dependent variable:

$$(2) \quad \ln QtrlyWage_{ct} = \alpha + \sum_{t=1}^{43} \beta_t \, QtrYr + \sum_{c=1}^{8} \gamma_c \, County_c$$

$$+ \delta \sum_{c=1}^{9} \sum_{t=21}^{44} VietPercent80_c \times Post_t + \varepsilon_{ct}$$

3. Results

3.1. Main Specification Results

The coefficient of interest corresponds to $VietPercent80_c \times Post_t$. This variable measures whether counties with greater percentages of Vietnamese residents in 1980 were associated with a higher average quarterly wage. As stated before, the percentage of Vietnamese residents in 1980 in each county serves as a proxy for the degree to which Vietnamese immigrants from the second wave of refugees will settle in that county, because ethnic enclaves are a good predictor for where future migrants of the same ethnicity will settle. Standard errors are clustered by county.

The linear-linear model (1) indicates a strong positive association between the arrival of Vietnamese refugees and the average quarterly wage (Table 4). The coefficient estimate of 516.951 implies that a 1-percentage-point increase in the percentage of Vietnamese residents in 1980 translates into a $516.95 increase in the average quarterly wage during the post period. The log-linear model (2) also shows a significant positive association (Table 4). The coefficient estimate of 0.093 implies that a 1-percentage-point increase in the percentage of Vietnamese residents in 1980 translates into a 9.3 percent increase in the average quarterly wage during the post period. Both estimates are significant at the 1-percent level. Nevertheless, it is important to point out that the standard errors for my estimates are quite large, bringing into question the preciseness of

the results. For example, in the case of the linear-linear model coefficient, an estimate

value of 200 would fall within the 95-percent confidence interval.

Table 4 - Effects of the Second Wave of Vietnamese Refugees on Quarterly Real Wages in Nine Counties of the San Francisco Bay Area

	Dependent variable:	
	Real Quarterly Wage	Log of Real Quarterly Wage
	(1)	(2)
$VietPercent80_c \times Post_t$	516.951[***]	0.093[***]
	(152.434)	(0.021)
Observations	396	396
R^2	0.152	0.204
Adjusted R^2	0.024	0.083
F Statistic (df = 1; 343)	61.556[***]	87.747[***]

[*]p<0.1; [**]p<0.05; [***]p<0.01

Notes: Observations are county-quarters. The estimated models include a constant, 8 county fixed effects, and 43 quarter-by-year fixed effects. Standard errors clustered by county are listed in parentheses. Wages are in constant 1990 4th-quarter U.S. dollars. The 'Post' variable takes the value of '0' for any quarter-by-year period before 1980, and '1' for any quarter-by-year time period beginning with 1980.

3.2. Alternative Specifications: Robustness Checks

i. *Alternative 'Post' Periods and Increasing Time Horizons*

1980 was chosen as the start of the treatment period since that is when the arrival of

second-wave Vietnamese refugees into the U.S. peaked (Figure 1). However, to address

the plausible argument that wages at this point and time were "sticky," or that the

refugees would be slow to enter the labor market upon arrival, I modify the original

models to delay the 'post' period, first by 1 year (Table A1), then by 2 years (Table A2). In both cases, I also increase the time horizon of the data to have an equal number of years for the 'pre' and 'post' periods. The estimate results in both cases are larger than the estimate results in the primary specification and still statistically significant at the 1-percent-level. In another modification to the original model, I revert to the original 'post' period (starting at 1980) but include data for all years up to 1990 (Table A3). Again, the estimate results for this alternative specification are larger than the main results and maintain the same significance level.

ii.   *Including Establishment Count Per Quarter as a Control*

My next robustness checks deviate from the original model equations by including a variable for the establishments per quarter data to attempt to control for the differences in the counties' economies. In these regressions, the magnitude of the estimates is cut nearly in half, and the estimate in the linear-linear model is no longer statistically significant while the estimate in the log-linear model is demoted to the 10-percent-significane level (Table A4).

iii.   *Exclusion of Napa, Solano, Marin, and Sonoma Counties*

Another potential concern is that Napa, Solano, Marin, and Sonoma counties are too dissimilar to Alameda, Santa Clara, and San Francisco counties to be suitable comparison counties. Plotting establishments, employments, and quarterly wages for each county (Figures 2, 3, and 4, respectively) shows how Contra Costa and Marin counties are the

most similar to Alameda, Santa Clara, and San Francisco, whereas Napa, Solano, Marin and Sonoma counties plot more distant to the 'highly treated' counties. This makes sense, seeing as how Contra Costa and Marin counties are geographically closer to the 'highly treated' counties.

Therefore, I run the original regression equations, (1) and (2), but include only San Francisco, Santa Clara, Alameda, San Mateo, and Contra Costa counties. The estimate for the linear-linear model is almost the same as the estimate result in the primary regression, and the estimate for the log-linear model is only slightly smaller. In both specifications, the coefficient estimates are statistically significant at the 1-percent-level (Table A5).

iv. *Treatment Modification*

A final modification to the original econometric models is to change the interaction term to equal the following: $VietPercent80_c \times Treatment_c \times Post_t$.
Here, $Treatment_c$ is equal to '0' for Contra Costa, Marin, Napa, San Mateo, Solano, and Sonoma counties, and '1' for Alameda, Santa Clara, and San Francisco counties. Since the variable $VietPercent80_c$' is included in the interaction, the product of these variables for Alameda, Santa Clara, and San Francisco, the 'treated' counties, still takes on a continuous value. For the other counties, though, the interaction variable now takes on a binary value: zero.

The estimate results for this robustness check are slightly smaller than the estimate results in the original models, and the level of significance for the linear-linear model fell

to the 5-percent-level while the level of significance for the log-linear model stayed at the

1-percent-level (Table A6).

4. Discussion

4.1. Interpretation of Results

The dynamic nature of the economy effectively precludes the existence of a universal answer as to what effect immigration has on the economic well-being of residents of the receiving area. While a simplistic analysis of this issue may focus on how wages can fall due to an increase in the supply of labor, one must also take into account the positive effects on wages that can occur due to increased consumption, productivity, and specialization of labor. The positive results obtained from my econometric model indicate that the positive impacts outweighed the negative impacts in the case of second-wave Vietnamese refugee immigration into the San Francisco Bay Area.

Within this specific immigration case, there are other factors that likely influenced how local wages were impacted. Primarily, the U.S. government consistently allocated about $500 million dollars per fiscal year to the Department of Health and Human Services for the cost of assisting refugees as provided for under the Refugee act of 1980 (U.S. Department of Health and Human Services, 1981:1986). Most of the funds were used to provide cash and medical assistance, social services such as English language and employment training, and to finance local government administrative costs.[5] All else

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[5] For example, in August of 1980, about 73,800 Southeast Asian refugees received some form of cash assistance (HHS, 1981, p. 30). Also, in the San Francisco Bay Area, the ORR spent $2,777,824 from October 1, 1980 to March 31, 1982 in contracts for programs that provided health, job training, and language learning services to refugees (HHS, 1982, pp. 140-142).

equal, an increase in income from government cash assistance would result in more spending, and thus more demand for labor, in the local economy. The government funds would also have spurred the creation of jobs for language and employment trainers and administrative personnel in areas that received a significant proportion of refugees.

Furthermore, although the magnitude of the estimates seems rather large, it should be noted that none of the counties had even 1-percent of their population be Vietnamese in 1980. In Santa Clara, the Bay Area County that had the largest percent of Vietnamese in 1980, this percent was only 0.86 of one percent. Therefore, a 1-percentage-point increase in the percentage of Vietnamese residents in these counties is akin to seeing an increase in the Vietnamese population by a factor of more than 2 in the case of Santa Clara and San Francisco, and by a factor of more than 10 in the case of Sonoma, for example. In fact, from 1980 to 1990, the only county that saw the share of its population that was Vietnamese increase by more than a percentage point was Santa Clara, which saw a 2.8 percentage-point increase during this ten-year period (Table 2). It is realistic to assume that from 1980 to 1985, the share of Vietnamese residents in Santa Clara must have increased by at least 1-percentage-point, and thus, it is plausible that only in Santa Clara did the average quarterly wage increase by around $516.95, if not more, during the 5-year 'post' period. In Alameda and San Francisco, the two other 'highly treated' counties, the percentage-point increase in the share of Vietnamese residents from 1980 to 1990 was 0.8 and .49, respectively. Thus, during this same 'post' period, likely neither of these counties would have witnessed their average quarterly wages increase by more than half of what the coefficient estimates suggest. Consequently, although the magnitude of the

coefficient estimates appears rather large, they should be interpreted within the context of how the percentage of residents that were Vietnamese increased for each county during the 1980s.

The results from the robustness checks support the overall conclusion that wages were positively affected by the arrival of Vietnamese refugees. Modifications to the timing of the 'post' period and the expansion of the time horizon yield estimates that do not deviate in any meaningful way from the main results. The specification that includes the establishment count control variable may better control for endogeneity, if in fact refugees immigrated to areas based on the which counties had more establishments (and thus possibly had more employment opportunities). However, this variable could suffer from a case of reverse causality if the changes in the number of establishments are being caused by the influx of Vietnamese refugees, so caution must be exercised in drawing conclusions from these results. Nevertheless, the results of this modification remain positive. The robustness check where only Contra Costa and Marin are included as comparison counties yields results that are almost identical to the results from the main models. The omission of the least comparable counties hardly alters the results. Finally, the resulting estimates from the specification where the interaction term is modified also do not deviate much from the main specification results. This indicates that even though the comparison counties receive some degree of treatment to Vietnamese immigration, the results would not differ much if they had received zero treatment.

The positive effects found in my analysis can be explained by increases in consumption, productivity, the specialization of labor, and government spending, even if

the impacts were likely not economically significant except in the case of Santa Clara County. Yet, although my results are supported by many studies of immigration that have found evidence in favor of null or positive effects stemming from immigration, the validity of my estimate results is questionable. There are notable concerns with my analysis that that must be discussed.

4.2. Endogeneity Problem

As stated before, estimating the causal effects of immigration on a receiving area's economy is made difficult if the choice of settlement is made based on local demand conditions. If this is the case with the second-wave Vietnamese refugees in the San Francisco Bay Area, then my estimates are likely upwardly biased. In this study, I argue that this endogeneity problem is weakened because the settlement decision for second-wave Vietnamese refugees would be based more so on where prior Vietnamese immigrants settled than what area offered the best economic opportunities. This phenomenon has been observed in many immigration studies (Card, 1990 and 2001; Abramitzky et al., 2019; Foged and Peri, 2015; Peri and Yasenov, 2017), and even in the specific case of second-wave Vietnamese refugees (Gordon, 1987). However, the extent to which this assumption is valid remains uncertain; without survey data, it is impossible to determine to what degree network externalities were a motivating force for settlement decisions in this specific study.

34

Even if refugee destination choices were made irrespective of local economic

conditions at the time, that would still not ensure the estimates are trustworthy. The

unbiasedness of my estimates also relies on the assumption that the county-specific

characteristics that attracted the Vietnamese refugees from the first wave are not affecting

the evolution of the local economy in the years when the second-wave Vietnamese

refugees arrived. Since the first and second waves of Vietnamese refugees arrived

relatively close together in time, it would be difficult to argue that this is the case.

Furthermore, the existence of any time-varying differences between the counties also

biases the results if the differences impose an effect on local wages. The time-varying

aspect of such differences would mean that county fixed effects included in my

econometric models would not suitably control for these confounding factors.

4.3. Timing Problem

Another shortcoming with my model that must be discussed is the issue with the

timing of the $VietPercent80_c$ measurement and the beginning of the 'post' period. The

second wave of Vietnamese refugees really began around 1978 and peaked in 1980

(Figure 1). However, the only measure available of the count and proportion of

Vietnamese residents per county comes from the 1980 Census. Tens of thousands of

second-wave Vietnamese refugees who had arrived and settled in the San Francisco Bay

Area prior to the conclusion of the 1980 Census would have likely been included in the

count. This issue could exacerbate the potential endogeneity problem if the counties with

relatively large Vietnamese populations in 1980 had attracted recent refugees because of

favorable economic conditions.

5. Conclusion

Despite often being considered a nation of immigrants, the attitudes and policies surrounding immigration in America have not always been the most pro-immigrant. This is due, in part, to concerns that the arrival of immigrants has a depressing effect on the wages earned by domestic workers. Economic literature on this issue has not always been in agreement of the effects, in part because it is not easy to find real-world examples of exogenous immigration shocks, much less ones for which there is comprehensive data readily available. The rapid and geographically concentrated settlement of Vietnamese refugees in the U.S. in the years following the end of the Vietnamese War, however, offers a promising set-up to study the effects of immigration on wages. And yet, it has seemingly not been the subject of any such analysis—until now.

My research shows that the arrival of Vietnamese refugees from the second wave of immigration into the San Francisco Bay Area is associated with a statistically significant increase in the average quarterly wage. Despite the potential issues with my methodology and imperfect data, there is a plethora of economic research that has found corroborating results and provided evidence-backed explanations for how even large and sudden inflows of immigration can be beneficial to the economic well-being of domestic workers. This particular case of immigration offers an exciting opportunity for further research, given the variety of potential methods that can be applied to it. In a time such as now when immigration is such a contentious issue in America and around the world, a

clearer and deeper understanding of the effects of immigration would allow society to progress towards more productive discussions and policies.

5.1. Recommendations for Further Research

Any future research into this particular study of Vietnamese Refugees in the San Francisco Bay Area would be greatly aided with the existence and application of more data. Data on measures of economic indicators could be used as control variables in an econometric specification. Furthermore, the QCEW data on wages only provides a measure of total quarterly wages per county. A more precise understanding of how the average wage of native workers is impacted could be attained if the data was segmented by nationality or ethnicity, or if individual-level data on wages was available. An accurate measure of the count of quarterly arrivals of Vietnamese refugees per county, or the existence of data on the percent of residents that were Vietnamese per county in 1978 would also allow for potentially better estimation methods.

Future research might also improve upon my analysis with the creation of synthetic control counties. Some economists have argued that there are too many issues with the strategy of estimating the effects of immigration on wages by comparing labor market outcomes across existing geographical areas (Borjas, Freeman, and Katz, 1991 and 1996; Borjas, 1994). The use of synthetic controls has been adopted as an alternative method for estimating the impacts of immigration on wages (Borjas, 2015; Peri and Yasenov

2017; Abadie, 2021). Synthetic controls could greatly improve my analysis, given the

potential issue with endogeneity and time-varying differences across counties.

Appendix

Table A1 - Effects of the Second Wave of Vietnamese Refugees on Quarterly Real Wages in Nine Counties of the San Francisco Bay Area, Post Period Begins 1981

	Dependent variable:	
	Real Quarterly Wage	Log of Real Quarterly Wage
	(1)	(2)
$VietPercent80_c \times Post_t$	679.527***	0.111***
	(153.708)	(0.024)
Observations	432	432
R^2	0.244	0.278
Adjusted R^2	0.131	0.170
F Statistic (df = 1; 375)	120.802***	144.079***

<div align="right">*p<0.1; **p<0.05; ***p<0.01</div>

Notes: Observations are county-quarters. The estimated models include a constant, 8 county fixed effects, and 51 quarter-by-year fixed effects. Standard errors clustered by county are listed in parentheses. Wages are in constant 1990 4th-quarter U.S. dollars. The 'Post' variable takes the value of '0' for any quarter-by-year period before 1981, and '1' for any quarter-by-year time period beginning with 1981. The time horizon spans from the first quarter of 1975 until the fourth quarter of 1986 to allow an equal number of years for the 'pre' and 'post' periods.

Table A2 - Effects of the Second Wave of Vietnamese Refugees on Quarterly Real Wages in Nine Counties of the San Francisco Bay Area, Post Period Begins 1982

	Dependent variable:	
	Real Quarterly Wage	Log of Real Quarterly Wage
	(1)	(2)
$VietPercent80_c \times Post_t$	813.538***	0.119***
	(169.218)	(0.025)
Observations	504	504
R^2	0.279	0.265
Adjusted R^2	0.173	0.158
F Statistic (df = 1; 439)	169.581***	158.440***

Note: *p<0.1; **p<0.05; ***p<0.01

Notes: Observations are county-quarters. The estimated models include a constant, 8 county fixed effects, and 59 quarter-by-year fixed effects. Standard errors clustered by county are listed in parentheses. Wages are in constant 1980 4th-quarter U.S. dollars. The 'Post' variable takes the value of '0' for any quarter-by-year period before 1982, and '1' for any quarter-by-year time period beginning with 1982. The time horizon spans from the first quarter of 1975 until the fourth quarter of 1987 to allow an equal number of years for the 'pre' and 'post' periods.

Table A3 - Effects of the Second Wave of Vietnamese Refugees on Quarterly Real Wages in Nine Counties of the San Francisco Bay Area, Post Period Begins 1980, Including Years 1975 - 1990

	Dependent variable:	
	Real Quarterly Wage	Log of Real Quarterly Wage
	(1)	(2)
$VietPercent80_c \times Post_t$	748.988***	0.117***
	(211.031)	(0.030)
Observations	576	576
R^2	0.177	0.195
Adjusted R^2	0.059	0.080
F Statistic (df = 1; 503)	107.968***	122.100***

*p<0.1; **p<0.05; ***p<0.01

Notes: Observations are county-quarters. The estimated models include a constant, 8 county fixed effects, and 71 quarter-by-year fixed effects. Standard errors clustered by county are listed in parentheses. Wages are in constant 1980 4th-quarter U.S. dollars. The 'Post' variable takes the value of '0' for any quarter-by-year period before 1980, and '1' for any quarter-by-year time period beginning with 1980. The time horizon spans from the first quarter of 1975 until the fourth quarter of 1990.

Table A4 - Effects of the Second Wave of Vietnamese Refugees on Quarterly Real Wages in Nine Counties of the San Francisco Bay Area, Including Establishments Control

	Dependent variable:	
	Real Quarterly Wage	Log of Real Quarterly Wage
	(1)	(2)
$VietPercent80_c \times Post_t$	293.852	0.054*
	(200.963)	(0.028)
Establishments per Quarter	0.041	0.00001
	(0.049)	(0.00001)
Observations	396	396
R^2	0.175	0.232
Adjusted R^2	0.047	0.113
F Statistic (df = 2; 342)	36.281***	51.654***

*p<0.1; **p<0.05; ***p<0.01

Notes: Observations are county-quarters. The estimated models include a constant, 8 county fixed effects, and 43 quarter-by-year fixed effects. Standard errors clustered by county are listed in parentheses. Wages are in constant 1980 4th-quarter U.S. dollars. The 'Post' variable takes the value of '0' for any quarter-by-year period before 1980, and '1' for any quarter-by-year time period beginning with 1980

Table A5 - Effects of the Second Wave of Vietnamese Refugees on Quarterly Real Wages in Five Counties of the San Francisco Bay Area

	Dependent variable:	
	Real Quarterly Wage	Log of Real Quarterly Wage
	(1)	(2)
$VietPercent80_c \times Post_t$	531.784***	0.077***
	(157.065)	(0.020)
Observations	220	220
R^2	0.290	0.328
Adjusted R^2	0.091	0.140
F Statistic (df = 1; 171)	69.964***	83.609***

*p<0.1; **p<0.05; ***p<0.01

Notes: Observations are county-quarters. The estimated models include a constant, 4 county fixed effects, and 43 quarter-by-year fixed effects. Standard errors clustered by county are listed in parentheses. Wages are in constant 1980 4th-quarter U.S. dollars. The 'Post' variable takes the value of '0' for any quarter-by-year period before 1980, and '1' for any quarter-by-year time period beginning with 1980. Napa, Solano, Marin, and Sonoma Counties are excluded from these regressions.

Table A6 - Effects of the Second Wave of Vietnamese Refugees on Quarterly Real Wages in Nine Counties of the San Francisco Bay Area, With Modification to Treatment

	Dependent variable:	
	Real Quarterly Wage	Log of Real Quarterly Wage
	(1)	(2)
$VietPercent80_c \times Treatment_c \times Post_t$	399.464**	0.071***
	(173.910)	(0.024)
Observations	396	396
R^2	0.123	0.163
Adjusted R^2	-0.010	0.036
F Statistic (df = 1; 343)	48.242***	66.768***

*p<0.1; **p<0.05; ***p<0.01

Notes: Observations are county-quarters. The estimated models include a constant, 8 county fixed effects, and 43 quarter-by-year fixed effects. Standard errors clustered by county are listed in parentheses. Wages are in constant 1980 4th-quarter U.S. dollars. The 'Post' variable takes the value of '0' for any quarter-by-year period before 1980, and '1' for any quarter-by-year time period beginning with 1980. 'Treatment' is equal to '0' for Contra Costa, Marin, Napa, San Mateo, Solano, and Sonoma counties, and '1' for Alameda, Santa Clara, and San Francisco counties.

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