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Analyzing the Nature of Immigrant Mobility with Respect to Property Taxes

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ANALYZING THE NATURE OF IMMIGRANT MOBILITY WITH RESPECT TO PROPERTY TAXES

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ABSTRACT

Immigration is one of the most heavily debated current issues in the United States. One area of this topic under investigation is what characteristics impact mobility decisions with respect to choice of location . A variety of factors can have an influence on immigrant mobility, one being property taxes. In this study, an analysis was conducted to determine if a relationship exists between property tax rates and immigrant mobility. County-level data from Illinois was used to see whether or not the percentage of foreign born individuals residing in a given county had any correlation with the property tax rate of that same county. The results of this study showed that the same conclusions of the Tiebout Hypothesis with regard to property tax induced migration remain true when applied to international migration. With evidence in support of property tax induced immigration, the findings from this study suggest that policy makers can utilize this information when making adjustments to property tax rates in certain locations in order to better accommodate the flows and distribution of foreign-born individuals in the United States.

***Keywords**: Immigration, mobility, property taxes, correlation, Tiebout Hypothesis*

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INTRODUCTION

There is much debate in today's society that centers around the topic of immigration. In the United States alone, there are approximately 45 million foreign-born individuals who represent close to 14 percent of the population (Pew Research Center, 2022). Those who choose to settle here come from different countries all around the world. As a result, America's population encompasses a wide variety of cultural beliefs, values, and morals. While some have succeeded in their journey to America in years past, many individuals today experience increased difficulty when trying to make it across the border. Given that the United States opens its doors to roughly one million immigrants every year (Pew Research Center, 2022), the U.S. government continues to seek out additional ways to better accommodate the high volume of immigration flows.

To date, there is a significant amount of literature that speaks to potential factors attributed to the flow of migration. One claim in particular, known as the Tiebout Hypothesis, argues that a consumer-voter will choose a community whose local government satisfies his or her set of preferences (Tiebout, 2022). Existing studies that incorporate this hypothesis into their research have found that individuals tend to be attracted to aspects such as lower state income tax burdens, as well as lower property tax burdens (Cebula, 2009). Alternative studies suggest that a positive correlation exists between increased property tax burdens and out-migration (Fraenkel, 2021). Several studies have analyzed individuals of a wide variety of demographics, and they all contain evidence in support of the claim that local tax systems have an influence on the migration patterns of individuals (Kirby, 2011; Shan, 2010; Thompson, 2011).

Although a significant amount of evidence exists in favor of a correlation between property taxes and mobility, it is unclear as to whether or not the same remains true for international migration flows. There are several pieces of existing literature that hint towards the application of the Tiebout Hypothesis to immigration. However, most of the findings that favor property taxes as an influence on immigrant mobility pertain only to select individuals or individuals exclusive to certain areas of the world. With that being said, a lack of evidence prohibits these same conclusions from being applied to the general immigrant population.

The purpose of this research is to examine the relationship between property tax rates and the mobility decisions of foreign-born individuals in the United States. Given that immigration is a highly debated political issue, research that might help further society's understanding of the intentions behind immigrant mobility is important to take into consideration. The primary aim of this research is to determine whether or not the claims of the Tiebout-Tullock Hypothesis apply to international migration flows, and specifically with respect to property taxes. The findings may have implications for tax policy, that is, to support policy measures that might better accommodate the immigration flows experienced by the United States.

THE LITERATURE

Conceptual Framework

Through observation of the economy with respect to local goods, Charles Tiebout concluded that a consumer's choice of location among varying alternatives indicated a clear signal of preferences (Oxford Reference, 2022). Furthermore, Tiebout hypothesized

that consumers "voted with their feet" by allocating themselves to whichever location was optimal to them. The Tiebout-Tullock Hypothesis was a significant framework that built on the idea of mobility with regards to migration. Since its origination, researchers have carried out additional investigation to further test this hypothesis.

In an attempt to test the conclusions of Charles Tiebout, Cebula analyzed the existing claims of the Tiebout Hypothesis for evidence of factors associated with taxation that had an effect on a consumer-voters' geographic mobility (2009). His findings suggested that individuals tended to be attracted to lower state income tax burdens, as well as lower property tax burdens. Cebula also made implications as to how his research potentially supported the application of the Tiebout Hypothesis to international migration flows. Similarly, Fraenkel conducted her own studies to test the theories of the Tiebout Hypothesis (2021). In doing so, she analyzed the impact changes in property tax had on homeowner mobility and voting. Her findings were consistent with the Tiebout hypothesis and indicated that a positive correlation existed between increased property taxes and mobility. Additionally, Rafiquzzaman also took an interest in the Tiebout Hypothesis (1991). His focus centered around testing the causal ordering between property taxes and inter-municipal migration in Canada. The results of his study fell in favor of Tiebout which suggested that local tax systems played a role in the migration patterns of individuals.

Applications of the Tiebout Hypothesis

While many studies were conducted surrounding the work of Chales Tiebout, researchers also conducted studies that examined migration patterns outside of the implications of the Tiebout Hypothesis. For example, Miller investigated what he thought

to be a variety of prospective determinants of out-migration patterns (1973). His work determined that economic variables had significant influence when it came to these rates. Similarly, Ordower looked at the influence taxation had on the movement of both people and capital (2019). As opposed to migration, Ordower's research was specific to immigration. The findings of his study, however, remain consistent with those of studies conducted with respect to migration. He found that taxation was in fact a driving force of decisions pertaining to movement from high- to low-tax jurisdictions.

There were also several studies conducted outside of the implications of the Tiebout Hypothesis that resulted in similar findings with respect to property taxes. However, a significant amount of the literature that analyzed the correlation between property taxes and mobility pertained to select groups of individuals or geographic areas. During one study in particular, Shan narrowed the focus of the population for his study to elderly homeowners (2010). He argued that significant evidence existed to conclude that increasing property tax burdens played a role in the moving decisions subject to this given population. Additionally, Kirby analyzed data provided by the Federal Immigrant Investor Program and was able to identify a trend of emigration to Canada by wealthier individuals as a means of tax avoidance (2011). Furthermore, Kleven, Landais, Munoz, and Stantcheva also investigated the topic of tax-induced mobility (2020). These researchers conducted a study that produced evidence in support of the geographic effect which taxes had on individuals, both nationally and internationally. However, the question of whether or not these findings applied only to certain individuals and certain countries arose. The authors concluded that they lacked enough evidence to assume these same conclusions about the broader population. In addition, the researchers suggested

that forces aside from taxation also played a role in the geographic mobility of individuals. Thompson centered the focus of his study on mobility to the area of New England (2011). He attempted to evaluate the impact of both state and local taxes in terms of migration. Thompson argued that the lack of research available on the matter indicated that tax played a rather insignificant role in cross-state migration. He also emphasized the complexity of analyzing the impact of taxes on a concept like migration. Various other factors also took part in the decisions of the populations which he analyzed, including economic conditions, property crime rates, and higher education enrollment.

In all, the research conducted with respect to the Tiebout Hypothesis and tax-induced mobility presented certain strengths, along with weaknesses. The majority of the findings remained consistent with the pre-existing arguments which pertained to the Tiebout Hypothesis. The additional research conducted helped to broaden the scope of the original findings. The literature produced from this research analyzed newer and more relevant migration data. By doing so, it helped to expand the interpretation of the hypothesis in terms of the contemporary economy. Much of the literature was heavily embedded with data in support of the arguments made by the author. The information presented in the articles relied solely on facts, and the arguments made by the authors were strongly supported by evidence. The majority of the literature was also written by authors who proved to be rather reputable sources. The information and findings which comprised the articles were very relevant given the timing of the research that was conducted. The content of each article appeared to be rather well-researched as most sources included a vast list of references at the end. Some of the articles had also been

referenced in the works of others up to over thirty times. In terms of organization, the works were logically structured, and the main findings were clearly presented.

On the other hand, the content of the existing literature demonstrated several weaknesses. A majority of the articles only addressed the implications of the Tiebout-Tullock Hypothesis in regards to migration. There was a significant lack of research regarding the application of the hypothesis in respect to the topic of immigration. This unexplored area of research left society contemplating whether or not similar trends of mobility in terms of migration also applied to migration across international borders. The research conducted on patterns of migration outside of the Tiebout Hypothesis presented this same lack of research. Furthermore, the studies which centered on the relationship between property taxes and migration demonstrated their own issues as well. Not only did these findings contribute to this same gap in knowledge, but they also put into question the accuracy in applying migration trends to certain individuals and areas of the world. Much of the literature concerned with tax-induced mobility presented findings in support of mobility decisions being influenced by property tax rates. However, these findings only held true for select groups of individuals, such as elderly populations and wealthy individuals. Additionally, most of the studies only focused their attention on a single country in the world.

The biggest flaw within the existing literature that covered the Tiebout Hypothesis and tax-induced mobility were the claims made by some of the researchers in regards to the gaps in knowledge concerning international migration. Many concluded that a lack of research attempting to investigate the relationship between the Tiebout Hypothesis and immigration indicated that these same trends did not apply to individuals

of immigrant populations. Additionally, researchers who studied the mobility decisions of individuals under the influence of property taxes suggested that evidence regarding tax-induced mobility did not apply to the general population as a result of the lack of evidence. If the studies had focused their attention towards investigating the applicability of these same findings to the topic of immigration, the gap in knowledge would not have been so severe.

METHODOLOGY

Data

The data for this study consisted of the 102 counties that make up the state of Illinois. The data collected were representative of the Illinois residents who participated in the 2020 Census and excluded the participants of all 49 other states. According to the U.S. Census Bureau, the response rates were quite high with the percentage of housing units in Illinois that self-responded during the 2020 Census being 71.4%, while 28.5% of households were enumerated by a census taker in nonresponse followup. Illinois was chosen for this study as it is a state that is experiencing a growing community of immigrants. According to the American Immigration Council, one in seven Illinois residents is an immigrant and approximately a third of all business owners in Chicago are immigrants (2020).

Data Collection Procedure

The data used in this study consisted of three layers. The first set of data was previously collected by the U.S. Census Bureau. This source was chosen for this

particular study because it provided information pertaining to the percentage of foreign-born individuals in Illinois by county. In addition, The U.S. Census Bureau provided data on the percentage of the Illinois population by county in terms of residential mobility. The percentage of individuals who moved within the same county, moved from a different county but the same state, moved from a different state, and moved from abroad were provided. Given that the last census was conducted in 2020, the data in question proved to be rather relevant to this study. The second set of data were collected with respect to the variable of interest in this study. A significant component of this study's data were taken from the Illinois Department of Revenue. This source disclosed information pertaining to the property tax rates by county in Illinois. Since the primary goal of the research was to evaluate whether or not property tax rates have an influence on immigrant mobility in the United States, the data taken from the Illinois Department of Revenue proved to be relevant to this study. Finally the third set of data was collected with respect to the covariates of this study. Data relating to crime rates were gathered from the Federal Bureau of Investigation along with data representing the average household income and total population count of each county, taken from the U.S. Census Bureau. The data collected from these two sources also proves to be relevant to this study as a means of presenting alternative variables that may influence the outcome of the data analysis.

Key Measures

The data collected for use in this study were analyzed by several means. An excel spreadsheet was created to organize the variables pertaining to each county over the span of a two-year period. A single row in the spreadsheet corresponded to a given county.

After the data for 2019 and 2020 were aggregated, the spreadsheet contained a total of 104 rows. The following columns were used in the spreadsheet to display variables pertaining to each county: Average Residential Property Tax Rate (%), Foreign-Born Population (%), Moved Within Same County (%), Moved From Different County (%), Moved From Different State (%), Moved From Abroad (%), Average Household Income (ln), Number of Violent Crimes Reported by Sheriff's Office, and Total Population Count (00000). The data pertaining to the foreign-born population percentage and the residential mobility variables were collected by the U.S. Census Bureau using the American Community Survey (ACS). This survey posed questions regarding the status of U.S. citizenship at birth and classified any individuals of the U.S. population who were not U.S. citizens at birth as foreign-born, including those who became U.S. citizens through naturalization. In addition, the ACS was used to classify individuals belonging to the foreign-born population who moved to the United States from a foreign nation during a given year as moved from abroad.

Several covariates that possibly influenced the percentage of foreign-born individuals per county reported by the Census and the Federal Bureau of Investigation were taken into consideration. Criteria affecting this data may have pertained to whether or not the county was considered to be urban or rural, an aspect determined by total population. Similarly, the average household income may have been higher in a given county when compared to another. The difference in the number of violent crimes reported by each county's sheriff's office may have also influenced the mobility decisions made by the foreign-born individuals in question. While all of these variables proved to

be relevant to the data that was collected, the variable operationalized in this study was property tax rate by county.

Data Analysis Method

Both a descriptive and several inferential analyses were run using the compiled data in JASP. The descriptive analysis was used to derive the mean and standard deviation pertaining to each county-level variable. Five different linear regression analyses were run using the following covariates: Average Residential Property Tax Rate (%), Average Household Income (ln), Number of Violent Crimes Reported by Sheriff's Office, and Total Population Count (00000). For each analysis, one of the five following variables was treated as the dependent variable: Foreign-Born Population (%), Moved Within Same County (%), Moved From Different County (%), Moved From Different State (%), and Moved From Abroad (%).

Treatment of Missing Data

When the data related to the number of violent crimes reported by each county sheriff's office were gathered from the Federal Bureau of Investigation, some of the values were missing for the years 2019 and 2020. The missing data was generated for the study by taking the median value of all years from the available data for each particular county dating back to 2010.

Hypothesis

The null hypothesis of this study states that no correlation exists between immigrant mobility and property taxes while the alternative hypothesis suggests that

property taxes are associated with the mobility decisions made by immigrants. If property taxes prove to be relevant when considering the movement of the foreign-born population within the United States, one should expect the alternative hypothesis to prove to be true.

RESULTS

Table 1 reports a summary of results derived from conducting a descriptive statistical analysis using several different county-level variables for the state of Illinois. The center of distribution for the data relating to each individual variable in the table is indicated by the mean. To comment on the spread of the data, the standard deviation for each variable has also been included in Table 1. When a higher standard deviation is assigned to a variable, it suggests that there is a greater spread in the corresponding data. As summarized in the table above, the mean average residential property tax rate lies at a value of 8.428% (SD = 1.007%), the mean foreign-born population falls at 3.297% (SD = 4.173%), the mean foreign-born population that moved within the same county assumes a value of 5.400% (SD = 6.167%), the mean foreign-born population that moved from a different county is equal to 3.942% (SD = 5.003%), the mean foreign-born population that moved from a different state resides at a value of 2.260% (SD = 5.053%), the mean foreign-born population that moved from abroad is 2.562% (SD = 3.973%), the mean average household income lies at a value of $73,171.93 (SD = $14,046.37), the mean number of violent crimes reported by the county sheriff's office falls at 27.691 (SD = 38.704), and the mean total population count assumes a value of 124,923.82 (SD = 528,291.60).

Table 2 lists the regression coefficients and standard errors pertaining to the associations between the foreign-born population percentage and the average residential

property tax rate, the total population count, the number of violent crimes reported by the county sheriff's office, and the average household income. Column "p" is used to assess the statistical significance of the variables used in the regression. As indicated by the results of this inferential analysis, four significant associations were revealed. First, a one percent increase in the average property tax rate corresponded to a 0.9% increase in the foreign-born population percentage. A one percent increase in the total population count resulted in a 0.3% increase in the foreign-born population percentage. Furthermore, a one percent increase in the number of violent crimes reported by the county sheriff's office was associated with a 0.02% increase in the foreign-born population percentage. Lastly, a one percent increase in the average household income resulted in an 11% increase in the foreign-born population percentage. The number of violent crimes reported by the county sheriff's office is statistically significant at the .05 level, while the remaining three variables in the study demonstrate high statistical significance at the .01 level. Figure 1 provides a graphical representation of the data pertaining to the foreign-born population percentage. The horizontal axis indicates the percentage of the population consisting of foreign-born individuals while the vertical axis comments on the number of counties containing these percentages.

Table 3 lists the regression coefficients and standard errors pertaining to the associations between the percentage of the foreign-born population that moved from a different county and the average residential property tax rate, the total population count, the number of violent crimes reported by the county sheriff's office, and the average household income. An analysis of the p-values summarized in the table above revealed no statistically significant associations. Figure 2 provides a graphical representation of

the data pertaining to the percentage of the foreign-born population that moved from a different county. The horizontal axis indicates the percentage of the foreign-born population consisting of individuals who moved from a different county while the vertical axis comments on the number of counties containing these percentages.

Table 4 lists the regression coefficients and standard errors pertaining to the associations between the percentage of the foreign-born population that moved from a different state and the average residential property tax rate, the total population count, the number of violent crimes reported by the county sheriff's office, and the average household income. The p values revealed that the relationships between the variables in this particular regression failed to demonstrate any level of statistical significance. Figure 3 provides a graphical representation of the data pertaining to the percentage of the foreign-born population that moved from a different state. The horizontal axis indicates the percentage of the foreign-born population consisting of individuals who moved from a different state while the vertical axis comments on the number of counties containing these percentages.

Table 5 lists the regression coefficients and standard errors pertaining to the associations between the percentage of the foreign-born population that moved within the same county and the average residential property tax rate, the total population count, the number of violent crimes reported by the county sheriff's office, and the average household income. As a result of this regression analysis, the positive relationship existing between the percentage of the foreign-born population that moved within the same county and the average residential property tax rate demonstrated statistical significance at the .05 level. For every one percent increase in the average residential

property tax rate, there was a 0.9% increase in the percentage of the foreign-born population that moved within the same county. Figure 4 provides a graphical representation of the data pertaining to the percentage of the foreign-born population that moved within the same county. The horizontal axis indicates the percentage of the foreign-born population consisting of individuals who moved within the same county while the vertical axis comments on the number of counties containing these percentages.

Table 6 lists the regression coefficients and standard errors pertaining to the associations between the percentage of the foreign-born population that moved from abroad and the average residential property tax rate, the total population count, the number of violent crimes reported by the county sheriff's office, and the average household income. This final regression analysis conveys yet another positive statistically significant relationship between the percentage of the foreign-born population and the average residential property tax rate at the .05 level. The magnitude of this relationship is demonstrated when a one percent increase in the average residential property tax rate correlates to a 0.6% increase in the percentage of the foreign-born population that moved from abroad. Figure 5 provides a graphical representation of the data pertaining to the percentage of the foreign-born population that moved from abroad. The horizontal axis indicates the percentage of the foreign-born population consisting of individuals who moved from abroad while the vertical axis comments on the number of counties containing these percentages.

DISCUSSION

The primary aim of this study was to determine whether or not the implications of the Tiebout-Tullock Hypothesis extend beyond the scope of migration flows with respect

to property taxes. The findings of this study provided implications for tax policy, that is, to support policy measures that might better accommodate the immigration flows experienced by the United States. The results suggested that the foundation underlying Tiebout is applicable to more than just the movement of individuals within a given country. Several of the regression analyses conducted in this study produced results in support of associations between populations subject to international migration and the property taxes, income levels, population levels, and crime rates attributed to individual locations in the state of Illinois. As a result, it can be said that the mobility decisions pertaining to foreign-born individuals who classify as residents of Illinois indicated a clear signal of preferences. This conclusion fell in accordance with the claims made by Charles Tiebout and his framework underlying the Tiebout Hypothesis. When analyzing the main variable of this study, the results not only depicted a strong association between the average residential property tax rate and the foreign-born population in all counties of Illinois, but they also revealed a correlation between the property tax rate and the percentage of the foreign-born population that moved from abroad.

The results and findings of this specific research partially support the Tiebout model. Several of the regression analyses not only demonstrated some degree of correlation between foreign-born populations and property tax rates, but they also demonstrated it at a highly significant level. Previous findings of the model suggest that a positive association surrounds the nature of the relationship between property taxes and residential mobility (Fraenkel, 2021). This study provided evidence in support of that theory which comments on the role tax systems play in terms of the geographic mobility decisions made by individuals. Furthermore, the results of this research helped contribute

and extend onto the existing ideas surrounding the Tiebout model. A majority of the previous studies that aim to verify the implications of the Tiebout Hypothesis test the model in regards to domestic migration. By incorporating foreign populations into the samples, this new research suggested that the Tiebout Hypothesis is applicable to individuals migrating across national borders as well.

On the contrary, there are several findings that challenged the underlying framework of the Tiebout model. Several existing studies testing the hypothesis have concluded that the relationship between property taxes and residential mobility is negatively correlated. Therefore, any increase in the property tax rate of a given area is accompanied by a decrease in the population of that location. However, the results of this study suggested the opposite. A higher average residential property tax rate in a given Illinois county was associated with a higher foreign-born population percentage, a higher percentage of the foreign-born population that moved within the same county, and a higher percentage of the foreign-born population that moved from abroad. A possible justification for this finding could be the attraction to certain factors attributed to areas with higher property taxes, such as home values, state and local budgeting, and funding towards educational institutions. Another conflicting finding of this research with respect to the implications of the Tiebout model resulted in terms of several regression models analyzing different aspects of residential mobility. No statistically significant correlation was identified in the average residential property tax rate's relationship with the percentage of the foreign-born population that moved from a different county nor the percentage of the foreign-born population that moved from a different state. The conflicting nature of this result might best be explained by the migration patterns of

foreign-born individuals who have already settled in the United States. Property tax rates may be of higher interest to foreign-born individuals when first settling in America which explains the statistical significance seen between the average residential property tax rate and the percent of the foreign-born population that moved from abroad. However, as these individuals start to relocate within the country, the influence of property tax rates on their mobility decisions may have less of an effect, explaining the lack of statistical significance seen with respect to the foreign-born populations that moved from a different county and a different state.

After evaluating the results of the regression analyses of this study, there were several unexpected findings. Logically, one would anticipate that a higher property tax rate would attract less foreign-born individuals to a particular area. However, the results of this study suggested the opposite. As discussed earlier, the relationships between the average residential property tax rate and both the foreign-born population percentage and the percentage of the foreign-born population that moved from abroad were positive in nature. Once again, this finding can be explained by the appeal certain attributes linked to areas with higher property taxes have to foreign-born populations. In addition, it is clear as to why the relationship between property tax rates and both the percent of the foreign-born population that moved from a different state and the percent of the foreign-born population that moved from a different county would demonstrate correlation. Any statistical significance could be explained by the existing variations seen in the property tax rates from county to county. However, what remains unclear why the results of this study suggested a positive correlation exists between the average residential property tax rate and the percentage of the foreign-born population that moved within the same

county. This finding raised questions regarding the explanations for why such an occurrence exists when the property tax rate remains constant. One likely explanation could be the discrepancies seen between the individual district rates within a county. Immigrants might tend to relocate within a given county as a means of finding the best deal.

When analyzing the covariates used in this study, all three variables produced statistically significant results with respect to the foreign-born population percentage. All three relationships evaluated through the regression model were concluded to be positive. It is possible that foreign-born individuals are more attracted to counties with higher populations if they are interested in settling within proximity of areas containing high levels of individuals who demonstrate similar ethnicity. In addition, individuals subject to international migration flows might seek out residency in counties with higher income levels as an indication of well-being and financial independence. Finally, higher levels of foreign-born individuals may exist in areas with higher crime rates as a result of the social capital maintained in that particular area. If individuals within a community build strong relationships with those around them, there is less of an incentive among those individuals to obstruct justice in that area.

Being able to better understand the trends of international migration helps provide insight into the motivating factors behind decisions pertaining to immigrant mobility. With that being said, this study helps identify new findings relevant to the policy decisions being made in several different fields. In the discipline of accounting, utilizing property tax rates as a means of analysis has the potential to serve as an indicator of the percentage of a given population that is foreign-born. As a result, these findings have

implications for the decisions made in regards to both tax and immigration policies. Given that immigration is a highly controversial political issue, it is important that results from studies such as this one be taken into consideration. With such insight into the relationship between property tax rates and international migration flows, policy makers can utilize this information when making adjustments to property tax rates in certain locations in order to better control the flows and distribution of foreign-born individuals in the United States.

Analyzing data in respect to studies like these offers many benefits in terms of the larger population. However, there are certain limitations associated with the effectiveness of the findings from such studies. While conducting research for this study, several difficulties were encountered in regards to compiling the raw data used in running the descriptive and inferential analyses. Among these difficulties was the nature of the property tax rate data. Actual tax rates for each county as a whole were not available due to the varying rates across the district which make up a given county. To accommodate for this limitation, the average tax rates available through the Illinois Department of Revenue for each particular county were used instead. Another limitation of the findings of this study is attributed to the treatment of missing data. When gathering the data related to the number of crimes reported by the county sheriff's office for each county in Illinois, data for some of the counties available through the Federal Bureau of Investigation was missing for the years 2019 and 2020. To generate these missing values for the sample, the median value of all years was taken from the data available for each particular county dating back to 2010.

In conclusion, this study provides concrete evidence to clarify the uncertainty surrounding the association between property tax rates and foreign-born population levels, along with that population's residential mobility. As a result, this research contributes to furthering the understanding behind the mobility decisions of foreign-born individuals seeking residence in the United States.

REFERENCES

Budiman, A. (2020, September 22). *Key findings about U.S. immigrants*. Pew Research Center. https://www.pewresearch.org/fact-tank/2020/08/20/key-findings-about-u-s-immigrants/

Cebula, R. J. (2009). Migration and the Tiebout-Tullock hypothesis revisited. *The American Journal of Economics and Sociology*, *68*(2), 541–552. http://www.jstor.org/stable/27739783

Federal Bureau of Investigation. (2022). *Crime Data Explorer*. https://crime-data-explorer.app.cloud.gov/pages/explorer/crime/crime-trend

Fraenkel, R. (2021). *Property tax-induced mobility and redistribution: Evidence from mass reappraisals*. UC San Diego Department of Economics. https://acsweb.ucsd.edu/~rfraenke/

Illinois Department of Revenue. (2022). *Average tax rates, 2016 – 2020* (table 8 – 2020) [Data set]. https://www2.illinois.gov/rev/research/taxstats/PropertyTaxStatistics/SitePages/PropertyTaxYear.aspx?rptYear=2020

Islam, M., & Rafiquzzaman, M. (1991). Property tax and inter-municipal migration in canada: A multivariate test of the Tiebout hypothesis, Applied Economics, 23:4, 623-630. https://doi.org/10.1080/00036849108841017

Kirby, J. (2011, July 19). *The great white tax haven.* Maclean's.ca. https://www.macleans.ca/economy/business/the-great-white-tax-haven/

Kleven, H., Landais, C., Muñoz, M., Stantcheva, S. (2020). Taxation and migration: Evidence and policy implications. *Journal of Economic Perspectives, 34(2), 119-42.* https://doi.org/10.1257/jep.34.2.119

Miller, E. (1973). Is out-migration affected by economic conditions? *Southern Economic Journal, 39*(3), 396–405. https://doi.org/10.2307/1056406

Ordower, H. (2019). Exploring the impact of taxation on immigration. *SSRN.* http://dx.doi.org/10.2139/ssrn.3648682

Shan, H. (2010). Property taxes and elderly mobility. *Journal of Urban Economics, 67(2), 194-205.* https://doi.org/10.1016/j.jue.2009.08.004

Thompson, J. (2011, April 12). *The impact of taxes on migration in New England.* Political Economy Research Institute. https://peri.umass.edu/publication/item/968-the-impact-of-taxes-on-migration-in-new-england

U.S. Census Bureau. (2022). *Annual estimates of the resident population: April 1, 2020 to July 1, 2019* (2019: PEP population estimates) [Data set]. U.S. Census Bureau. https://data.census.gov/table?g=0400000US17$0500000&y=2019

U.S. Census Bureau. (2022). *Geographic mobility by selected characteristics in the United States (*2019: ACS 5-year estimates subject tables) [Data set]. U.S. Census

Bureau. https://data.census.gov/table?t=Residential+Mobility&g=0400000US17$0500000&y=2019&tid=ACSST5Y2019.S0701

U.S. Census Bureau. (2022). *Geographic mobility by selected characteristics in the United States, 2020 (*ACS 5-year estimates subject tables) [Data set]. U.S. Census Bureau. https://data.census.gov/table?t=Residential+Mobility&g=0400000US17$0500000&y=2020&tid=ACSST5Y2020.S0701

U.S. Census Bureau. (2022). *Income in the past 12 months (in 2019 inflation-adjusted dollars)* (2019: ACS 5-year estimates subject tables) [Data set]. U.S. Census Bureau. https://data.census.gov/table?t=Income+and+Poverty&g=0400000US17$0500000&y=2019&tid=ACSST5Y2019.S1901

U.S. Census Bureau. (2022). *Income in the past 12 months (in 2020 inflation-adjusted dollars)* (2020: ACS 5-year estimates subject tables) [Data set]. U.S. Census Bureau. https://data.census.gov/table?t=Income+and+Poverty&g=0400000US17$0500000&y=2020

U.S. Census Bureau. (2022). *Race* (2020: DEC redistricting data (PL 94-171) [Data set]. U.S. Census Bureau. https://data.census.gov/table?g=0400000US17$0500000&y=2020

Table 1

Results of Descriptive Analysis

	Statistics	
Variables	**Mean**	**Std. Deviation**
Average Residential Property Tax Rate (%)	8.428	1.007
Foreign-Born Population (%)	3.297	4.173
Moved Within Same County (%)	5.400	6.167
Moved From Different County (%)	3.942	5.003
Moved From Different State (%)	2.260	5.053
Moved From Abroad (%)	2.562	3.973
Total Population Count	124,923.82	528,291.60
Number of Violent Crimes Reported by the County Sheriff's Office	27.691	38.704
Average Household Income ($)	73,171.93	14,046.37

Table 2

Results of Foreign-Born Regression

	Unstandardized	Standard Error	Standardized	t	p
H_0 (Intercept)	3.297	0.292		11.284	< .001
H_1 (Intercept)	−124.939	12.939		−9.656	< .001
Average Residential Property Tax Rate (%)	0.907	0.183	0.219	4.968	< .001
Total Population Count (00000)	0.277	0.045	0.350	6.137	< .001
Number of Violent Crimes Reported by the County Sheriff's Office	0.019	0.006	0.174	2.930	0.004
Average Household Income (ln)	10.705	1.132	0.441	9.455	< .001

Figure 1

Bar Graph of Foreign-Born Population

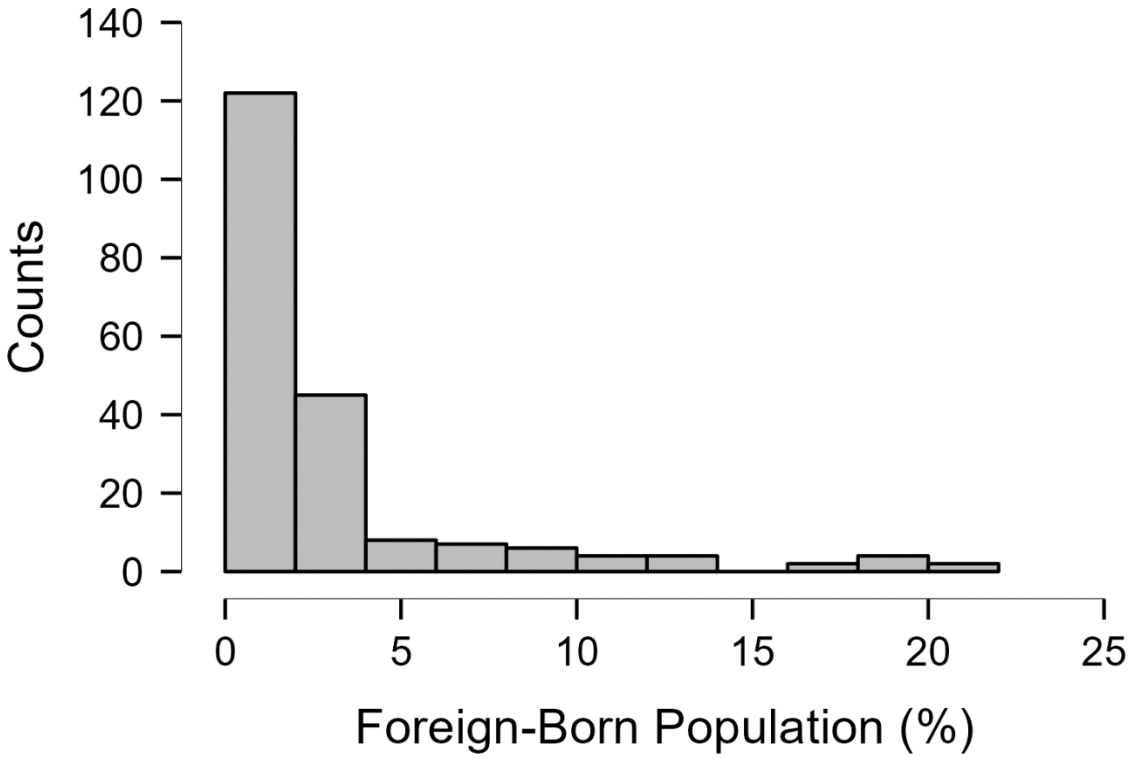

Table 3

Results of Moved from a Different County

	Unstandardized	Standard Error	Standardized	t	p
H_0 (Intercept)	3.942	0.350		11.254	< .001
H_1 (Intercept)	-3.787	25.776		-0.147	0.883
Average Residential Property Tax Rate (%)	-0.348	0.364	-0.070	-0.958	0.339
Total Population Count (00000)	-0.062	0.090	-0.065	-0.688	0.492
Number of Violent Crimes Reported by the County Sheriff's Office	-0.003	0.013	-0.025	-0.251	0.802
Average Household Income (ln)	0.968	2.255	0.033	0.429	0.668

Figure 2

Bar Graph of Moved from a Different County

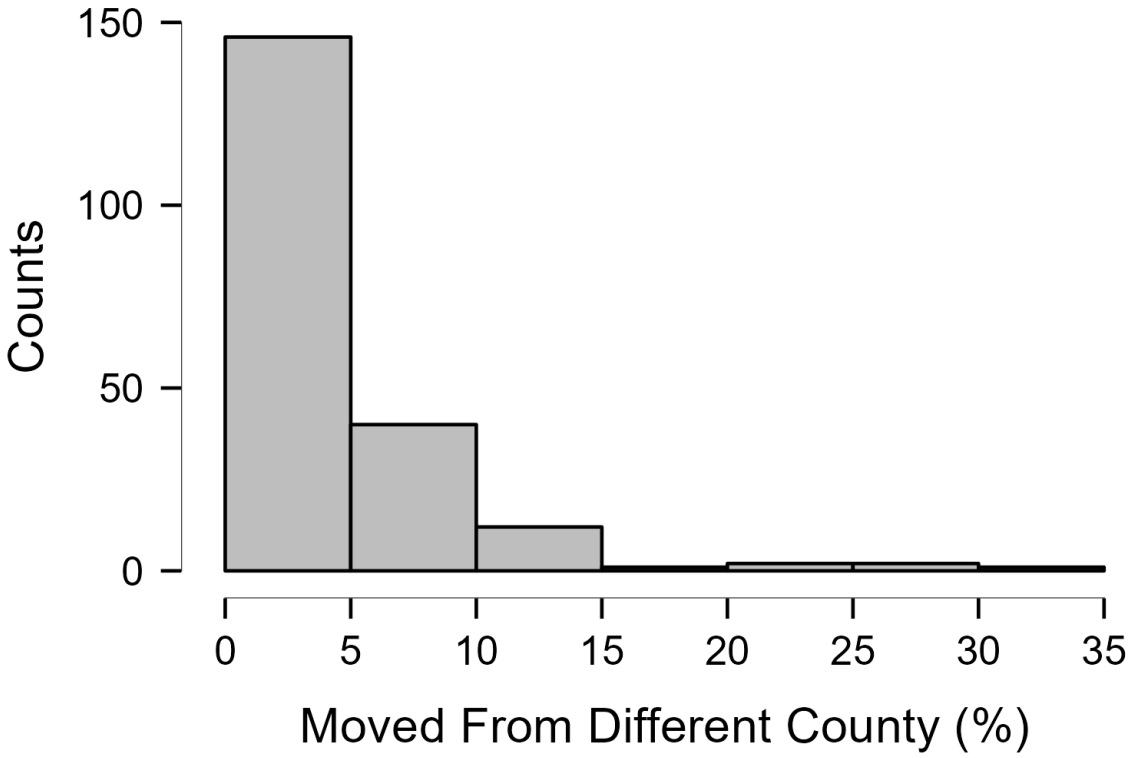

Table 4

Results of Moved from a Different State

	Unstandardized	Standard Error	Standardized	t	p
H_0 (Intercept)	2.260	0.354		6.390	< .001
H_1 (Intercept)	-0.954	26.065		-0.037	0.971
Average Residential Property Tax Rate (%)	0.481	0.368	0.096	1.309	0.192
Total Population Count (00000)	0.003	0.091	0.003	0.031	0.976
Number of Violent Crimes Reported by the County Sheriff's Office	-0.006	0.013	-0.049	-0.498	0.619
Average Household Income (ln)	-0.060	2.281	-0.002	-0.026	0.979

Figure 3

Bar Graph of Moved from a Different State

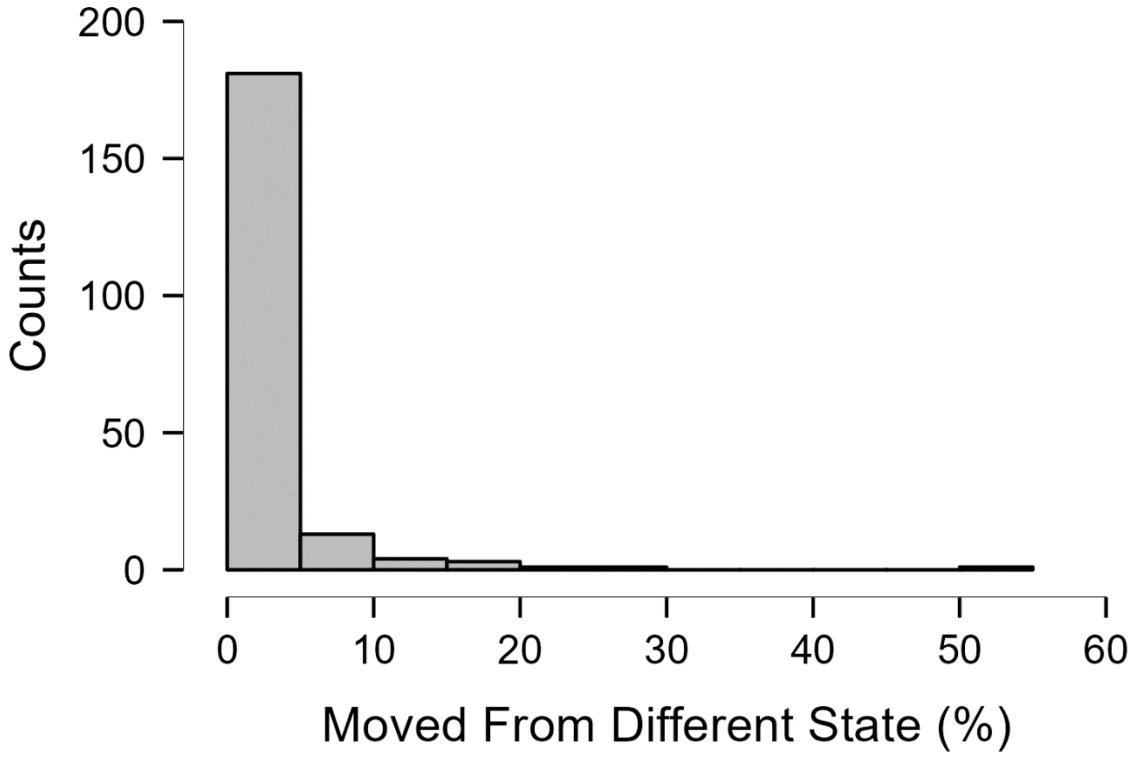

Table 5

Results of Moved Within the Same County

	Unstandardized	Standard Error	Standardized	t	p
H_0 (Intercept)	5.400	0.432		12.508	< .001
H_1 (Intercept)	-16.190	31.396		-0.516	0.607
Average Residential Property Tax Rate (%)	0.928	0.443	0.152	2.095	0.037
Total Population Count (00000)	0.021	0.109	0.018	0.191	0.849
Number of Violent Crimes Reported by the County Sheriff's Office	0.010	0.016	0.066	0.674	0.501
Average Household Income (ln)	1.203	2.747	0.034	0.438	0.662

Figure 4

Bar Graph of Moved within the Same County

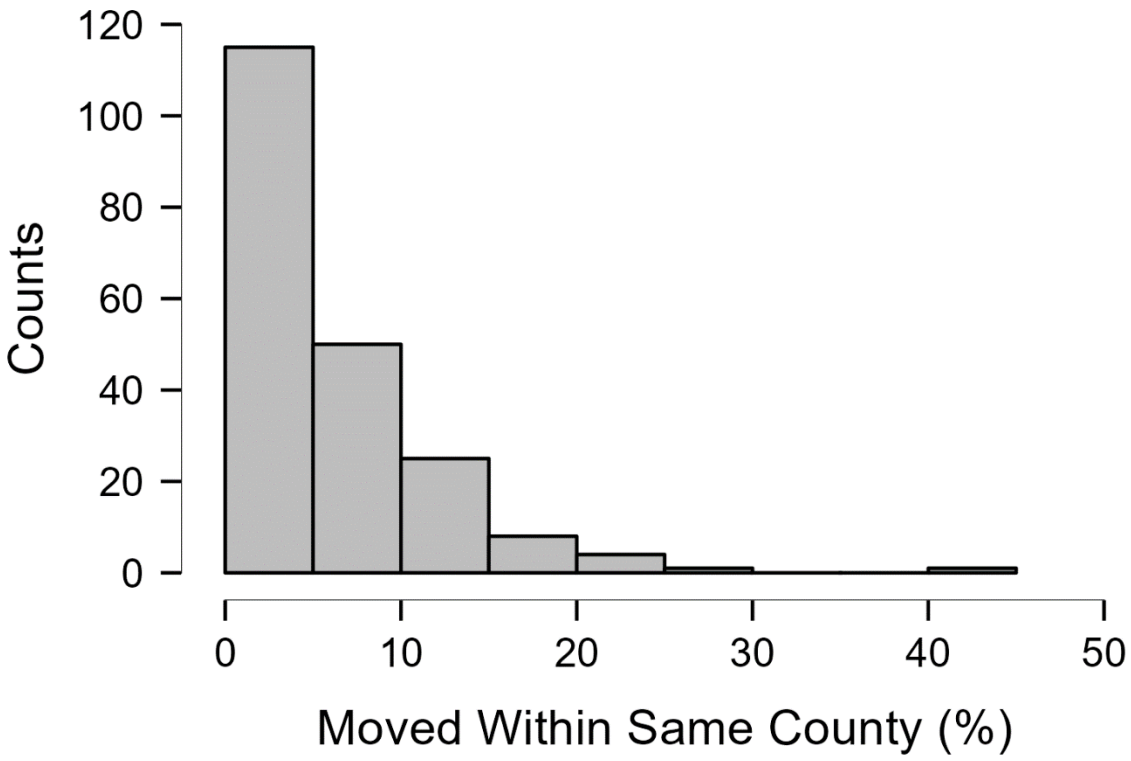

Table 6

Results of Moved from Abroad

	Unstandardized	Standard Error	Standardized	t	p
H_0 (Intercept)	2.562	0.278		9.212	< .001
H_1 (Intercept)	-1.603	20.320		-0.079	0.937
Average Residential Property Tax Rate (%)	0.619	0.287	0.157	2.161	0.032
Total Population Count (00000)	-0.016	0.071	-0.021	-0.223	0.824
Number of Violent Crimes Reported by the County Sheriff's Office	0.003	0.010	0.027	0.278	0.781
Average Household Income (ln)	-0.099	1.778	-0.004	-0.056	0.955

Figure 5

Bar Graph of Moved from Abroad