# Abstract

*Asian Americans comprise of a panoply of differing ethnic national origins, yet there is also a case to be made in managing a collective shared political identity. It is important to recognize the power in a shared political identity; however, in using a shared political identity, often minimizes the differences between different ethnic groups by consolidating Asian American statistics into one consolidated group. This study is framed using Dache’s (2022) Critical Geographic College Access (CGCA) and seeks to make a case of disaggregating Asian American data, by analyzing geographic differences utilizing Local Indices of Spatial Autocorrelation (LISA) and Kruskal-Wallis test. I use college access indicators such as median income, frequency of college attainment, and distance to tutoring resources, to argue that Asian Americans have different experiences based on ethnic background related to their geographic boundaries.*

# Introduction

Asian American comprises a panoply of differing and unique intersectional identities, histories, and experiences, yet Asian Americans are essentialized as a group and broadly stereotyped as the model minority, which shapes information to college access and campus resources (Museus & Truong, 2009; Palmer & Maramba, 2015; Poon & Byrd, 2013). Scholars and researchers have frequently called for the disaggregation of Asian American data to ensure that ethnic minorities are supported within the Asian American racial category (Museus & Truong, 2009). Although more recently there have been calls to disaggregate Asian American, scholars and practitioners have pointed to the differences that exist in immigration experiences as early as 1989, (Hsia & Hirano-Nakanishi, 1989; Osajima, Keith, 1995). In the pursuit of data disaggregation in educational data, I map the different experiences of Asian American ethnic groups across Philadelphia and their access to higher education utilizing Local Indices of Spatial Autocorrelation (LISA) to indicate which census tracts have high relative frequencies and high clustering. I then compare the census tracts that have unique clustering using pairwise t-tests to determine if the differences between the Asian American populations are statistically significant.

# Asian American Immigration and Asian American movements

In 1989 Hsia and Hirano-Nakanishi wrote that Asian Americans that decades, “… fastest-growing group of college goers” (1989, p. 20), and that Asians could comprise of 10% of the total U.S. population by 2080. The rapid growth of Asian Americans into the United States was related to passing the immigration act of 1965 which abolished policies such as the 1882 Chinese Exclusion act, and 1924 National Origins Act, and set an annual quota based on hemispheres. The eastern hemisphere where Asia is categorized set a cap of 170,000 migrants with no more than 20,000 permitted from any one country. Additionally, a preference system was established that prioritized first reunification, third professional scientists and artists, and sixth skilled and unskilled workers.

Under the U.S Attorney General in 1975 there was an increased flow of Southeast Asian refugees from U.S. intervention in the Vietnam war (CITE). The 1980 Refugee act allowed refugees to become permanent residence after a year in the country, which led to many Southeast Asian communities such as Vietnamese, Laotian, Cambodian, and Khmer populations to immigrate to the United States. Although the 1965 immigration act brough in many refugees, it also brought in scholars and students such as Chinese immigrants mostly from Taiwan. With the turbulence of the Chinese revolution, many Chinese scholars decided to stay in the United States. In addition to the Chinese revolution, from the Korean war, many Korean women immigrated to the United States with American service men. However, there were also many Korean-educated medical professionals who also immigrated to the United States (Lee, 2011).

During the 1960s Asian Americans in the U.S, which included Chinese, Japanese and Filipino Americans pushed for the first Asian American movement. Many of these groups have long and storied histories in the U.S with Filipinos arriving in 1587, and Chinese and Japanese people arriving as laborers in the 1840s (Nadal, 2019; Okihiro, 2015). As such, when Asian Americans began their movement, this movement did not include Indian Americans who immigrated to the United States in the late 1800s. Despite Indian Americans geographic location in the content of Asia, they were categorized under the census category of “Caucasian” because they were not considered a discriminated minority group. In the late 1960s the Association of Indians in America lobbied for Indian Americans being labeled as Asian Americans and in the 1980s the census began to use the term “Asian Indian” (Nadal, 2019). Later this group would expanded and be known as “South Asian” to describe Pakistani, Bangladeshi, Sri Lankan, and Nepalese people by 2000. Additionally, with the movement for Asian Americans, the entry of Southeast Asians as refugees also challenged the notions of Asian America. Many of the migrants came from lower socioeconomic statuses and educational attainments, which challenged the model minority myth (Nadal, 2019).

Although this is not a comprehensive history of immigration into the United States by Asian ethnic groups, broadly Asians who immigrated after the passing of the 1965 immigration act immigrated with vastly different socioeconomic experiences. Most were escaping from the turmoil from war and conflict in Asia; however, their educational context drastically varied with Chinese immigrants being highly educated scholars, and southeast Asians escaping crises of war. Despite these different immigration and arguably cultural contexts, as Asian Americans immigrate to the United States, they are categorized as simply Asian American which mitigates the differences between Asian American categories, while providing a more powerful political coalition.

# Asian American in Higher Education

Race as a geographic cultural construct shapes how students experienced being Asian American. In Chan’s (2017), study on geographic differences in being Asian American the theme of race as a social identity was broken updivided into four subthemes: (1) distancing racial identity, (2) the strategic use of racial identity, (3) shifting experiences of race and racial identity to describe the importance of students' hometowns and high schools, and (4) how they now felt about their racial context. This theme described how some students felt closer to their identity, while other students felt more distanced because they no longer were the only Asian American identifying person in their hometown.

The literature on Asian American geographic differences is not extensive, but the literature that does exist indicates that there are differences in access to locations and socialization. Patterns of immigration and discourse also shaped where Asian Americans could move to, and the environment that Asian Americans occupy also shape their own ideas perceptions of self. Geography plays an important role in shaping the Asian American experience; however, very little has been done to explicitly understand geography and its relationship to college access for Asian American populations.

# Framework: Critical Geographic College Access

Perna (2006) offers a conceptual model of higher education which encompasses four layers: (1) habitus, (2) school and community context, (3) higher education context, (4) social, economic and policy context. Although this framework does consider context, it does not explicitly address the geographic context (Turley, 2009). Turley argues that college choice must be situated in the geographic context and found that high school seniors had a wide range of colleges within commuting distance, zip code had a small but significant increase in the odds of applying to college. Finally, schools that are more conveniently accessible had higher application rates.

Hillman (2016) builds upon the geographic distance of higher education institutions to argue for the existence of education deserts, which are defined as locations with no colleges nearby. These education deserts show that place shapes the decision-making process in deciding whether to attend and where to attend college. The idea of applying the term geography of opportunity is to show that there are unequal opportunities to higher education. Like food deserts, education deserts are constrained along the lines of race and class. Individual choices to go to college are shaped by their geographic context, which constrains the options of school context, community context, and their social habitus. Dache-Gerbino (2016) argues that geographic context is critically important using a Critical Geographic College Access (CGCA) framework to visually show how urban development and modernization failed black communities and that locations of colleges are not just coincidences but socially constructed around a history of residential segregation. In utilizing CGCA I argue that Asian Americans have different conditions which cultivate their opportunities for higher education.

# Methods

## American Community Survey (ACS) Data

I am using 2019 American Community Survey (ACS) data. The ACS is distributed to a small sample of the U.S. population The broad categories that I have selected from the ACS are: (1) Asian country of origin, (2) median incomes and earnings, (3) frequencies by racial category, (4) frequencies by income, and (5) frequencies by educational attainment. The Asian countries of origin where then categorized into four broad groups based on the history outlined by Nadal (2019), East Asian, South Asian, Southeast Asian, and Filipino. These categories are based on histories of immigration, and similarities with community experiences in the United States (Ocampo, 2016).

|  |  |
| --- | --- |
| Ethnic Group | PanEthnic Cateogry |
| Pakistani | South\_Asian |
| Bangaldeshi | South\_Asian |
| Sri Lankan | South\_Asian |
| Nepal | South\_Asian |
| Indian | South\_Asian |
| Bangladeshi | South\_Asian |
| Bhutan | South\_Asian |
| Vietnamese | Southeast\_Asian |
| Cambodian | Southeast\_Asian |
| Lao | Southeast\_Asian |
| Hmong | Southeast\_Asian |
| Burmese | Southeast\_Asian |
| Indonesian | Southeast\_Asian |
| Malaysian | Southeast\_Asian |
| Filipino | Filipino |
| Chinese | East\_Asian |
| Japanese | East\_Asian |
| Taiwanese | East\_Asian |
| Korean | East\_Asian |
| Mongolian | East\_Asian |
| Thai | East\_Asian |
| Other | Other |
| Two or more | Other |
| Okinawan | Okinawan |

## Spatial Autocorrelation Analysis: Moran’s I and LISA

Spatial autocorrelation describes how related geographic spaces are to each other, and one way to determine this is through Moran’s I. Moran’s I has been widely used to test for spatial autocorrelation or spatial dependencies and its value determines the strength of autocorrelation indicating how clustered values are. Values that are closer to 1 indicate strong positive autocorrelation, while values closer to -1 indicate negative autocorrelation that being how repelled values are. Conversely, if values are positively autocorrelated they are spatially clustered. If the value is close to 0, then there is no spatial autocorrelation, indicating a random pattern. Although Moran’s I has been widely utilized, it does not identify local locations where there are high frequencies and high clustering.

A LISA statistic or Local Indicator of Spatial Association (LISA) is defined as having two properties. (1) the LISA for each observation gives an indication of the extent of significant spatial clustering of similar values around that observation and (2) the sum of LISAs for all observations is proportional to a global indicator of spatial association.The LISA we will be looking at is Moran’s I at a local level for each point. In our case each census block calculated individually and then summed to provide the I in the Moran's I. The calculated LISA describes each blocks effects of the clustering within the data.

After these census tracts were identified, I then removed any census tracts where two or more Asian American populations had high frequencies and were highly clustered overlapped. This would allow me to identify census tracts that were unique to ethnic enclaves to understand how these ethnic enclaves conditions differed from other ethnic enclaves. After this, I would then run a Kruski-Wallis test, because the remaining data would be non-parametric and the group sizes would not be the same. The null hypothesis for the Kruski-Walli test is that the mean ranks of all the groups are the same. While the alternate hypothesis is that the mean ranks of the groups are different.

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | n | statistic | df | p | method |
| Median gross rent Total | 41 | 15.33399 | 4 | 0.00406 | Kruskal-Wallis |
| Median income in the past 12 months Total | 41 | 14.57941 | 4 | 0.00566 | Kruskal-Wallis |
| White\_Race | 41 | 16.779012 | 4 | 0.00213 | Kruskal-Wallis |
| Black\_Race | 41 | 19.748025 | 4 | 0.00056 | Kruskal-Wallis |

# Findings and Analysis

## Asian American Clustering

The LISA statistics found four different spaces: (1) high frequency and high clustering, (2) high frequency and low clustering, (3) low frequency and high clustering, and (4) low frequency and low clustering. The maps below show the clustering for different Asian American populations.

## Differences among Asian American Enclaves

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