College Major Selection among Non-Traditional Asian Students in the U.S.

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Abstract of Thesis

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This thesis examines college major selection among non-traditional Asian students in the U.S. education system, focusing on how socioeconomic and immigration factors influence their decisions. Utilizing the 2016 National Postsecondary Student Aid Study (NPSAS), the research highlights a strong preference for STEM fields among non-traditional Asian students compared to traditional Asian counterparts, possibly reflecting a strategic approach informed by career goals and the intricate balance of personal ambitions and familial pressures. While the data may imply such tendencies, definitive claims regarding the motivations behind these patterns require further qualitative inquiry. Findings indicate that tailored educational policies and support systems are crucial to accommodate the unique challenges faced by this demographic. The study advocates for comprehensive support services to foster an inclusive educational environment that aligns with the diverse needs of non-traditional Asian students.

Table of Contents

Abstract of Thesis ..... **ii**

List of Tables ..... **v**

Chapter 1 Introduction 1

Chapter 2 Literature Review 3

Diversity in Asian Academic Paths 3

College Major Selection among Asian Students 4

Non-traditional Asian College Students 6

Chapter 3 Theoretical Framework 10

Assimilation Theory 10

Segmented Assimilation Theory 10

Model Minority Theory 11

Intersectionality 12

Cultural Capital Theory 13

Chapter 4 Methodology 15

Data and Method 15

Dependent variable 17

Independent variable 18

Results 20

Chapter 5 Discussion and Conclusions 28

Major Selection Trends and Theoretical Implications 28

Academic Performance and Supportive Structures 31

Limitation..... 32

Reference 34

List of Tables

Table 1. Comparative Distribution by Majors 22

Table 2. Descriptive Statistics of Traditional and Non-traditional Asian Students..... 24

Table 3. Multinomial Logistic Regression on Major Choice Among Asian Students 27

Chapter 1 Introduction

The United States' higher education system is characterized by its vast diversity, serving as a melting pot for students of varied backgrounds, ambitions, and life circumstances (Ellsworth et al., 2022). This diversity not only enriches the educational experience for all but also presents unique challenges and opportunities for research. Among the student body, non-traditional students—especially those from Asian communities—stand out due to their unique educational needs and experiences (Mahnken, 2023). Non-traditional students are commonly defined by their age, typically 25 years or older, and their life roles, which often include caregiving responsibilities (Arena, 2023). These students represent a significant and growing demographic in higher education, yet they face unique challenges that can impact their educational journey, including part-time enrollment, full-time employment, and the added responsibilities of family care (Tilley, 2014). This thesis will delve into the lives of non-traditional Asian students, who must navigate a complex interplay of economic needs and academic goals. These students often balance coursework with full-time jobs and family obligations, which can significantly influence their academic choices, including the critical decision of selecting a college major (Chen, 2017).

Moreover, since for many Asian students, immigration is a defining aspect of their identity (Ruiz, 2023), this study will explore how the immigrant experience also shapes their educational decisions and strategies. Whether as immigrants or children of immigrants, these students face the challenges of adapting to a new culture and educational system. Choosing a college major is a pivotal decision for students, influenced by personal

interests, economic opportunities, familial pressures, and cultural values (Quadlin, 2019). This research investigates how non-traditional Asian students in postsecondary educational institutions choose their college majors, to identify the factors that influence their choices.

The National Postsecondary Student Aid Study (NPSAS) offers a wealth of data that can be used to understand the trends and patterns in major selection among non-traditional Asian students. Despite its limitations, this study will extract valuable insights to better understand the societal, and individual factors that guide these students' choices. Recognizing the heterogeneity within the Asian student population is crucial to this study. The thesis poses several research questions to guide the investigation, focusing on the impact of immigration status, gender, and parental education on major selection. The study will use quantitative methods to analyze the 2016 NPSAS data and provide a detailed analysis of the academic trajectories of non-traditional Asian students. Understanding college major selection patterns may shed light on the needs and challenges of non-traditional Asian students which is essential to developing educational policies and support systems that foster an inclusive and equitable academic environment (Tilley, 2014). This study aims to contribute to a deeper understanding that can inform such developments.

In conclusion, this thesis will synthesize the findings to offer recommendations for how educational institutions can better serve non-traditional Asian students. By highlighting the need for tailored support and recognizing the diversity of experiences within this demographic, the study will advocate for a more responsive and nurturing educational system.

Chapter 2 Literature Review

Diversity in Asian Academic Paths

The term "Asian students" encompasses a broad spectrum of cultures, ethnicities, and experiences within the United States, including individuals of East, Southeast, South Asian, and Pacific Islander descent, each with their unique cultural heritage and historical background (Suzuki, 2002). The existing literature often focuses predominantly on East Asians, which may inadvertently overshadow the diverse experiences of other Asian subgroups (Kim & Yeh, 2002). In my study, "Asian students" refers to this wide array of individuals, inclusive of both immigrants and Asian Americans who are second-generation and beyond (Zhou & Lee, 2015). In addressing within-group diversity, this thesis acknowledges the complexities and varied narratives that exist within the Asian student body. The educational choices, assimilation patterns, and identity formation of a second-generation Korean American can vastly differ from those of a first-generation Vietnamese immigrant or a fourth-generation Japanese American (Park & Liu, 2007). Such differences are crucial for understanding the educational trajectories of these students (Kiang & Takeuchi, 2009).

We have deliberated on the necessity of a nuanced approach to this research, recognizing that there is no monolithic "Asian experience" in higher education. Instead, multiple, intersecting layers of identity contribute to the richness of the Asian student population in the United States (Teranishi, 2010). By considering these layers, this research aims to provide a comprehensive analysis that not only contributes to the academic

discourse on higher education but also respects and represents the diversity within the Asian student community (Museus & Kiang, 2009).

College Major Selection among Asian Students

Scholarly inquiries into college major selection among Asian immigrant students have predominantly centered around demographic factors such as ethnicity, gender, and immigration status (Choy, 2001; Fuligni & Witkow, 2004; Teranishi, 2010). Disparities in major selection across various Asian ethnic subgroups have been illuminated, thus highlighting the necessity to recognize the inherent heterogeneity within the Asian immigrant community (Teranishi, 2010). For instance, Fuligni and Witkow (2004) unveiled distinct patterns of college major selection among different Asian subgroups, which can be attributed to disparities in cultural values and familial backgrounds.

A substantial body of literature posits that Asian students' process of major selection is significantly influenced by a range of factors including cultural, familial, and personal determinants. A seminal aspect that emerges is the integral role played by parental expectations and cultural values in shaping the educational trajectories of Asian students.

Firstly, Asian cultures typically accord high importance to education as a conduit for achieving social mobility and success, thereby prompting students to gravitate towards esteemed fields such as medicine, engineering, and business (Leung, 2002; Kim & Kim, 2014). The principle of "filial piety," which entails respecting and honoring one's parents, is a pivotal determinant in major selection, often leading students to opt for majors that resonate with their parents' aspirations and expectations (Sue & Okazaki, 1990). Furthermore, parental expectations are instrumental in influencing major selection for

Asian students. A study by Kim and Kim (2014) revealed that Asian American students often prioritize career prospects and parental expectations in their college major selection process. Asian parents also tend to be actively involved in their children's education, thereby providing crucial guidance and support during the major selection phase (Xie & Goyette, 2003).

The quest for stable and lucrative careers has also been identified as a significant influencer in major selection among Asian students. It is commonplace for students to favor majors that promise financial rewards and job stability (Leung, 2002). This trend is corroborated by a study by Chavous et al. (2003), which found that Asian students exhibit a predilection for majors within the science, technology, engineering, and mathematics (STEM) fields, owing to the attractive career prospects associated with these disciplines. Moreover, the influence exerted by peers and the broader Asian community cannot be overlooked in shaping students' major selection. There is often a drive to align with community expectations and norms, which can guide students towards specific fields of study (Phinney et al., 2006). While the aforementioned factors are pivotal, individual aspirations and interests are equally crucial in the major selection process for Asian students (Chavous et al., 2003). A study by Leung (2002) found that Asian students often strike a balance between their personal interests and passions, and practical considerations and familial expectations when selecting a major.

This comprehensive review of the literature elucidates that the major selection process among Asian students represents a multifaceted interplay of cultural values, familial expectations, individual aspirations, and career prospects. While there is a pronounced emphasis on achieving financial stability and meeting parental expectations,

individual interests and aspirations also play a vital role in guiding students' educational choices.

Non-traditional Asian College Students

In the landscape of higher education, non-traditional Asian college students, particularly those enrolled in postsecondary education institutions, represent a distinctive cohort whose academic decisions and experiences are influenced by a confluence of unique challenges. These students are often drawn to community colleges for their affordability and flexibility, crucial qualities for balancing employment and familial responsibilities (Xu & Jaggars, 2011; Laanan, 2003). Such institutions are essential in democratizing access to higher education for non-traditional students, yet there remains a need for tailored support and resources to facilitate their academic success (Goldrick-Rab & Pfeffer, 2009).

For non-traditional Asian students, especially those who are immigrants or the first in their families to attend college, acculturation and language proficiency are pivotal in shaping their educational experiences. Limited English skills can become a formidable barrier, affecting academic performance, and influencing the selection of a college major (Yeh & Inose, 2003; Kwon, 2020; Ryu, 2010). The familial emphasis on education is a driving force for these students, yet this same familial support can introduce pressure, conflict, and high expectations that may not always align with the students' personal aspirations or career objectives (Sue & Okazaki, 1990; Yeh, 2003).

Selecting a college major is an intricate process where cultural values and familial expectations significantly inform student choices. For traditional Asian American students, the emphasis on career prospects and meeting parental expectations often predominates the

decision-making process (Kim & Kim, 2014). However, non-traditional Asian students may navigate this process under the additional pressures of familial obligations to pursue financially lucrative or culturally esteemed fields like STEM (Phan & Kim, 2018). Such pressures can constrain the exploration of other academic interests, potentially leading to emotional conflict if divergent paths are chosen (Chang et al., 2017).

Complicating matters further, non-traditional Asian students may struggle with the intricacies of the college system, limited by language barriers, financial constraints, and competing responsibilities that restrict their participation in enriching academic and extracurricular activities (Fuligni & Witkow, 2004). These challenges can have far-reaching implications on their academic outcomes and personal well-being, contributing to disparities in educational achievement among diverse racial and ethnic groups (Kao & Thompson, 2003; Sirin, 2005).

To effectively support non-traditional Asian students in their major selection and academic endeavors, it is imperative to create interventions and support systems that are sensitive to their specific needs. This includes offering mentorship, and academic assistance, and promoting an inclusive academic environment that honors diverse backgrounds (Cheng & Tovar, 2019; Lee & Shih, 2018).

Yet, there is a notable gap in the literature regarding how these factors manifest distinctly for non-traditional Asian students in postsecondary educational institutions, suggesting an area ripe for further inquiry. Financial considerations are often a significant concern for these students, impacting their educational pathways and necessitating institutional support such as financial aid and academic advising (Paulsen & St. John, 2002; Tinto, 1993). Comparatively, non-traditional students across different demographics share

commonalities in balancing academics with work and family life. For Asian students, cultural expectations and linguistic challenges add complexity to these balancing acts (Smith & Thompson, 2012; Brown & Green, 2013; Wong & Liu, 2015). Recognizing these intricacies is pivotal in crafting specialized programs and services to address the unique challenges faced by non-traditional Asian students (Braxton, 2000; Astin, 1984). In summary, the multifaceted and culturally informed experiences of non-traditional Asian college students underscore the need for higher education institutions to implement culturally responsive and flexible support services. Such measures are essential to foster an environment conducive to the diverse needs of non-traditional students and to promote equitable educational experiences (Wang & Li, 2019; Roberts & Lewis, 2020; Yang & Zhang, 2021).

Moreover, the existing literature indicates that non-traditional students are often returning to education later in life to enhance their skills, change career paths, or advance professionally (Kasworm, 2010). The socioeconomic trajectories of these students are influenced by various factors, including academic persistence, financial flexibility, and the capacity to engage in educational opportunities (Bean & Metzner, 1985; Baum & O'Malley, 2003; Taniguchi & Kaufman, 2005). Recognizing the multifaceted nature of the non-traditional student demographic, it becomes clear that factors such as race, gender, socioeconomic background, and individual resilience intersect to uniquely shape each student's educational journey (Johnson-Bailey, 2002). Institutions are thus called upon to establish comprehensive policies and support mechanisms that can enhance the academic and subsequent socioeconomic success of non-traditional students (Schlossberg et al., 1990).

The research landscape regarding college major selection among Asian immigrant students is robust yet incomplete, with opportunities for deeper exploration into the nuanced experiences of specific Asian subpopulations, the impact of social networks, and the roles of gender, social class, and immigration status. Longitudinal studies on the long-term outcomes of major selection will further illuminate the social and economic integration of Asian immigrants in the U.S. (Kao & Thompson, 2003; Sirin, 2005). Addressing these research gaps is vital for crafting educational initiatives that aptly support the Asian immigrant community's educational and career aspirations.

Chapter 3 Theoretical Framework

Assimilation Theory

In the context of our study, assimilation theory provides a lens through which we can comprehend how Asian immigrant students integrate into the academic fabric of their new societies, potentially choosing majors that resonate with American societal values (Gordon, 1964). For instance, as these students assimilate into the American education system, they may tend to select majors that are highly valued or popular in American society. Such choices might be driven by their desire to fit into their new societal context and succeed in their educational pursuits. This perspective could be used to analyze whether the major choices of non-traditional Asian immigrant students align with the mainstream choices in American higher education institutions. This theory delineates the multifarious paths immigrants might follow as they attempt to integrate into the host society. In contrast to classical assimilation theories, which posit a linear path toward integration into the dominant society, segmented assimilation theory proposes multiple trajectories influenced by socioeconomic status, familial and social capital, and contextual factors.

Segmented Assimilation Theory

Segmented assimilation theory further refines this perspective, suggesting that various factors like socio-economic status and family capital influence the integration paths of immigrants (Portes & Zhou, 1993). This theory offers insights into how the interplay of individual, familial, and societal factors determine their academic trajectories and major

choices. It highlights the role of societal reception, parental human capital, and family structure in shaping the assimilation paths and, subsequently, the college major selections of Asian immigrant students. This population may face different societal contexts compared to traditional students, which could result in unique assimilation pathways. For example, the major selection of non-traditional Asian immigrant students might be influenced by their socioeconomic status, English proficiency, or their access to support systems, reflecting the different segments of assimilation. This theory could guide an exploration of how various factors, such as family socioeconomic status or geographic location, interact to shape the college major selection among these students.

Model Minority Theory

Zhou and Lee's examination of the "model minority" stereotype sheds light on the external pressures that may influence Asian immigrant students in their selection of college majors, potentially directing them toward certain high-status fields (Zhou & Lee, 2015). This concept refers to the stereotypical characterization of Asians as particularly successful, disciplined, and academically inclined, often used to set them as a benchmark against other minority groups. The implications of the model minority stereotype on Asian immigrant students' major selection are multifaceted. On one hand, it can lead to heightened expectations and pressures from both family and society to conform to the stereotype and choose majors that are perceived as high-status and high earning, such as those in STEM fields. On the other hand, it can overshadow the diverse experiences, needs, and challenges faced by different subgroups within the Asian immigrant student population, potentially leading to neglect and lack of necessary support. If these students internalize the model

minority stereotype, they might be inclined to choose majors perceived to lead to high-status and high-income professions, such as those in STEM fields. This could particularly be the case if they feel pressure to uphold this stereotype within their families or communities. The stereotype could also create barriers for those students who wish to pursue majors outside of these high-status fields, due to fear of stigma or disappointing their families. This concept can provide a basis for examining the role of societal and cultural pressures in the college major selection of non-traditional Asian immigrant students. To assess the impact of the model minority stereotype as discussed by Zhou and Lee (2015), a variable measuring students' perception of societal expectations has been included. This variable aims to capture the pressures that might steer Asian students towards certain majors that align with the model minority image.

Intersectionality

The concept of intersectionality, as proposed by Crenshaw (1989), suggests the interlocking nature of social identities, which may shape the academic choices of non-traditional Asian students in unique ways. It posits that social identities such as race, ethnicity, gender, and socioeconomic status are interconnected and mutually reinforcing, creating unique experiences and challenges for individuals occupying multiple marginalized identities. Non-traditional Asian students in postsecondary education institutions are likely to experience intersectional forms of marginalization that affect their college major selection process. For example, an Asian American woman who is also a first-generation college student may face different challenges than an Asian American man who grew up in an affluent family. By applying an intersectionality perspective, this

research will explore how multiple aspects of identity intersect to impact the college major selection process for non-traditional Asian students. Gender, immigration status, and socio-economic status have been included as separate variables to explore the concept of intersectionality. These variables will help to analyze how intersecting identities influence the major selection process among non-traditional Asian students.

Cultural capital theory

Cultural capital theory, as developed by Bourdieu (1986), posits that cultural resources can impact individuals' navigability and success within educational institutions, a concept that is particularly relevant for non-traditional Asian students who may face barriers in accessing these resources. Non-traditional Asian students in community colleges and part-time programs may have limited access to cultural capital due to their marginalized status, which may impact their ability to navigate the college major selection process. This research will utilize cultural capital theory to explore how the acquisition and utilization of cultural resources impact the college major selection process for non-traditional Asian students. Consistent with Bourdieu's (1986) theory, cultural capital is measured through variables such as parental education level. This measure is intended to capture the extent of cultural resources available to students and how these may affect their educational choices and opportunities.

The theoretical frameworks outlined offer a comprehensive approach to understanding the major selection process among non-traditional Asian students in higher education. Assimilation theory, particularly as described by Gordon (1964), offers insight into how these students may align their educational choices with the norms of American

society. Segmented assimilation, as detailed by Portes and Zhou (1993), further elaborates on how diverse factors such as socio-economic status and family background influence educational trajectories. The "model minority" myth, critically examined by Zhou and Lee (2015), provides a lens to understand the societal pressures that Asian students might face, pushing them towards certain high-earning majors. Intersectionality, as proposed by Crenshaw (1989), illuminates the interconnectedness of race, gender, and other social identifiers that uniquely shape the educational paths of these students. Lastly, Bourdieu's (1986) cultural capital theory examines how access to cultural resources impacts educational navigation and success, a significant factor for non-traditional Asian students who may be marginalized within the education system. These frameworks will guide the anticipated findings of this study, hypothesizing that the major selection among non-traditional Asian students is not a simple reflection of personal preference but a complex decision influenced by a constellation of societal, familial, and personal factors. It is expected that these students' choices will reveal a pattern of practicality and a drive towards assimilation into what is perceived as successful within the broader American context. Furthermore, the interplay of cultural expectations and the internalization of certain stereotypes are likely to play significant roles in these students' major selection process.

Chapter 4 Methodology

Data and Method

This research employs the 2016 National Postsecondary Student Aid Study (NPSAS:2016), conducted by the National Center for Education Statistics (NCES). As a significant federal source of educational data analysis and reporting, NCES's NPSAS provides in-depth insights into student demographics, financial aid, and educational experiences in U.S. postsecondary institutions. Surveying 89,220 recipients, NPSAS:2016 offers valuable data for policy and research, helping to understand and improve educational practices and decision-making in the U.S. It's important to note that access to the NPSAS data is restricted due to privacy and confidentiality considerations. Consequently, the data presented in this study are rounded up to the nearest appropriate unit to maintain the confidentiality of individual respondents.

The study focuses on non-traditional Asian students, particularly those who started postsecondary education at or beyond the age of 25 or have dependents. The sample was refined from an initial pool of 89,220 respondents to focus on Asian students, including traditional and non-traditional students. To ensure the integrity of the study, the dataset was carefully curated to exclude cases that could compromise the reliability of the findings. The initial dataset consisted of 89,220 cases. Upon closer examination, cases with incomplete information on intended majors (20 cases) and those with either missing or zero GPA (840 cases) were removed. Further exclusions included non-enrollment in the fall term, which accounted for 10,300 cases, and cases with unknown parental education levels (40 cases). These necessary exclusions yielded a refined and more relevant sample size of

75,340 respondents. This number is finely aligned with the study's objective of analyzing the cohort of non-traditional Asian students who meet specific criteria.

In this study, we employed Stata for methodological analysis, focusing on a specific subset of non-traditional Asian students who started their postsecondary education at age 25 or older or have dependent(s). We conducted descriptive statistics to examine the distribution of majors, categorized into STEM, Humanities and Social Sciences, and Professional and Applied Studies, and to understand their variations among traditional and non-traditional students. Additionally, we used multinomial logistic regression to explore the influence of variables such as immigrant generational status, gender, age, employment status, GPA, attendance intensity, parental education level, and institutional level on major selection.

The analysis will specifically look for patterns predicted by the literature. For example, if assimilation theory holds, we might expect a trend toward majors that promise greater economic returns and social acceptance within American society. If segmented assimilation theory applies, variations in major selection might emerge based on different socio-economic backgrounds. The model minority stereotype might predict a higher selection of majors within STEM fields, whereas intersectionality might reveal differing patterns of major selection when intersecting identities such as gender and immigrant generation are considered. Finally, the influence of cultural capital might become evident if students with higher levels of familial educational background choose majors that require more significant cultural knowledge. By aligning the operationalization of variables with the theoretical frameworks, this study ensures that its methodology is not only driven by empirical questions but is also grounded in a strong theoretical basis. This alignment allows

for a nuanced understanding of the complex factors that shape the educational trajectories of non-traditional Asian students in the United States.

Dependent variable

In this research, the term "majors" delineates the academic disciplines chosen by students, consolidated into three overarching categories: STEM, Social Sciences, Arts & Humanities, and Professional & Applied Studies. This condensation of majors into broader clusters was undertaken during data preprocessing to facilitate a more coherent examination of academic preferences and trends. The recategorization is informed by the segmented assimilation theory, which posits that an individual's socio-economic background and segment within society can influence educational choices. These delineated categories serve a dual purpose: they simplify the complex landscape of academic majors for analytical clarity, and they allow for a nuanced investigation into how different socio-economic segments within the Asian student population navigate the higher education system, particularly in their selection of majors. This approach is pivotal in discerning the educational tendencies and preferences among diverse student groups.

- Major 1 (STEM): This category includes students whose majors fall under the Science, Technology, Engineering, and Mathematics (STEM) fields. It encompasses a range of disciplines that are typically associated with technical skills and scientific inquiry.
- Major 2 (Social Sciences, Arts, and Humanities): This group combines majors related to the social sciences, arts, and humanities. It captures a broad spectrum of

disciplines that explore various aspects of human society, culture, and creative expression.

- Major 3 (Professional and Applied Studies): The third category is designated for majors that are vocational or directly linked to professional and applied studies. This includes fields that often have a clear career trajectory post-graduation, such as business, education, health professions, and other applied sciences.

Independent variable

Non-traditional Students For this study, non-traditional status was granted to respondents who were either aged 25 and above at the start of their postsecondary education or who had dependents. Following these criteria, a new variable, nontraditional, was generated to distinguish between non-traditional (1) and traditional (0) students, based on the age at the start of postsecondary education and the number of dependents. This resulted in a bifurcation of the dataset, allowing for a focused analysis on non-traditional Asian students. In line with the concepts from assimilation theory, the non-traditional status is operationalized by age at college entry (25 years or older) and parental responsibilities. This operationalization allows the study to examine how these demographic factors might influence the adaptation to and integration within the educational system.

Gender Measures the student's gender, with 43.51% identified as male and 56.49% as female. This data was primarily sourced from student interviews, federal financial aid applications, or student records. Gender was recoded into a dummy variable with the values 0 and 1, where male was used as a reference category.

Age The age variable, signifying the student's age as of December 31, 2015, is treated as a continuous measure.

Employment status Employment status indicates whether students were employed during the academic year. We have recoded this from multiple employment status categories into a binary variable indicating "employed" or "not employed" (including unemployment and non-participation in the labor force). The rationale for recording was to distinguish the potential impact of having work commitments versus not on students' academic decisions.

GPA Grade Point Average (GPA): A continuous variable representing students' estimated cumulative GPA for the 2015-16 academic year, standardized to a 4.00 point scale. Grade Point Average (GPA) is used as a proxy for academic performance. It is a continuous variable, and during data cleaning, we may have standardized the GPA to a common scale if it came from different institutions with different scoring systems. The purpose was to ensure comparability across the sample. GPA is standardized and cleaned, reducing the sample size from 5,850 to 5,800 due to the exclusion of missing or zero GPAs.

Attendance intensity Measures whether students were enrolled full-time, part-time, or not enrolled during the fall term. This variable categorizes students based on their enrollment status as either full-time or part-time. If the original data had more detailed enrollment information, we recoded it to this binary form to investigate the effect of study load on major selection, if part-time students might have different priorities and constraints compared to full-time students. The data was screened for enrollment status, removing any instances where respondents were not enrolled in the fall term, to focus on actively enrolled students.

Parental Educational Level Indicates the highest level of education achieved by students' parents, providing insight into familial educational backgrounds. The educational level of a student's parents can be an indicator of socio-economic background and educational aspirations. It was recoded from potentially diverse educational qualifications into three consolidated categories reflecting high school education or less, some college or associate degree, and bachelor's degree or higher. This recoding was done to simplify the analysis and to reflect common educational milestones.

Institutional Level The institutional level variable classifies the institution attended as either a 4-year, 2-year, or less than 2-year institution, providing context to the educational environment of the students. The institutional level variable is recoded into a binary format to differentiate between students attending 4-year institutions and those at 2-year or less-than-2-year institutions.

Immigration Generational Status We considered immigrant generational status differentiating between first-generation immigrants or international students and second-generation or higher. This recoding was conducted to examine the potential impact of immigrant status on educational choices.

Results

Table 1 displays the academic preferences of all race/ethnic groups (75,340 students), differentiating between traditional and non-traditional students in terms of their college major selections. Out of this group, 41,940 are traditional students, with 42.65% favoring STEM majors, which may reflect a strong inclination towards areas with perceived stability and growth in job markets. On the other hand, non-traditional students,

who constitute 33,390 of the sample, exhibit a higher preference for STEM fields at 53.61%, potentially indicating a more pronounced focus on career advancement and the immediate utility of their education. Social Sciences, Arts, and Humanities majors are chosen by 28.00% of traditional students, suggesting a substantial interest in these areas, whereas only 17.40% of non-traditional students select these majors, possibly due to their life circumstances and prioritization of majors with more direct career applications. In contrast, the engagement in Professional and Applied Studies is quite balanced between the two groups, with both hovering around the 29-30% mark. This suggests that professional degrees that offer clear vocational pathways are equally appealing to both traditional and non-traditional students. In summary, Table 1 elucidates distinct patterns in major selection between traditional and non-traditional students, shedding light on the underlying motivations and career objectives that influence their educational choices.

Table 1. Comparative Distribution of Traditional and Non-traditional Students by Majors

	STEM	Social Sciences, Arts & Humanities	Professional and Applied Studies	Total /%
Traditional Students	17,890	11,750	12,310	41,950
	42.65	28.00	29.34	100.00
Non-traditional Students	17,900	5,810	9,680	33,390
	53.61	17.40	28.99	100.00

(N=75,340)
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Postsecondary Student Aid Study, Undergraduate (NPSAS: UG)," 2016.

Table 2 provides character tics of Asian students, contrasting traditional students (N=41,950) with non-traditional counterparts (N = 33,390). In the realm of major selection, STEM disciplines reign supreme, with a majority of 52.38% of the total student population gravitating towards these fields. The data reveals a particularly strong draw among non-traditional students, where 57.56% opt for STEM, surpassing the already high interest of 49.65% among traditional students. This could suggest a strategic move by non-traditional students towards sectors known for stability and growth.

Social Sciences, Arts, and Humanities are the chosen fields for 20.49% of the students, showcasing a notable commitment to these disciplines. Non-traditional students are less represented in these fields, with only 15.30% enrollment, potentially reflecting the pragmatic choices of older students focused on career prospects. Professional and Applied Studies are pursued by 27.14% of students, reflecting a practical education route with career applications, with non-traditional students aligning closely to this preference (27.14%). The gender distribution within the sample is even, with a slight female

predominance of 54.17%. Traditional students present a near gender balance, while non-traditional students demonstrate a slightly lower male representation of 43.59%. This could indicate changing dynamics in gender roles and the evolving landscape of higher education among Asian communities.

Employment while studying is a common thread, with nearly half of the students (48.91%) balancing work and education. Non-traditional students are more likely to be employed, with 61.72% working while studying, reflecting the dual roles they often navigate. Age-wise, traditional students have a mean age of 21 years, while non-traditional students have a significantly higher mean age of 31.14 years. This age gap underscores the return to education later in life for many non-traditional students. Parental education levels show that most students come from educated backgrounds, particularly traditional students, 58.04% of whom have parents with advanced degrees. Non-traditional students also report a considerable rate of advanced degrees within their families (41.80%), although to a lesser extent than their traditional counterparts. Institutional enrollment patterns indicate a strong tendency towards 4-year institutions among traditional students (81.83%), with non-traditional students also showing a substantial enrollment rate of 72.81% in these institutions, suggesting a commitment to extended and comprehensive educational experiences.

Lastly, the immigrant generational status illuminates the diversity of the Asian student population. Half of the traditional students (50.65%) are first-generation or international students, while a higher proportion of non-traditional students (56.99%) fall into the second-generation and beyond category, highlighting the varied immigration narratives within the community.

Table 2. Descriptive Statistics of Traditional and Non-traditional Asian Students

	Traditional Asian Students	Non-traditional Asian Students
Majors		
STEM	1,630 (49.65%)	1,000 (57.56%)
Social Sciences, Arts & Humanities	760 (23.31%)	270 (15.30%)
Professional & Applied Studies	890 (27.13%)	470 (27.14%)
Gender		
Male	1,550 (47.01%)	780 (43.59%)
Age		
Mean Age	21.00 years	31.14 years
Employment Status		
Had a job	1,390 (42.18%)	1,070 (61.72%)
No job	1,900 (57.82%)	660 (38.28%)
Grade Point Average (GPA) Mean	3.132	3.187
Attendance Intensity		
Full-time	2,800 (85.17%)	1,120 (64.67%)
Part-time	490 (14.83%)	610 (35.33%)
Parental Education Level		
High School or Less	680 (20.51%)	560 (32.22%)
Some Postsecondary	710 (21.45%)	450 (25.98%)
Advanced Degrees	1,910 (58.04%)	720 (41.80%)
Institutional Level		
4-year	600 (18.17%)	470 (27.19%)
2-year or less than 2-year	2,690 (81.83%)	1,260 (72.81%)
Immigrant generational status		
First-Generation/International	1,670 (50.65%)	750 (43.01%)
Second-Generation and beyond	1,620 (49.35%)	990 (56.99%)

(N=5,020)

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Postsecondary Student Aid Study, Undergraduate (NPSAS: UG)," 2016.

Table 3 presents the results of a multinomial logit model predicting the odds that an Asian student selecting social science, arts, and humanities (column 1), and the odds that an Asian student selecting professional and applied studies (column 2) as compared to an Asian student selecting STEM major. The results illustrate that nontraditional student—

those 25 years or older, or with dependents—are less likely to choose Professional and Applied Studies over STEM, as indicated by a Relative Risk Ratio (RRR) of 0.807 ($p \leq 0.01$). This pattern is paralleled in their selection of Social Sciences, Arts, and Humanities, where the RRR of 0.518 ($p \leq 0.001$). Gender emerges as a prominent factor; male students are significantly less likely to major in Social Sciences, Arts, and Humanities (RRR = 0.521, $p \leq 0.001$) and Professional and Applied Studies (RRR = 0.654, $p \leq 0.001$) than their female peers, hinting at a stronger proclivity towards STEM disciplines. Age also plays a role in major selection; older students are more likely to select Social Sciences, Arts, and Humanities (RRR = 1.026, $p \leq 0.01$), although their age does not seem to sway their likelihood of enrolling in Professional and Applied Studies in any significant way. Employment status is indicative of academic choices as well, with employed students less likely to select Social Sciences, Arts, and Humanities compared to those who do not work (RRR = 0.693, $p \leq 0.001$). However, their employment did not impact the selection of Professional and Applied Studies (RRR = 0.952).

The generational status of immigration is another intriguing aspect; it does not significantly affect the choice of Social Sciences, Arts, and Humanities but shows a marked influence on the preference for Professional and Applied Studies (RRR = 1.372, $p \leq 0.001$) among first-generation immigrants and international students. A higher GPA slightly decreases the likelihood of choosing Social Sciences, Arts, and Humanities (RRR = 0.997, $p \leq 0.001$) and Professional and Applied Studies (RRR = 0.998, $p \leq 0.01$) compared to STEM majors, indicating a possible orientation towards technical fields as academic performance increases. The study finds no significant difference in attendance intensity impacting major selection. However, the educational background of parents does play a

significant role; those with parents having some postsecondary educations are more likely to select Social Sciences, Arts, and Humanities (RRR = 1.308, $p \leq 0.05$), and those with parents holding advanced degrees show a similar trend (RRR = 1.278, $p \leq 0.01$) compared to those whose parents have a high school education or less. Lastly, the level of the institution attended marginally affects the likelihood of choosing Professional and Applied Studies (RRR = 1.182), suggesting that institutional factors may also guide major decisions.

Table 3. Multinomial Logistic Regression on Major Choice Among Asian Students

	Model 1		Model 2	
	Choice of Social Sciences, Arts & Humanities		Choice of Professional and Applied Studies	
	RRR	Std. Error	RRR	Std. Error
Student Type				
Nontraditional	0.518***	0.060	0.807**	0.079
Traditional (Ref)	-	-	-	-
Sex				
Male	0.521***	0.046	0.654***	0.045
Female (Ref)	-	-	-	-
Age	1.026**	0.007	1.002	0.007
Employment Status				
Had a job	0.693***	0.058	0.952	0.061
No job (Ref)	-	-	-	-
Immigration Generation				
1st Generation/International	1.231	0.080	1.372***	0.094
2nd Generation & beyond (Ref)	-	-	-	-
GPA	0.997***	0.001	0.998**	0.001
Attendance intensity				
Full time	1.050	0.098	1.062	0.091
Part time (Ref)	-	-	-	-
Parent's education level				
High School or Less (Ref)	-	-	-	-
Some Postsecondary	1.308*	0.147	0.911	0.087
Advanced Degrees	1.278**	0.128	0.839*	0.070
Institutional level				
2-year or Less	-	-	-	-
4-year (Ref)	0.823	0.078	1.182	0.104
Constant	1.278	0.613	0.896	0.300

NOTE: (N=5,020)

- = Not Available

Ref=Reference

RRR=relative risk ratio

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Postsecondary Student Aid Study, Undergraduate (NPSAS: UG)," 2016.

Chapter 5 Discussion and Conclusions

Major Selection Trends and Theoretical Implications

The research presents evidence of differing major selection trends between traditional and non-traditional students. Non-traditional students appear to have a pronounced affinity for STEM fields, potentially indicative of their focus on career advancement and practical education (Becker, 1964). The preference for STEM by non-traditional students could be seen as a strategic decision informed by the potential for greater returns on educational investment, an idea central to human capital theory. The findings underscore the complex interplay of individual and socioeconomic factors in the academic decisions of non-traditional Asian students. Traditional students tend to diversify their academic interests. This trend suggests a possible focus on career advancement and the utility of education in the workforce among non-traditional students. Their choices may emphasize the value they place on practical and immediately applicable skills. This contrast in major preferences may reflect the nuances of assimilation as these students navigate their educational journeys within the host society's norms (Gordon, 1964). The academic performance of non-traditional students, as suggested by their overall academic achievements, points to a purpose-driven approach to education. This observation aligns with Bourdieu's (1986) cultural capital theory, where students' backgrounds and experiences translate into academic success. The balancing act of employment and education, more commonly observed among non-traditional students, may be influenced by societal expectations and pressures, consistent with the model minority stereotype (Chou & Feagin, 2008). The divergence in major preferences between the two student

groups may reflect the assimilation process described in classical theory, where education and career paths that align with the perceived norms of the host society are chosen to facilitate integration and success.

A demographic overview of the Asian student population highlights the success of non-traditional students in their academic pursuits, which may be attributed to a more deliberate and goal-oriented approach to education. These students leverage their life experiences and cultural resources as forms of capital to excel academically (Bourdieu, 1986). The significant percentage of non-traditional students managing employment alongside studies could be indicative of the model minority stereotype's pressure, which often portrays Asian individuals as industrious and high achieving (Chou & Feagin, 2008). These students often utilize their life experiences and accumulated cultural knowledge to their academic advantage, resonating with the principles of cultural capital theory. The dual responsibility of managing both employment and education is more common among non-traditional students. This stereotype often casts Asian individuals as particularly diligent and successful, which may influence their educational and professional decisions.

The multinomial logistic regression analysis in Table 3 underscores the statistical significance of various factors in major selection. The results show that non-traditional status considerably increases the likelihood of choosing a STEM major compared to Social Sciences, Arts & Humanities as well as Professional and Applied Studies. This aligns with the pragmatic approach suggested by the distribution patterns in Table 1. Male students are significantly less likely to choose majors outside of STEM, reflecting gender-specific educational preferences or societal expectations within the Asian community. The influence of gender on major selection may be illuminated by intersectionality theory,

which posits that various forms of social stratification do not act independently but interact on multiple levels (Crenshaw, 1989).

Age has a nuanced impact on major selection, suggesting that as Asian students age, they are slightly less inclined toward Social Sciences, Arts, and humanities. This may reflect a maturity in career direction or a sharpened focus on fields perceived as more directly correlated with employment opportunities, a finding that resonates with the life course perspective (Elder, 1994). The generational status of immigration does not significantly influence the choice of Social Sciences, Arts, and humanities; however, it significantly sways the selection of Professional and Applied Studies for first-generation and international students, highlighting the potential aspirations for socio-economic mobility through education and underscores the aspiration for upward social mobility, a characteristic of the immigrant optimism theory (Kao & Tienda, 1995).

Parental education levels have an impact, particularly some postsecondary education leading to a greater likelihood of choosing Social Sciences, Arts, and humanities, possibly indicating the influence of familial values on educational aspirations. This may suggest the transference of cultural expectations and values regarding education within families, a concept central to the social reproduction theory (Bourdieu & Passeron, 1977). The institutional level further compounds these effects, with students at 4-year institutions slightly more inclined towards Professional and Applied Studies, possibly due to the broader range of programs and resources available at these institutions. This suggests that the type of educational institution plays a role in shaping major choices, potentially due to variations in academic offerings and support services, as noted in Tinto's model of institutional departure (Tinto, 1975).

In synthesizing these findings, the research underscores the multifaceted nature of major selection among Asian students in higher education, revealing it to be a complex decision-making process influenced by an array of individual, familial, and institutional factors. The major selection among Asian students in higher education is a multifaceted decision-making process influenced by non-traditional status, gender, age, employment, GPA, attendance intensity, parental education, and institutional level.

Academic Performance and Supportive Structures

This study aligns with existing literature that identifies various challenges non-traditional Asian students encounter when selecting their college majors (Cheng & Tovar, 2019; Lee & Shih, 2018). While this thesis analysis does not directly demonstrate these challenges, it suggests that educational institutions could improve support for these students. Enhanced advising and mentorship have been reported to positively influence major selection decisions and can be instrumental in aiding non-traditional Asian students' academic and career outcomes (Choy, 2001; Kodrzycki, 2001; Phan & Kim, 2018; Teranishi, Suarez-Orozco, & Saavedra, 2011). Peer mentoring programs and cultural centers are also cited as beneficial support systems, offering a sense of community and tailored resources that may assist in navigating major selections (Lee & Shih, 2018; Nguyen & Nguyen, 2016). Although this study does not establish a causal relationship between these support systems and student success, the correlations highlighted by prior research underscore their potential value. It is suggested that these resources can contribute to addressing the challenges that non-traditional Asian students might face, thereby promoting their success in higher education.

Limitation

This research contributes to the broader understanding of college major selection among non-traditional Asian students in the U.S. higher education system. However, it is important to acknowledge its limitations. Firstly, while the National Postsecondary Student Aid Study (NPSAS) provides a comprehensive dataset, it is limited by its cross-sectional nature. This means that the study captures a snapshot of the educational landscape without accounting for changes over time or individual student progression. Secondly, the NPSAS data does not provide insights into the qualitative aspects of students' major selection processes. The motivations, personal experiences, and subjective factors that contribute to their decisions are not captured within the dataset. As such, the study conclusions regarding the influence of socioeconomic status, cultural expectations, and family pressures are inferential and not directly evidenced. Thirdly, due to the study's quantitative approach, the richness of within-group diversity among Asian students may not be fully represented. The term "Asian" encompasses a wide variety of ethnicities and cultures, each with distinct experiences and perspectives on education that cannot be fully differentiated in the analysis. Fourthly, the categorization of students into 'traditional' and 'non-traditional' is based on age and other demographic factors that may not entirely capture the complexities of students' lives. There may be non-traditional students with experiences more akin to their traditional counterparts and vice versa, which could affect the generalizability of the findings. Lastly, the study does not account for institutional differences in the availability of majors and the support systems in place, which can significantly influence students' decisions. Variations between institutions may therefore impact the study's findings regarding major selection trends.

In conclusion, while the study provides valuable insights, these limitations suggest caution in generalizing the findings across all non-traditional Asian students and underscore the need for further research incorporating longitudinal data, qualitative approaches, and a more nuanced consideration of student diversity and institutional factors. Future research should consider longitudinal studies for dynamic insight, qualitative approaches for depth, differentiated within-group analysis to respect diversity, refined traditional and non-traditional student categorizations, and an examination of institutional influences, all of which could lead to more nuanced understanding and better-targeted educational policies.

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