South Asians in Boston

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Submitted to the Department of Urban Studies and Planning
in partial fulfillment of the requirements for the degree of

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A study of South Asian immigrants in Greater Boston and the rest of Massachusetts

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ACKNOWLEDGEMENTS

This thesis is on South Asian immigrants who came to Boston and settled here. It presents a detailed study of when and how these immigrants came to Boston and the factors that led to this migration.

However, I would not have been able to undertake this study had it not been for a research project I got an opportunity to work on with Prof. Tunney Lee from MIT's School of Architecture and Planning. Working on the project, I met two people extremely passionate about Boston's past, its history of immigrants and how it has evolved- Prof. Lee and a DUSP alum, James Madden.

Researching on this project, I walked through the pages of history on Boston's immigrants and learnt from stories and anecdotes that Prof. Lee and James shared. Not knowingly, I had prepared my base for a research on one of Boston's youngest groups of immigrants- the South Asians. Coming from a South Asian background, I got extremely involved in this topic.

And I would like to heartily thank Prof. Lee for introducing me to Boston's rich history and helping me build a base for my thesis. I would also like to thank two lovely librarians at MIT, Christopher Donnelly and Katherine McNeill for giving me early guidance on this research and helping me gather and understand data to build my thesis on.

TABLE OF CONTENTS

ABSTRACT

Boston has a rich and diverse history of immigrants. Right from the arrival of the Puritans in 1628-30 who established the earliest immigrant settlements in Boston, this region has attracted immigrants from different parts of the world.

Boston's strategic coastal location, its flourishing industries and the growing economy provided a hope of opportunities for the immigrants who came with a dream- the famine-struck Irish, the Italians, the Eastern European Jews wanting to escape religious and socio-political tensions, the Blacks wanting to escape slavery, the Chinese seeking better economic opportunities and more recently, the Asian Indians seeking better education and work opportunities.

The economy of Massachusetts underwent transformation in the 20th century with the rise of the high technology sector. The emergence of Route 128 around Boston and subsequently, I-495 corridor in the 20th century led to the formation of a high technology cluster that attracted extremely skilled immigrants.

South Asians, especially the Asian Indians constitute an integral part of this immigrant population that gravitated to this region not because of famines or wars, but the transformation in Massachusetts' economy. Their numbers grew rapidly through the 20th century and the story of their growth is remarkable. From the days of insignif-

icant presence, South Asians have grown into a young, fast-growing ethnic community in Boston. A majority of the South Asian population today is young, educated, highly skilled and employed in the high technology sector but there are others employed in the low-skilled, working class and service occupations across the state.

What happened in each of the waves of South Asian immigration to Massachusetts? Do the immigration patterns of Asian Indians differ from other South Asians? Who are these immigrants who undertook this long journey from the Indian sub-continent to the United States?

This thesis is an attempt to trace the origins and growth of the South Asian immigrant community in Massachusetts, which is one of the youngest and fastest growing groups of immigrants in the state. The presence of South Asians in Massachusetts has come a long way from being negligible and invisible in the post-World War II period to being a prominent presence in its high technology nucleus of Greater Boston.

PREFACE

There are times when we all pause to retrospect on things we achieved and are fascinated by how a small chat, a chance meeting or an unexpected occurrence sets into motion a chain of ideas that evolve into something productive and valuable.

This paper has a lot of valuable information to offer for someone who is working on a similar research on immigrants. But it started out of a conversation with Prof. Tunney Lee in the School of Architecture and Planning at the Massachusetts Institute of Technology (MIT). While working on a project with Prof. Lee, I was asked to write an article on South Asian immigrants in Boston that would be a small component of a larger research project on the planning history of Boston.

Working on this project, I realized that gathering information on South Asian immigrants in Boston was easier said than done. Not only were the South Asians one of the youngest immigrant communities in Boston with a fairly recent history, but it was also hard to find sources that recorded a story of their evolution in this region. The U.S. Census only began identifying Asian Indians as an independent minority in the 1980 Census.

The early history of South Asian immigrants in Boston is thus, a story of Asian Indians[1] who are an integral part of the educational and research sector and high technology industries of Massachusetts. People from South Asian nations other than India came in much later. Why were Asian Indians attracted to Boston? Who were these immigrants and why do a majority of them possess certain similar professional traits? Why did the immigration pattern of other South Asian nations begin later than the Asian Indians? Unraveling answers to these questions led to findings worthy of sharing with other researchers who would like to study this topic further. In this manner, a small article for the research project turned into a thesis.

Although it studies the South Asian immigrant community as a whole, early history of South Asian immigrants focuses on the history of Asian Indian immigrants and their transition into an ethnic community. As a result, the thesis largely focuses on Indians, the largest group of immigrants from South Asia. South Asian immigrant population continues to concentrate in large numbers in the Greater Boston area. Boston remains this paper's main focus but it also analyzes data from the rest of Massachusetts. This offers a basis to study the movement of South Asian immigrants across the state as their numbers in the community grew.

[1]Asian Indians represent the biggest community of immigrants from South Asia and they were the first South Asian minority to be recognized in the US Census in 1980. The numbers have helped trace the growth of this community.
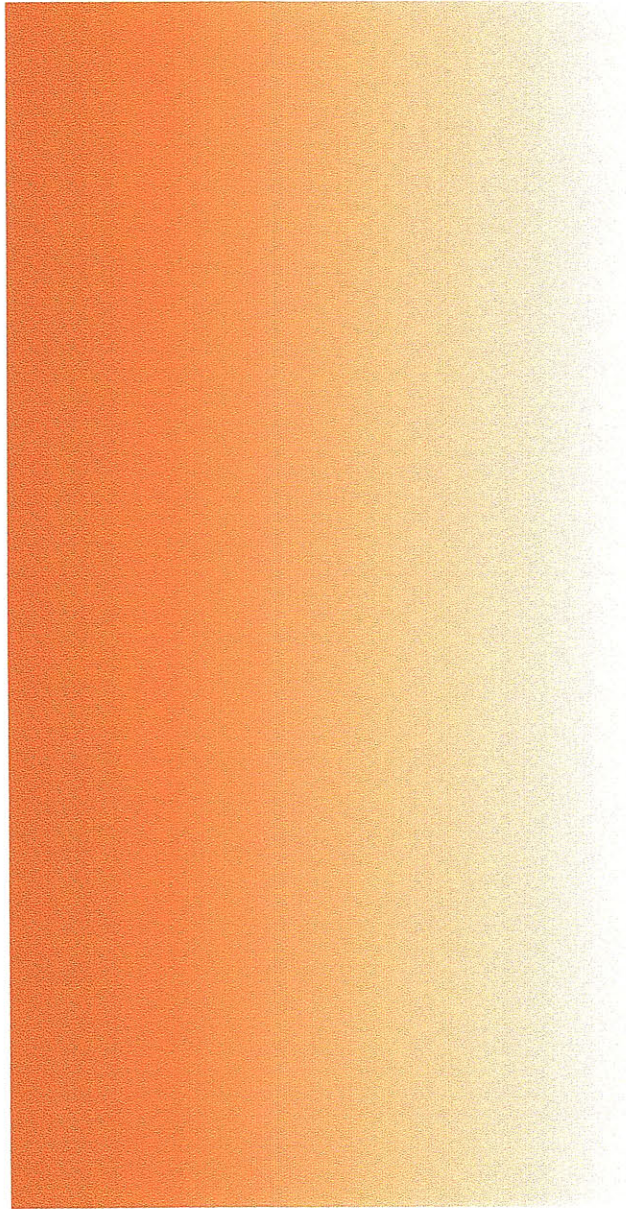
SECTION I

Section I contains the first four chapters of this paper. The first chapter is the introduction to this paper. It gives an overview of South Asian immigrants in Massachusetts and how the community evolved.

The next three chapters provide a contextual framework necessary to understand topics discussed in the subsequent chapters of this paper. Chapter 2 is about Boston's immigration history, why the city has constantly attracted immigrants to the area over the centuries, subsequent changes in United States' (U.S.) immigration policies and their impact on Boston.

The next two chapters describe the push and pull factors that set the wheel of immigration from South Asia in motion. These chapters provide a background to the Boston economy and industry in the post-Second World War era and circumstances in India that led to the first major wave of immigration from South Asia.

Figure 1: Sikh immigrants were attracted to the pleasant weather and farms of California. Image Src: Sikh Farmers in California, http://www.sikhpioneers.org/images/Display%20Pictures/012.jpg

CHAPTER 1: INTRODUCTION

The emergence of a fairly recent immigration trend from South Asia has roots in its immigration history in the U.S.

Immigration from South Asia to the U.S. took place as far back as the late nineteenth and early twentieth century. However, these early immigrants were characteristically very different from the South Asians who migrated to the U.S. in the post Second-World War period.

These immigrants were predominantly Sikhs[2] and came from an agricultural and farming background. Many of them served in the British Indian Army. According to sikhpioneers.org, the first records of their arrival in North America say that they traveled to Vancouver, British Columbia to celebrate Queen Victoria's Diamond Jubilee. They traveled across the Pacific Coast and moved to California when resistance against their presence grew in Canada (Sibia T.S.- Sikh Pioneers). Some of the earliest immigrants did not want to settle on the North American coast but wanted to earn enough to buy their ticket back to India (Roots in the Sand, Sibia T.S.- Sikh Pioneers). Immigrants traveled on boats at that time

[2]Sikhism: A religion practiced especially in Punjab, a region in the northern parts of India. Some of this region is also a part of the post-partition Pakistan. Sikhism was often confused with Hinduism in the early years in the US. However, Sikhs wear turbans and keep a beard, an appearance that also leads to stereotyping them with Muslims.
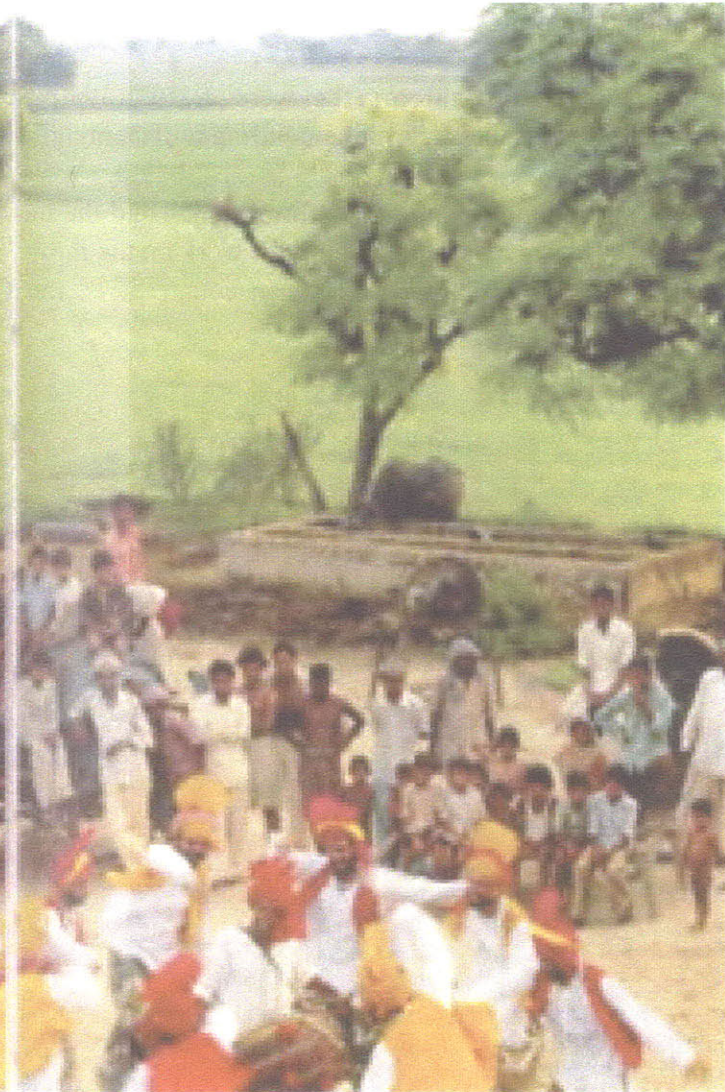
This photograph of a Sikh Village Festival was taken in Punjab which closely resembles the Sacramento Valley.

and the journey for the Indians via East Asia to India was long.

When they moved to California, they were attracted to the pleasant climate and vast stretches of fertile land and many of them chose to settle.

They attracted more immigrants from Punjab and the newer generation of immigrants came to look for work on the farms, in lumber or railroad similar to their Asian counterparts, the Chinese
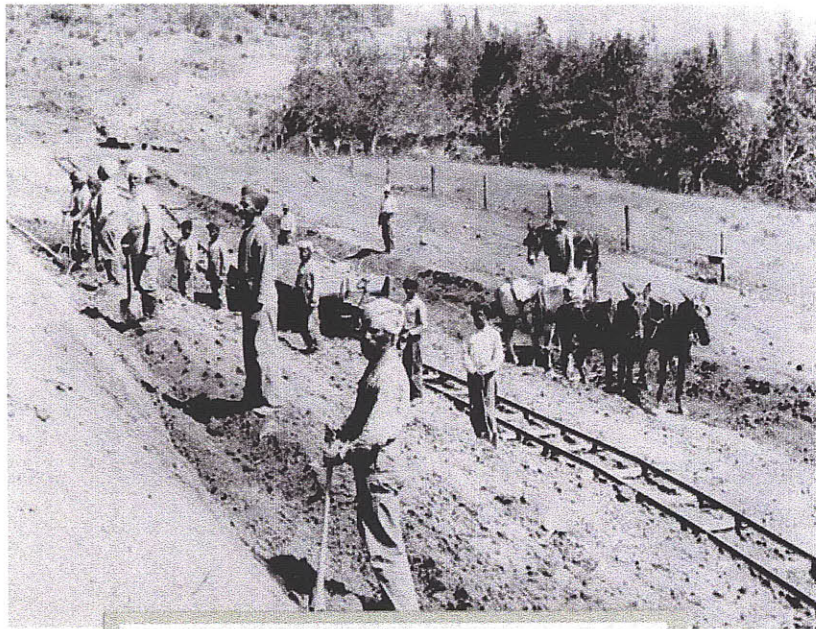
1909 Sikh Workers on the Pacific & Eastern Railroad.

Figure 2: Post-1965 South Asians on the west coast worked as labor on the railroad. Sikh Farmers in California, Src: http://www.sikhpioneers.org/images/Display%20Pictures/014.jpg

who were brought to work on similar projects on the west coast.

However, their growing presence led to resistance and the fear of them taking over jobs and land (Sibia T.S.- Sikh Pioneers). The need to maintain in the U.S., a predominance of people of white race from Europe led to the implementation of various immigration and exclusion policies over the years. These Acts curtailed immigration from Asia to anywhere in the U.S. As a result of this, a pattern of immigration from South Asia to the U.S., as could be seen today, did not emerge before the 60s. In 1965, a new amendment that abolished this ban on immigration from Asia was implemented. This new Act was called the Immigration and Nationality Act [Hart-Celler Act], 1965. South Asian immigrants who came to the US in the post-1965 period were characteristically very different. They were highly educated, skilled and spoke English fluently. This new wave of immigrants came from all over India; not just the Punjab region. They sought better educational opportunities, skill-oriented jobs and work in the technological field. They were students, doctors and engineers. The U.S., with its involvement in the Cold War and the Vietnam war, needed qualified medical practitioners, scientists and engineers and welcomed these skilled immigrants from India in great numbers (Menon et al., 2003).

Many of these Asian Indian immigrants attracted to scientific and technological growth migrated to world-renowned schools in Boston and technological powerhouses on Route 128 in Massachusetts long before Silicon Valley was created. Alumni databases of educational institutes in the Greater Boston area backed up with media reports and census data show that immigrants from India came to study in Boston intermittently in the years preceding the Second World War[3].

However, with the rise of Silicon Valley and subsequent technology boom at the turn of the 21st century, Asian Indian im-

[3]According to the US census, there were 58 Asian Indians in Massachusetts, 31 of them in Boston Metropolitan Area before 1950.

Five Largest Detailed Asian Groups in the Top 20 Metropolitan Statistical Areas With the Largest Asian Populations: 2010

(Numbers are based on the alone-or-in-any-combination population for each group. For information on confidentiality protection, nonsampling error, and definitions, see www.census.gov/prod/cen2010/doc/sf1.pdf)

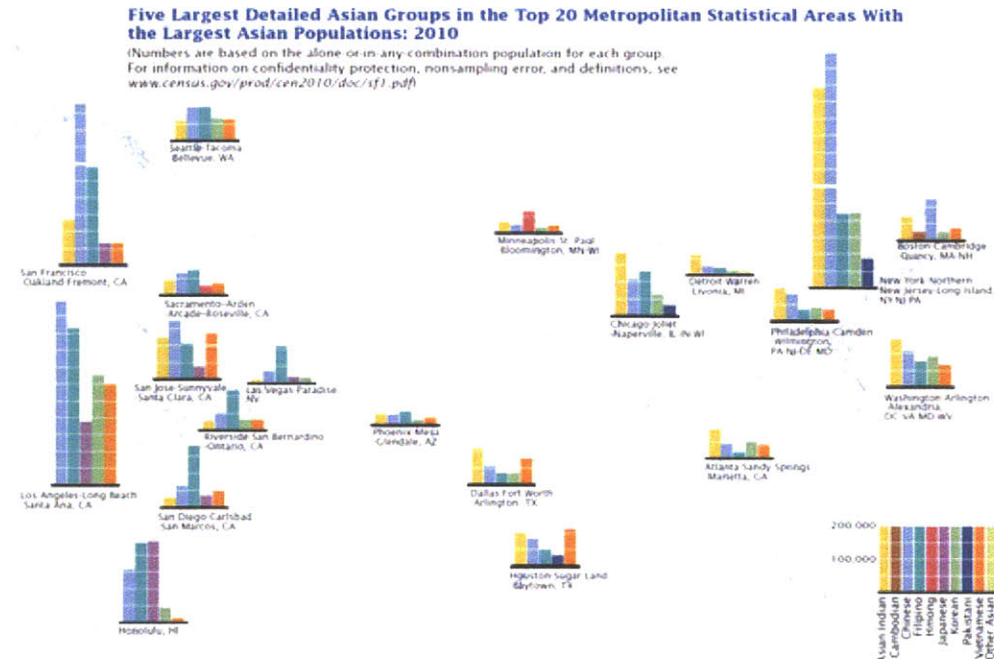|	Asians	Asian Indians
2010	46.88%	76.20%
2000	67.53%	122.13%
1990	191.35%	135.11%
1980	120.91%	749.75%
1970	133.00%	887.00%
1960	115.75%	72.41%
1950	48.16%	190.00%
1940	-12.28%	-52.38%

Figure 3: Based on 1990 U.S. Census, The chart shows distribution of the five largest sub-groups of Asian population in the U.S. Metropolitan Areas. Yellow blocks represent the Asian Indian population. Src: U.S. Census Bureau, 1990- Population by Race- Asian Indians, http://2010.census.gov/news/pdf/20120321_asian_slides.pdf, slide 40

migrants dispersed to other parts of the U.S. where allied industries and clusters were rising. Figure 3 based on the 2010 US Census shows the distribution of Asian population in the U.S. metropolitan areas. The yellow blocks in the figure indicate the presence of Asian Indian population in the top-five Asian population groups for each major metropolitan area in the U.S.

Figure 4, based on data from the 1990 census gives a more detailed snapshot of the Asian Indian clusters in the U.S. by their population density.

Following the 2010 Census, media reports declared Asian Indians as the fastest growing immigrant community in the U.S. (Kirk, 2012, Pew Research Center, 2012, June 19). California, New York, New Jersey, Texas and Illinois were the states that showed the highest growth in the Asian Indian population.

Massachusetts continues to have the highest population of Asian Indians in New England and their immigration pattern has a story, right from the time the trend began in the post-Second World War period to the present. The rise of Asian Indians as a prominent and visible immigrant community in Massachusetts has been steady, rapid in the 80s and 90s and steadier as the population matured in the years that followed. Table 1 shows the percentage increase in Asian Indian population in Massachusetts in each decade. The re-

Asian Indian Population Clusters

(based on 1990 Census Src: US Census Bureau, 1990)

Legend
USA States (over 1:3m)
ASIND_POP
- 240 - 5083
- 6084 - 13926
- 13927 - 31457
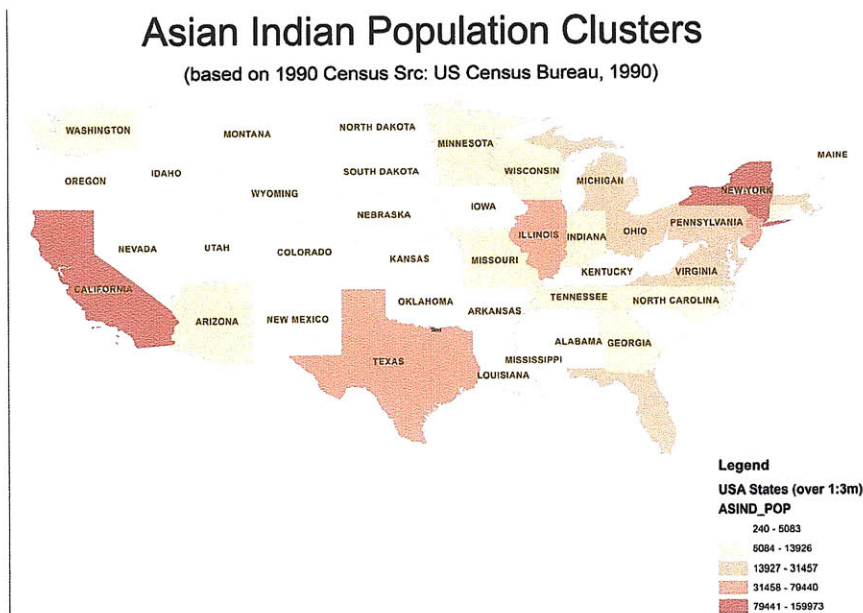- 31458 - 79440
- 79441 - 159973

Figure 4: Based on 1990 U.S. Census, Src: US Census Bureau, 1990- Population by Race- Asian Indians

sults are based on the change in population over the previous decade.

It must also be noted that this table is based on the U.S. Census Bureau special report on the Asian Population. It is interesting to observe that although the U.S. Census Bureau switched to using a more comprehensive 'Asian Indians' term to refer to Indian immigrants in the post-Indian independence period, the Census Bureau identified Indians as 'Hindus' in the Census Data for 1940 and the preceding years. 'Hindu,' that represents one of the many religions practiced in India was a common misnomer for every Indian immigrant coming from India.

As evident in Table 1, an immigration trend did not set in until 1960s-70s

among the Asian Indians. The implementation of Immigration and Nationality Act, 1965 that removed restrictions on immigration from Asia was a major reason behind a growth in this trend.

This paper will focus on the post-Second World War period to study the growth of South Asian immigrants in Massachusetts. This paper primarily focuses on Asian Indian immigrants whose data is available in the census reports for the period beginning in the 1960s and hence offers a base for analysis and description of the population. However, the thesis also describes in subsequent chapters, other South Asian immigrant communities that migrated to Massachusetts in later years.

India was the first country from South Asia to record a significant growth in immigrant population in Massachusetts and find its way into the U.S. Census report. As a result, early immigration history of South Asians in Massachusetts is the history of Asian Indian immigrants who settled in Massachusetts. Even today, Asian Indians continue to dominate the group of South Asian immigrants in Boston.

India gained independence with Pakistan. However, India was the first country in the Indian sub-continent to have a Constitution and establish a democratic government with a vision for its economy. India stood apart from all other nations in South Asia because of its emphasis on science and technology and the desire to emulate advances taking place in the U.S. and Soviet Union. Development of institutes of research and advanced learning in science and technology in 1950, barely three years after the Independence played an important role in this vision.

Other nations from South Asia like Pakistan, Bangladesh, Ne-

pal, Bhutan and Sri Lanka were not visible in numbers as a community in Massachusetts until the last three decades. Apart from their diversity, countries from the Indian sub-continent share some regional similarities and subsequent chapters will describe these immigrant communities from South Asia.

Studies on Asian Indians have largely focused on Asian Indian immigrants in the Silicon Valley and New York City that have some of the biggest Asian Indian and other South Asian population groups[4]. Other studies have focused on comparing Route 128 and Boston to Silicon Valley (Wadhwa, Gereffi et al, 2007; Wadhwa, Saxenian et al., 2007). However, the number of South Asian immigrants in Massachusetts has grown significantly over the last five decades and unlike the Silicon Valley that seems to be growing exponentially and New York City that represents a more diverse economic distribution among the Asian Indian immigrants, Boston has a strong, focused community of highly educated and skilled immigrants coming out of MIT, Harvard University and other major universities in this area and employed in many high technology and research organizations across the state.

The big picture of immigration patterns of South Asians, especially Asian Indians to Massachusetts tells a story of economic migration focused on the high technology sector, education and skilled jobs. However, there are other less represented facts and characteristics of this community that this thesis also tries to explore. The nature of this paper is research-based and descriptive and the study relies heavily on U.S. Census data, American Community Survey and personal experiences of this author gained through interaction with other South Asian community members over the years. Secondary sources used to back observations are from media publications, journal articles, studies and websites of various organizations in Massachusetts.

As much as this paper is an attempt to contribute to the knowledge of one of the youngest immigrant groups in Boston, it is also a personal research for this author who traces her roots back to India and is one among the many like her who came to this region awed by the education and growth opportunities that Boston had to offer.

[4]Among such examples are Saxenian, AnnaLee, 1999, Silicon Valley's New Immigrant Entrepreneurs and M.P. Fisher's Creating Ethnic Identity: Asian Indians in the New York City Area
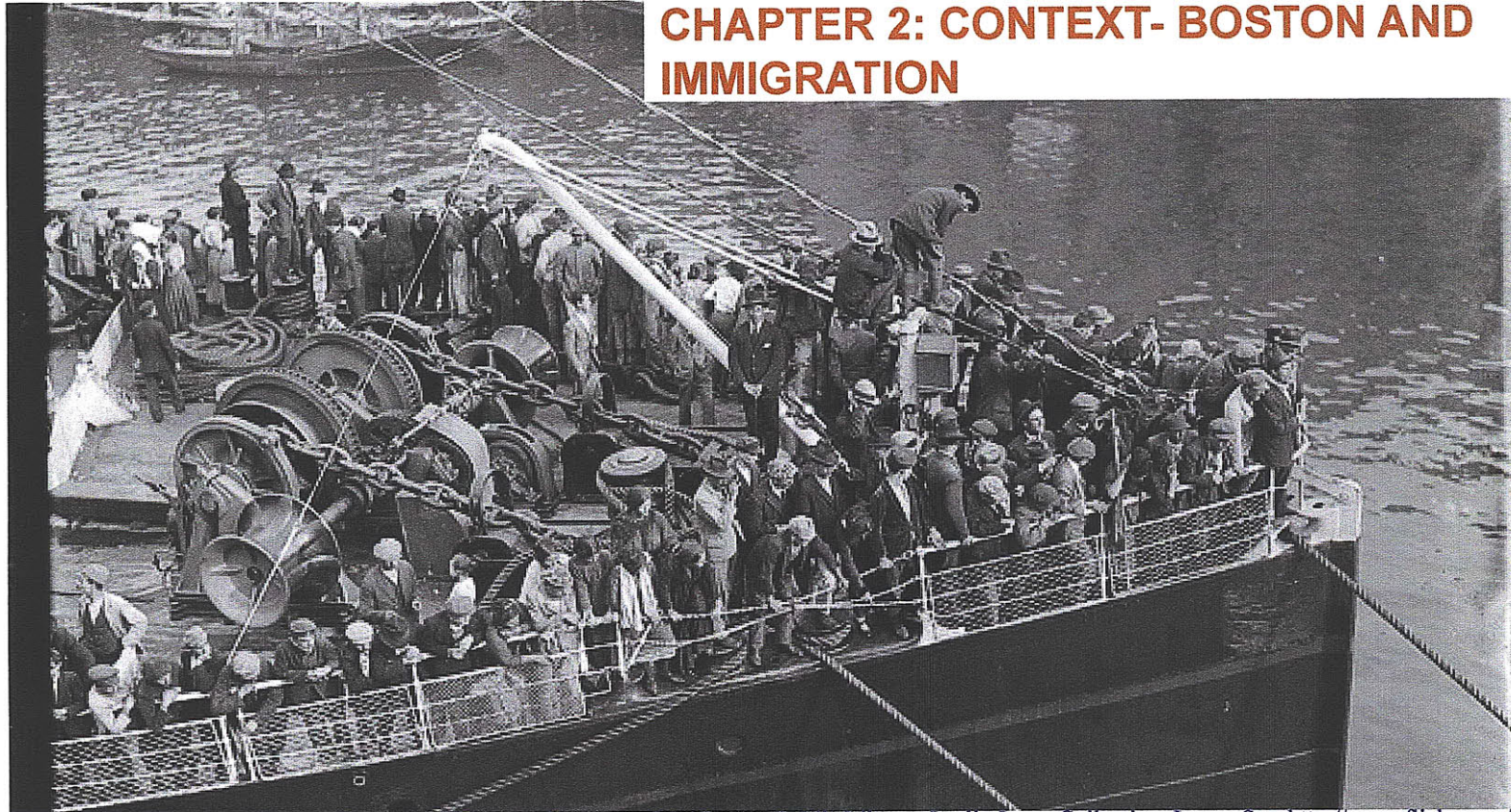
Figure 5: Immigrants arriving on the coast of Boston. Courtesy of the Boston Public Library, Leslie Jones Collection, Image Src: http://www.flickr.com/photos/boston_public_library/5881626624/

Massachusetts' history of immigration is the history of the people of Boston. Originally a native Indian settlement, the strategic geography of Boston made for an ideal location for its earliest immigrant settlers- the Puritans from England who founded Boston in 1630; it was viable as a port and the most proximate point via sea route for the early voyagers from Western Europe before New York City flourished as a port. The ideals of these early voyagers were, in a way, responsible for creating a global image of Boston that would attract Asian Indian immigrants to this region over three centuries later. The ideals were those pertaining to education and literacy for all (Herring). These led to the establishment of Harvard College in 1636 for advanced learning and subsequently led to the establishment of schools for children and other institutes of higher learning in the Greater Boston area that are recognized globally today.

In the centuries that followed the settlement of Puritans, waves of

immigrants from different parts of the world arrived on the coast of Boston with the intent of escaping socio-economic and political tensions in their home countries. They all dreamt of and hoped for a new start amidst a land of opportunities. In the first couple of centuries after Boston was founded, immigrants largely came from Europe. Following the Puritans who wanted to escape the rule of the Pope and the King came the Irish who wanted to escape the wrath and misery of a famine-struck Ireland. The Italians and the Eastern European Jews who wanted to leave behind religious, socio-economic and political tensions came to Boston in the 1800s.

Immigrants from other parts of the world began arriving in Massachusetts in the 19th century. This was a period when railroads were built across the nation making transcontinental east-west travel possible. As a result, apart from those who arrived via sea routes, there were many cases of in-migration. Slaves who were brought from Africa to work for the wealthy whites in the southern part of the U.S. moved up north to Massachusetts and Canada to escape from slavery. The Chinese who were brought to California to work as labor on railroads and highways traveled across the country initially as contract labor and later, to look for newer work opportunities in Massachusetts. Immigration slowed down in the early 20th century when the U.S. implemented strict immigration policies and bans on immigrants from certain regions of the world, especially Asia, to preserve white ethnic dominance.

The Immigration Act of 1924 was implemented and it set a quota system for immigrants based on national origin. The allotted quota was initially two and later three per cent of the overall population of immigrants from a particular nation in a given year. This provision was made to reduce some restrictions but the intent to maintain a majority of the White race and prevent immigrants from Asia and Eastern Europe from entering in large numbers was obvious.

The year, 1965 marked an important year in the immigration history of the U.S. when an amendment was introduced to the Immigration and Nationality Act, also known as Hart-Celler Act of 1965 (1965 Immigration and Nationality Act, a.k.a. the Hart-Celler Act, Act). This Act abolished the national quota system that was implemented under the Immigration Act of 1924 and was reaffirmed in The McCarran Walter Act of 1952 (Page 34, Teacher's Lesson Plan, CUNY)

The 1965 Act opened doors for people from Asia, especially those who wanted their families to move and settle with them in the U.S..

Figure 6: Asian Indian immigrants arriving in the US on boats. Original Caption from the source: SS Minnesota, Seattle, June 23, 1913. Image Src: http://www.sikhpioneers.org/images/Display%20Pictures/006.jpg

The Chinese who were excluded from immigration to the U.S. migrated in large numbers to re-unite with their families. South Asian immigrants who were trickling into Boston for studies and education opportunities came in large numbers to seek economic, career and personal growth that their home countries could not offer.

These immigrants came from countries of the Indian sub-continent that were once colonies under the Imperial Rule and had gained independence in the years following the Second World War. Newly in charge of authority over their own people, these countries were struggling to find their own footing politically and economically. Prominent among these countries were India, Pakistan, Bangladesh, Nepal and Sri Lanka.

Figure 7: How India ushered in its first Independence Day, Firstpost Photos, August 15, 2012. Image Src: http://www.firstpost.com/photos/images-how-india-ushered-in-its-first-independence-day-418724.html

CHAPTER 3: CONTEXT- INDIA AND THE SOCIETY

Unlike all of the waves of immigrants who have made Boston their home, the migration of South Asians to Boston and the rest of the United States has been fairly recent, in fact, the trend did not begin until the period following India's independence from colonial rule in 1947. The following were some of the main reasons for this trend.

Independence and Communal Tensions:

The South Asian region was colonized until the years following the Second World War. In 1947, India, Pakistan, Sri Lanka [previously called Ceylon] became independent. Independence brought a new set of struggle for these countries.

India, the most prominent and economically dominant of the nations in the South Asian region was never at peace in the immediate decades following independence. Internationally, India suffered from a separation based on religious lines with Pakistan that had a dominant Islamic community. India started the Non-Aligned-Movement [NAM] with the support of other newly independent countries and chose to take the best of the first and the second worlds and not subscribe to either of the two superpowers. In 1956, under the States Reorganisation Act, states in India were organized on linguistic lines. In these years, India battled secessionist tendencies among its ethnically and linguistically diverse communities. Rife among these were the secessionist movements

in South India, Khalistan movement in Punjab [for a separate Sikh nation] and similar movements in Northeastern states of India during the 60s and 70s. Some of these also spilled into the 80s. People immediately affected by these linguistic tensions migrated to other areas that were more tolerant to their presence.

The focus on Education Sector:

In spite of these tensions, the first leaders of independent India helped the country move forward. One of the major commonalities among these leaders was that they had all traveled abroad for work or received their education in law and administration abroad, which had exposed them to the new thought and advances taking place in the world outside their home country. During the colonial era, it became prestigious to travel abroad for education. Even before independence, many of these leaders were actively engaged in British administration of India because they all knew that administrating a nation as vast and diverse as India would be a challenge when the British left India.

One of the crucial steps taken in 1946, a year before India's independence was the setting up of a taskforce to consider India's needs from the education system and the creation of higher technical institutions in India (Central Library, IIT Kharagpur). This report resurfaced when India's First Prime Minister Jawaharlal Nehru declared a vision of a scientific and technologically advanced India.

Three years into India's independence, the first Indian Institute of Technology (IIT) was set up in Kharagpur, India. IIT Bombay (1958) followed. It was built with funding from United Nations Educational, Scientific and Cultural Organization (UNESCO) and Soviet Union (IIT Bombay). Soviet Union and the US had greatly influenced India's drive towards a future of technological advances and growth. The IITs were centers of advanced learning in applied sciences for young Indians and reflected this vision.

Major innovations were taking place in the field of computers and electrical sciences at this time and many of them were taking place in the educational institutes, research laboratories and organizations in Massachusetts (see Chapter 4). The IITs, among many other medical schools and engineering colleges in India closely observed these developments. Knowledge of these advances spread among the youth by the word of mouth or through media. The connection between India and Boston was however, much closer than informal conversational exchanges and media reports. Following the IITs, India set up infrastructure for its future managers and businessmen by establishing the Indian Institutes of Management [IIMs]. Two IIMs were established in 1961. IIM Calcutta came up in collaboration of MIT Sloan School of Management and IIM Ahmedabad was established in collaboration with the Harvard Business School. Indian students were very well aware of these schools and their achievements

The first company in biotechnology was founded in the Greater Boston area and research in health sciences and technology continued in the 70s and 80s. India, with its rich history in medicine and health sciences was also attracted to these developments.

However, a factor that encompassed all of these qualities among the Indian youth and eased their transition into the U.S. was their ability to speak English. One of the outcomes of reorganizing Indian states on linguistic lines was that there was a linguistic divide in the methods of running a centralized government

in India. The choice of Hindi as the national language, which is predominantly spoken in the northern belt of India was seen as unfair on the non-Hindi speaking southern states and the Official Language Act of 1963 provided for continuing English along with Hindi as the official languages for all administrative and official work (Government of India). English continued as a popular medium of instruction in schools and for higher education.

Thus, India had the apparatus for honing these bright minds in India but the lack of economic opportunities in a struggling country lured some of these people away from India to countries like the U.S. that offer better opportunities of career and economic growth.

The following section presents an analysis of each of the transition periods in the history of South Asian immigration to Massachusetts starting with the early onset and the transition years and the more recent period of a phenomenal rise in their numbers that makes them one of the fastest growing groups of immigrants in this country. In each of these sections, this paper tries to describe who the immigrants were, their movement and the push and pull factors that led to this immigration.
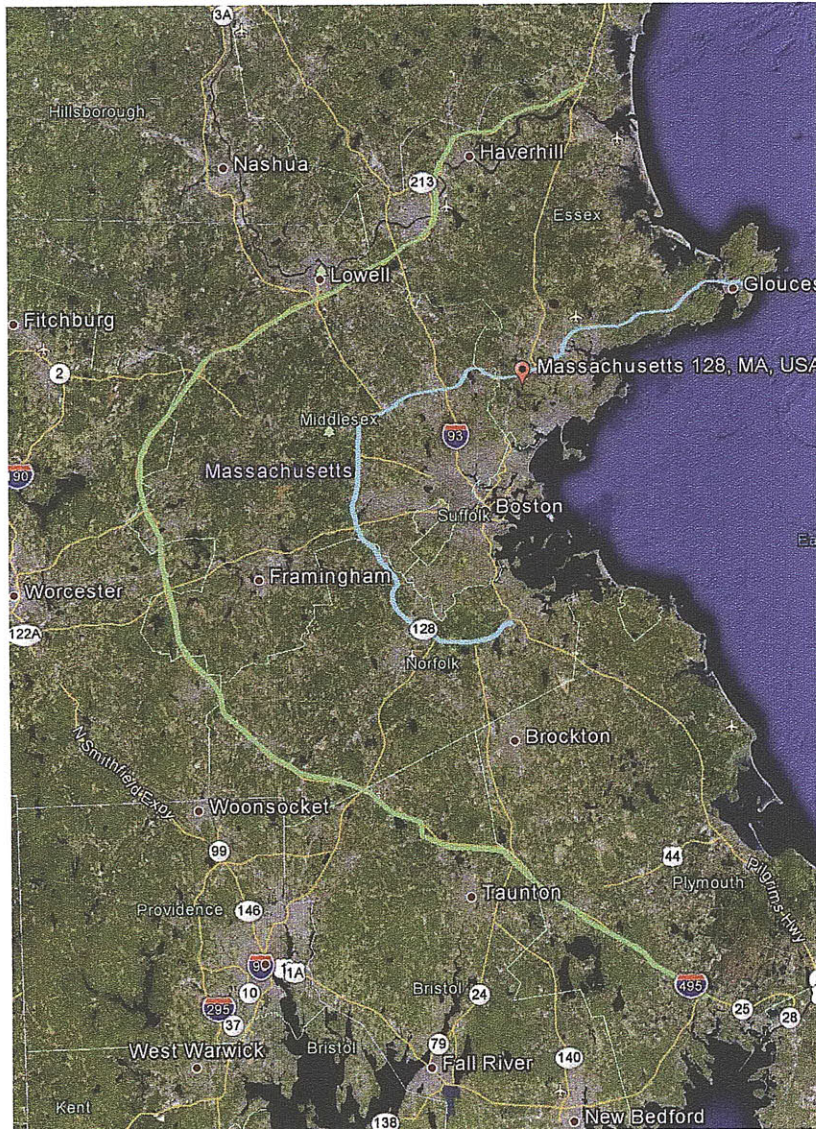
Figure 8: Route 128 and I-495 form the outer extent of Boston. Major high technology organizations proliferated in this region. Image Src: Google Earth

CHAPTER 4: CONTEXT- BOSTON ECONOMY

Massachusetts is the home of many inventions that revolutionalized the world of computers and electrical sciences in the 20th century. At the turn of the century, Boston diverged from its traditional mills, factories and workshops and became increasingly interested in visualizing a high-technology future long before the Silicon Valley of California was created.

Radio technology leading to the creation of the first microwave oven, S-tubes that allowed radios to be connected to house current, Differential Analyzer- a mechanical computer, the first strobe light, the first 'instant' flash camera and the transistor were created out of this vision (Earls).

Massachusetts became the center of all high-technology activities when scientists from MIT and Harvard and companies from the state were roped into developing defense-building technologies preceding the Second World War. Computer sciences was a major part of this process and funding and support for research in computer science led to projects like SAGE and Whirlwind computer that were commissioned during the Second World War. Features like interactivity and networking that are the basis of many information technology companies today were discovered at this time. The first reliable 'random access memory' [RAM]
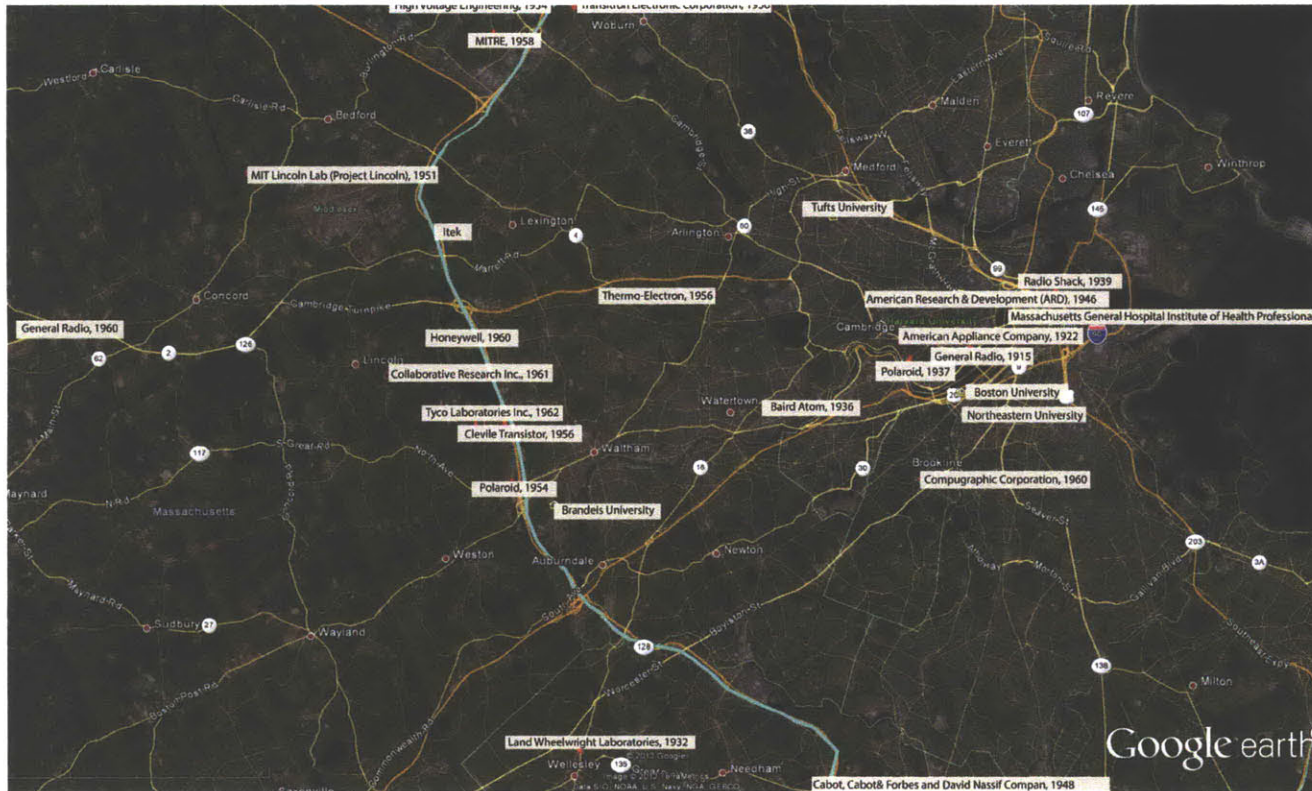
and the first computer chess game were developed at MIT (Earls).

MIT and Harvard scientists preferred the proximity of Route 128 corridor and many of them started their organizations in the suburbs around this belt. American Appliance Company that is now called Raytheon, Polaroid, General Radio [GenRad], Digital Equipment Corporation [DEC], founded in these years were all located around Route 128. Route 128 came to be called 'America's Technology Highway' (Moments). This reputation led to an agglomeration of similar companies along the 128 corridor. Figure 9 gives a snapshot of some of the organizations that came up in this period.

Inventions continued into the years following the Second World War. Wang Laboratories built the first electronic typesetting system and logarithmic calculators. Ken Olsen of DEC developed world's first minicomputers in 1957 that could be mass-produced and sold to smaller companies and researchers at affordable prices and MIT Lincoln Lab built the first Sketchpad and started an era of computer-aided design [CAD] and graphics.
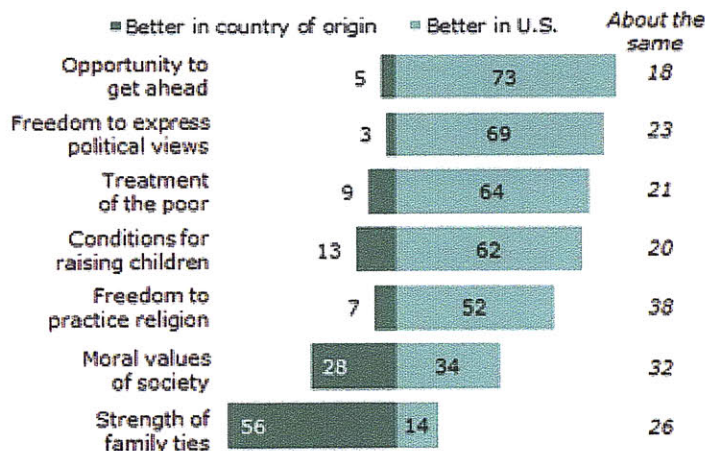
27

These inventions put Boston on the world map and technologically inclined countries and cities in the world were taking notice.

In these years, Boston was also making a transition into combining health sciences and technology. Brandeis University professor Dr. Orrie Friedman left his position to launch Collaborative Research Inc., the first biotechnology company in the world. (Moments)

However, this glorious era ended when U.S. defense drastically reduced its investment in the companies along Route 128. There was massive unemployment. This lull in Massachusetts' history lasted through the 70s but the state made a 'miraculous' comeback with the commercial success of minicomputers and rapid growth of EMC,

an IT company in the 80s. The fairly young biotechnology sector in Boston received a further boost when researchers at Harvard University made new breakthroughs in DNA sequencing methods (Earls).

In spite of the growth of the Silicon Valley starting in the 1960s and the advent of IBM's personal computer [PC] that replaced minicomputers, Massachusetts continued making revenue in its high-technology industry and continued generating high employment. Wang Laboratories employed 30,000 employees in 1986 and DEC employed 120,000 people in 1988 (Earls).

New high technology organizations that tapped into the niche of software applications such as Mathworks emerged in the 80s (Mathworks).

Graduates from the IITs and other engineering and medical schools in India who were mesmerized by the computers and the growth of biotechnology and applied engineering sciences in Massachusetts immigrated to this region by choice seeking educational and career growth and better economic opportunities.
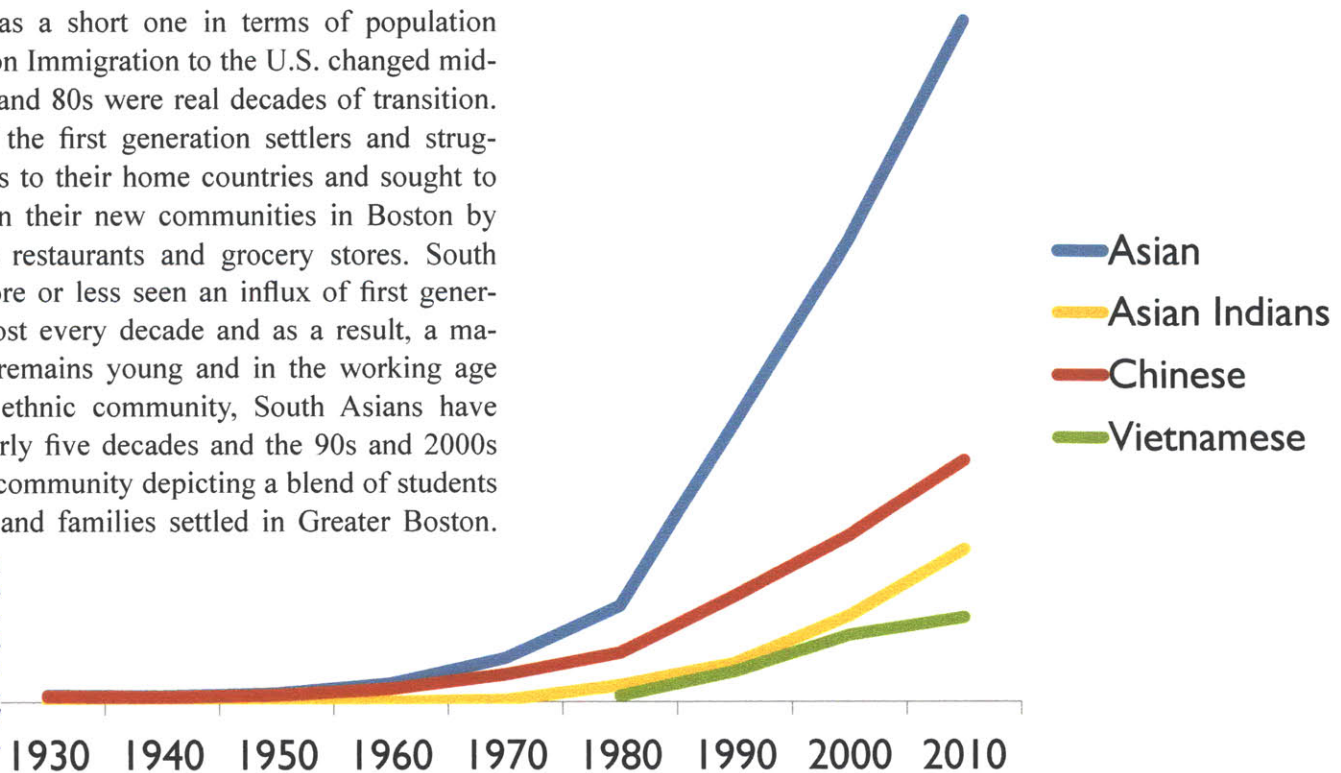
Figure 10, sourced from Pew Research Center's June 2012 report on Asian Americans summarizes the some of the topmost pull factors that lured South Asians to the U.S.

For Most Asians, U.S. Offers a Better Life

% saying ...

■ Better in country of origin   ■ Better in U.S.   *About the same*

	Better in country of origin	Better in U.S.	About the same
Opportunity to get ahead	5	73	18
Freedom to express political views	3	69	23
Treatment of the poor	9	64	21
Conditions for raising children	13	62	20
Freedom to practice religion	7	52	38
Moral values of society	28	34	32
Strength of family ties	56	14	26

2012 Asian-American Survey. Q54a-g. Responses of 'Don't know/Refused' not shown.

PEW RESEARCH CENTER

Figure 10: The Rise of Asian Americans, Pew Research Center, June 19, 2012, Src:http://www.pewsocialtrends.org/2012/06/19/the-rise-of-asian-americans/

SECTION II: ERAS OF IMMIGRATION

Chapters in this section study waves of South Asian immigration who came to Massachusetts. The section is divided into four chapters based on eras beginning with the new wave in 1960s, followed by transition years in the 70s and 80s and rapid growth post-1990s and 2000s.

The decade of 1960s was a short one in terms of population growth because policies on Immigration to the U.S. changed midway through it. The 70s and 80s were real decades of transition. They were the years of the first generation settlers and strugglers who held closer ties to their home countries and sought to create cultural markers in their new communities in Boston by building temples, ethnic restaurants and grocery stores. South Asian population has more or less seen an influx of first generation immigrants in almost every decade and as a result, a majority of the population remains young and in the working age group. However, as an ethnic community, South Asians have settled in Boston for nearly five decades and the 90s and 2000s show signs of a matured community depicting a blend of students and working population and families settled in Greater Boston.

Figure 11: Percentage growth of Asian population subgroups over the decades, Massachusetts. Src: U.S. Census Bureau reports 1930-2010: http://www.census.gov/population/www/documentation/twps0056/appC.pdf, U.S. Census 1980 (Table 195)

Legend:
- Asian
- Asian Indians
- Chinese
- Vietnamese

1930 1940 1950 1960 1970 1980 1990 2000 2010

The decade of 1960 represents a landmark period when the Immigration and Nationality Act of 1965 was implemented opening doors for immigrants from Asia. The decade also represents an onset of and steady increase in the number of immigrants from South Asia who came to the Boston Metropolitan Area seeking work opportunities and education.

Who were the people?

In the 1960s, the first and the only South Asian group to be recorded among countries of origin for foreign-born persons in Massachusetts in the U.S. Census was Asian Indians due to a visible increase in their population. There was

Comparison of Growth in Asian Indian Population and Asians in Massachusetts, 1930-2010

Asian Indians   **Asians**

	Asian Indians	Asians

(chart showing years 1930-2010, with x-axis 400,000 · 300,000 · 200,000 · 100,000 · — · 100,000 · 200,000 · 300,000 · 400,000)
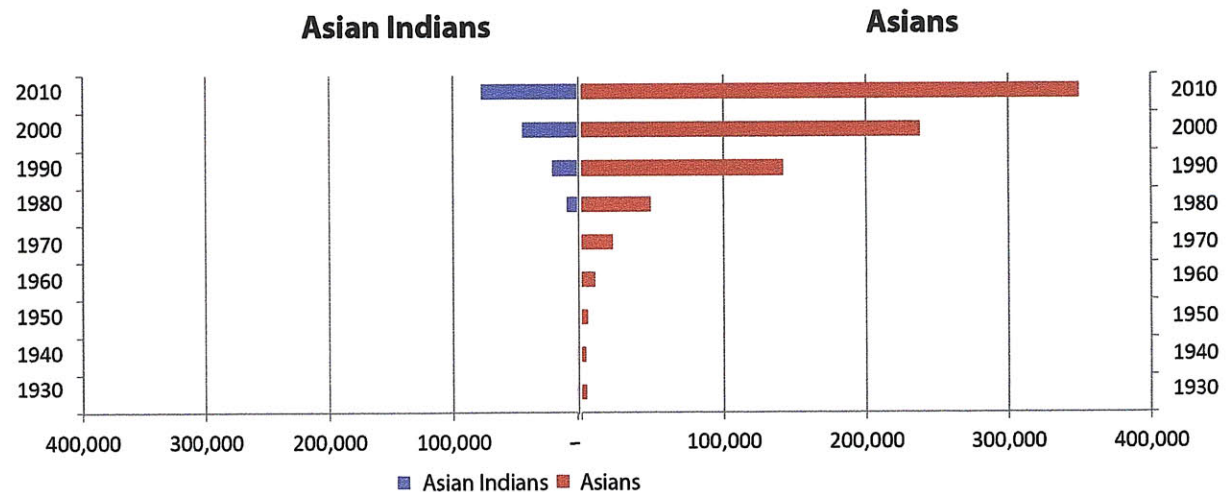
■ Asian Indians ■ Asians

Figure 12: Waves of immigration from South Asia begin in the 1960s. Asian Indians are the most prominent minority group among the South Asians and were recognized in the U.S. Census 1980 and later reports.

The figure compares the growth of Asian Indians and all Asians in Massachusetts. The proportion of Asian Indians among Asians increased rapidly between 1990 and 2010.

Data Src: U.S. Census Bureau: http://www.census.gov/population/www/documentation/twps0056/appC.pdf, U.S. Census 1980 report (Table 195) was used to obtain data for 50s, 60s and 70s. The above link does not have data on Asian Indians for these years. See Appendix I
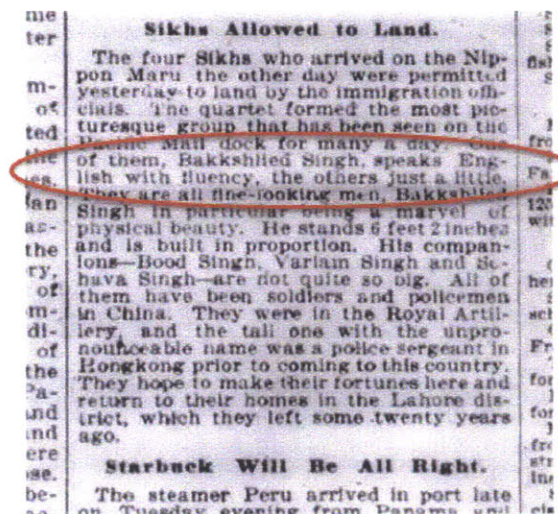
(Image top left: Representational only- to show the onset of immigration: Image Src: Indian Immigrants Important in Driving Economical Growth of U.S., December 31, 2011 http://thelinkpaper.ca/?p=12981)

no information available on other South Asian nations for this period. Before 1950, there were 58 immigrants who had settled in Massachusetts and identified their nationality as Asian Indians.

Restriction on immigration due to a quota system implemented under the Immigration Act of 1924 [reaffirmed in a subsequent amendment in 1952 called the McCarran Walter Act of 1952] ensured that only a handful of Indians per year came to the whole of United States. By 1964, there were only 495 Asian Indians recorded in Massachusetts (see Table 2). When this group was compared to other foreign-born persons, Asian Indians did not account for a significant proportion of the immigrant population in Massachusetts. At this point, they made up 0.16 per cent of the overall foreign-born population of Massachusetts. In spite of a steady growth in their numbers, their representation in the overall population was not substantial enough and continued to render them invisible.

Between 1965 and 70, Asian Indians started coming to the U.S. in greater numbers. According to the data from the U.S. Census, there were 301 Asian Indians who settled in Massachusetts between 1960 and 1964. This number more than doubled to 686 between 1965 and 1969 (see Table 2). Indian immigrants who came to the U.S. at this time were aware of the technology boom and developments in health and biotechnology taking place in the research institutes in Boston. They were also aware of the employment that this progress was generating in the Boston Metropolitan Area.

Many of the immigrants who moved to Massachusetts during these years were part of a new wave of highly educated Indian immigrants. They were doctors, academics, engineers and students. They were all attracted to the education institutions and

Figure 13: South Asian immigrants in all of the decades were either fluent in English or accompanied family members or friends who were well-versed in English. Image source: http://www.sikhpioneers.org/images/Display%20Pictures/005.jpg

San Francisco Chronicle, April 6, 1899

work opportunities in Boston that were getting wide recognition all over U.S. and abroad. They had all heard from their friends, relatives and business acquaintances about MIT, Harvard University, the development and opportunities in Boston.

Where did they go?

Cultures tend to change with distance to adapt to different conditions peculiar to the location. This leads to distance decay[5] and as migrants move further from their place of origin, they try to stay closer to aspects of the new culture that are most familiar to them. Asian Indian immigrants stayed close to the urban centers that depicted similar fondness for education and work that they had imagined in their pursuit of opportunities available in this region of the US.

[5]Cultures change more significantly as people migrate further away from their homelands.

	Massachusetts	Boston SMSA	Lawrence SMSA	Providence SMSA	Springfield SMSA	Worcester SMSA	% Asian Indians settled in Boston SMSA
1950-59	100	80	0	6	0	7	80%
1960-64	301	242	0	18	10	9	80.40%
1965-69	686	495	23	79	31	23	72.16%

Table 2: U.S. Census Bureau, 1980 (Table 195) Citizenship and year of immigration for foreign-born persons by country of birth for Standard Metropolitan Statistical Areas (SMSAs) in Massachusetts

Asian Indian immigrants came from a very different socio-cultural background, practiced a different religion in many cases and spoke a language other than English in their homes. Their skin-tone made it easy for others to single them out. However, in spite of much dissimilarity between these new immigrants and the existing settlers, their biggest advantage was that a majority of them could speak English, owing to a legacy left behind by the English colonists who governed India and if they didn't speak English, a family member who could speak English usually accompanied them in this journey to the U.S. Their fluency in English made them overcome one of the biggest barriers in communicating with others in this foreign land and integrating with the society.

Also, for Indians, knowing English was also a necessity to interact with other members of their linguistically diverse country. With a small number of Indian population from their hometowns migrating to the US, it was less likely for an Indian to find another Indian who spoke the same language as they did

and English provided a uniform platform that could be used to communicate with other South Asians and Americans.

Prior to 1960, 80 per cent of Asian Indian immigrants who moved to Massachusetts settled in Metro Boston. This trend continued in the 60s. Prominent institutions in the Boston Metropolitan Area at this time were MIT, Harvard University and other universities and Massachusetts General Hospital, apart from the high-technology companies that were operating on Route 128.

It can be deduced that a majority of those who immigrated to Boston at this time were researchers, students or workers in the high-technology sector[6].

In the post-1965 years, when there was more freedom to immigrate, there were new pockets of Asian Indian communities developing in Lawrence, Providence, Springfield and Worcester metropolitan areas. The following table shows the population of Asian Indian immigrants in Massachusetts and where they settled.

	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
India	295	279	263	278	234	230	234	224	214	197	181	158	148	135
Afghanistan												1		
Bangladesh	5	6	8	7	7	9	13	13	15	16	16	13	11	10
Bhutan				1	1	1	1			1	1	1		
Burma	1	1	2	3	4	3	2	2	2	4	3	2	1	1
Nepal	13	12	11	9	6	5	7	4	4	4	5	6	6	5
Pakistan	30	32	33	33	33	31	29	20	23	24	24	31	26	29
Sri Lanka	9	8	6	9	7	6	6	9	8	11	9	6	19	16

Table 3: Student intake by country- Asia, MIT International Students' Office, Src: http://web.mit.edu/iso/about/statistics_1112.shtml

[6] Alumni databases at MIT, and media reports on Indian almni from Boston area such as Virender Singh Mathur (Menon, Murarka)
Boston.com., Ravi Sakhuja, founder of Tecogen went to MIT in 1967 (Boston. com) and his quote about Indian immigrants in the 1960s.

Asian Indians had not yet followed in the footsteps of their Asian counterparts, the Chinese who migrated to Boston decades earlier and had set up their ethnic restaurants and stores. The Indians were the first generation of South Asian immigrants and the five years after the 1965 Act were years of struggle and settlement for these immigrants in Boston.

Push Factors- Why did they leave India?

India as a nation was exposed to advances in sciences and technology in the western world. Even before India's independence, the young Indian society had grown to the idea of prestige associated with foreign education. Some of India's famous writers and freedom fighters of that time, who were an inspiration for the youth had gone abroad to work or study.

After independence, Indian Prime Minister Jawaharlal Nehru visioned an India in the future that was at par with the superpowers of the post-Second World War period- Soviet Union and the U.S. Both nations were making great technological progresses during the Cold War era. Nehru channeled his vision and set up Indian Institutes of Technology [IITs] in different parts of India as early as 1950 to create a force of scientists and engineers in India. It was a time when India had the apparatus for training such brilliant minds that it needed for building the future of India but its struggling economy post-independence had not reached the same point where it could support this ambitious youth

that was craving for better career and economic opportunities. Furthermore, the decision to retain English as the official administrative language of India and the use of English as a medium of instruction in several schools and colleges in India including the IITs made it easier for young engineers and doctors from India to consider the prospect of moving to the advanced English-speaking countries.
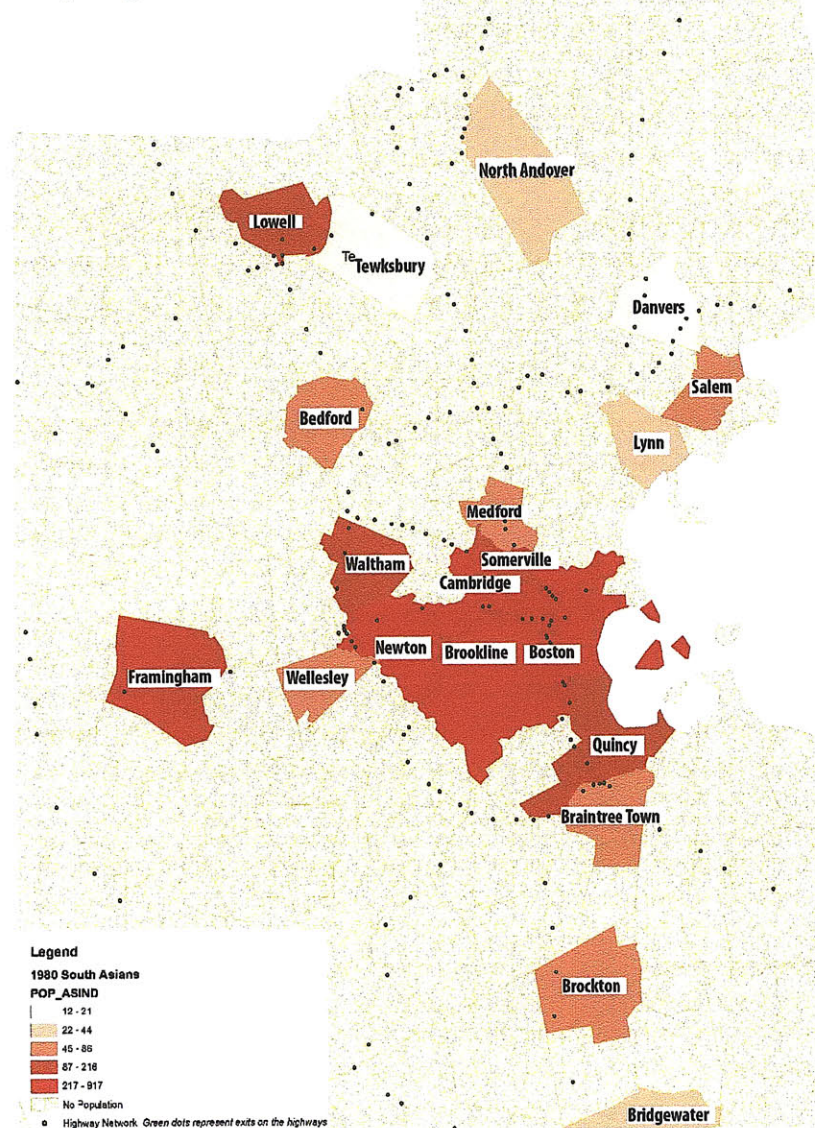
Pull Factors- Why did they come to Boston?

An education or a career in science and technology was an extremely appealing prospect to Asian Indians who grew up in the post-independence India and studied in engineering and medical science disciplines. Culturally, families in India have encouraged their children to pursue careers in the sciences- engineering and medical fields and there is a prestige associated with education in these fields in India. A look at the list of alumni from India in electrical and computer sciences at MIT and the growing migration of Asian Indians to the Silicon Valley is a telling story of the interest of Asian Indian immigrants in the engineering and applied sciences.

Politically, Massachusetts was also one of the states that had shown the most tolerance to foreign immigrants. President John Kennedy and Ted Kennedy, the Senator from Massachusetts had exhibited vocal support to the 1965 Act[7]. It was also easier for a visible foreign community like the Indians to get accepted into educational and research institutes and workplaces in an urban setting with lesser opposition.

[7]The revolutionary amendment to the Immigration and Nationality Act, 1965 also known as Hart-Celler Act is named after state representatives from New York and Michigan. Hart, Celler and Ted Kennedy (state senator of Massachusetts) were known as the prominent supporters of this amendment. Src: http://en.wikipedia.org/wiki/Ted_Kennedy (First years and assassinations of two brothers. Retrieved on August 20, 2012)

Figure 14: Population of South Asian immigrants in Boston was greatly concentrated in the metropolitan area. Src: U.S. Census Bureau, 1980, Image: U.S. Census Bureau shapefiles- county subdivision

Legend
1980 South Asians
POP_ASIND
| 12 - 21
22 - 44
45 - 86
87 - 216
217 - 917
No Population
o Highway Network *Green dots represent exits on the highways*

CHAPTER 6: 1970s-80s TRANSITION AND STRUGGLE

The Immigration and Nationality Act of 1965 was more revolutionary than it was perceived to be by American political representatives who advocated for it. Immigrants from South Asia came to the U.S. in greater numbers in the decades that followed. Just like the trend in 1960s, Asian Indians continued to be the dominant immigrant group from South Asia. They were transition years for the Asian Indian immigrants. However, for other South Asian sub-groups, the 80s marked the beginning of an immigration trend from their home countries. The 70s and the 80s were also different from each other for the economy of Massachusetts.

Patterns of immigration in 1970s and 1980s had transitioned from the infancy of the early years. The immigrants were largely first generation settlers but there was a growing sense of settlement in the community in Greater Boston towards late 70s and mid-80s. New ethnic restaurants, grocery stores selling ethnic products and temples were built in the Greater Boston Area hinting at visible changes in the ethnic make-up and diversity of the Greater Boston area.

Who were the people?

In the 1970s, 3500 immigrants moved to Massachusetts from India. Of these, 2435 settled in Metro Boston, according to the U.S. Census report 1980. About a quarter of the overall population settled in Worcester and Providence Metropolitan areas of Mas-

Comparison of Asian Indian families and non-families in Massachusetts, 1970-80
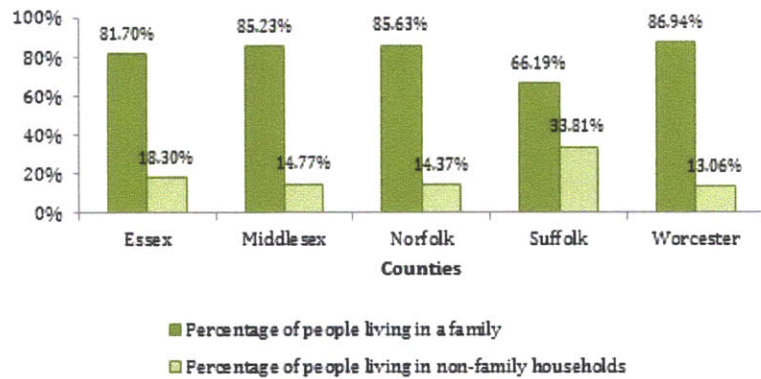
Figure 15: Asian Indian families in Massachusetts, Src: U.S. Census Bureau, 1980, General Characteristics for Selected Racial Groups for Counties: 1980, Counties (400 or more of the specified racial group)

sachusetts. The settlers exhibited the following characteristics:

(i) They were families:

Except for those in the Suffolk County, over 80 per cent of the

Population distribution of Asian Indians by age, Massachusetts, 1970-80
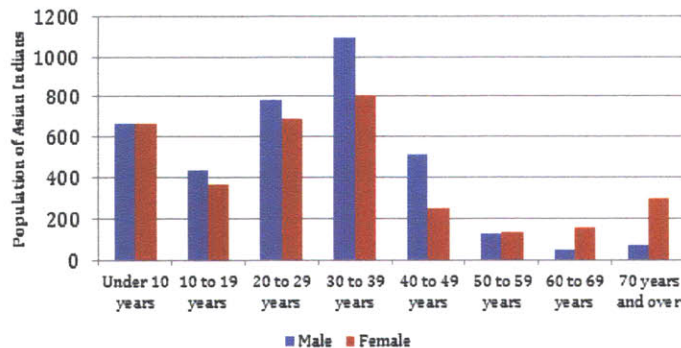
Figure 16: Population distribution of Asian Indians by age and sex, 1970-80, Src: U.S Census Bureau, 1980, General Characteristics for Selected Racial Groups for Counties: 1980, Counties (400 or more of the specified racial group)

Asian Indian immigrants who moved to Boston in 1970s were families. One of the main revolutionary changes brought by the 1965 Act was that it led to a rise in family reunions and immigration as a family. Figure 15 shows a comparison between the number of Asian Indians who immigrated to Massachusetts as families and the number of Asian Indians living in non-family households.

Across all of the counties of Massachusetts that had Asian Indian immigrant settlements, the percentage of families is significantly higher than that of non-family households. Immigrants arriving as family indicate a stronger inclination towards permanent settlement in this area. A closer observation of the population distribution of these immigrants in Figure 16 gives some more insights into the family composition of these immigrants.

Incidents of female feticide were rampant in the Indian society as recent as the 21st century before gender identification devices and sonography tests for this purpose were banned in the urban centers of India. An equal distribution of males and females in the under 10 years and 10-19 years age groups indicates that the population that immigrated was more educated and urban and along with the spouse, children were an integral part of these family immigration patterns. There were about 1200 children in the under 10 years category alluding to the beginning of a second generation of Asian Indian immigrants.

There were more males in the working age group of 20-49 years. Apart from those males who immigrated with their families, there were others who came alone to look for work or study at the institutions in Boston. A significantly higher number of females in the old age group indicates immigration of widowed,

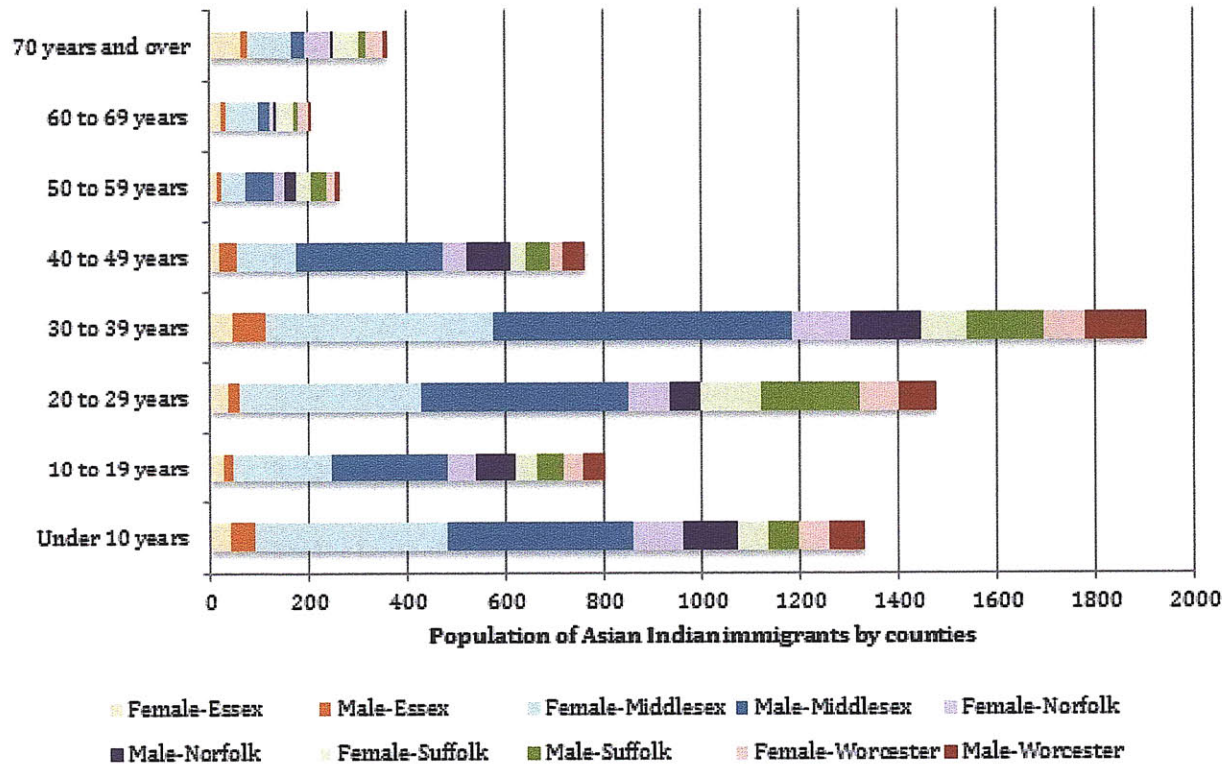## Distribution of Asian Indian population by sex across various age groups, Massachusetts 1970-80

Population of Asian Indian immigrants by counties

Age groups (top to bottom): 70 years and over, 60 to 69 years, 50 to 59 years, 40 to 49 years, 30 to 39 years, 20 to 29 years, 10 to 19 years, Under 10 years

X-axis: 0, 200, 400, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000

Legend: Female-Essex, Male-Essex, Female-Middlesex, Male-Middlesex, Female-Norfolk, Male-Norfolk, Female-Suffolk, Male-Suffolk, Female-Worcester, Male-Worcester

Household Type and Relationship	
Total Persons	3500
Total Persons in households	3359
Family Householder	972
Spouse	1042
Child	585
Other relatives	293
Non-family householder	255
Non-relatives	212

Table 4: Household type and relationship, Asian Indians, Massachusetts, Src: U.S. Census Bureau, 1980

aging mothers to live with their sons and family in Boston.

Figure 17 offers another perspective on the male-female population distribution in Massachusetts counties by age. The lighter shades of a color represent female population in that county while the darker shades represent males. The distribution of males and females in the working age group was close to equal in the Essex, Norfolk and Worcester counties. This signifies immigration of many Indian women as spouses and partners of the working male.

Table 4 based on the U.S. Census report for 1970-80 gives a better idea of the demographics of this population. Spouses represent wives or husbands of the main family householder identified in the census. Census guidelines did not allow for more than one name to be registered as a householder even in case of joint applications. Hence, it is likely that a higher number of spouses indicate
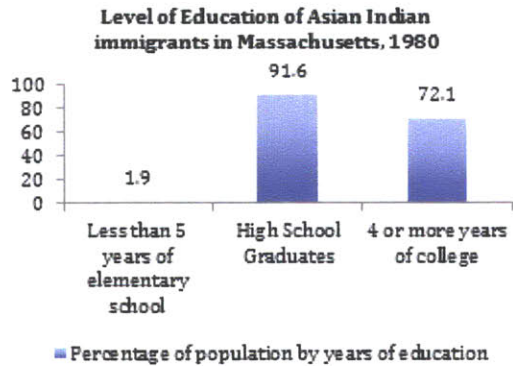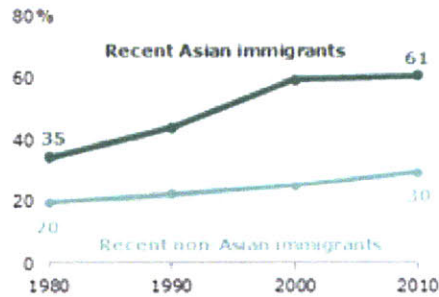
Level of Education of Asian Indian immigrants in Massachusetts, 1980

Percentage of population by years of education

The Immigrant Education Gap

% with at least a bachelor's degree, ages 25-64, 1980-2010

Recent Asian immigrants

Recent non-Asian immigrants

Note: Except for 1980, 'recent immigrants' refers to those who came to live in the U.S. in the past three years prior to the survey. In 1980, the reference period was 1975-1980.

Source: Pew Research Center analysis of the 1980, 1990 and 2000 Decennial Censuses and 2010 American Community Survey: Integrated Public Use Microdata Sample (IPUMS) files

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Asian Indians- Ability to Speak English, 1970-80 (5 years and over)

Number of people

Asian Indians- Ability to Speak English, 1970-80 (18 years and over)

Number of people

that some of them jointly owned or leased their house. The number of non-family householders was comparatively smaller than those who lived with their families suggesting that a higher number of Asian Indian immigrants who moved to Boston at this time were looking forward to settle in this new country and region.
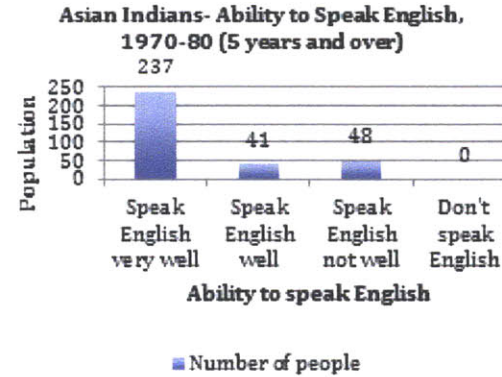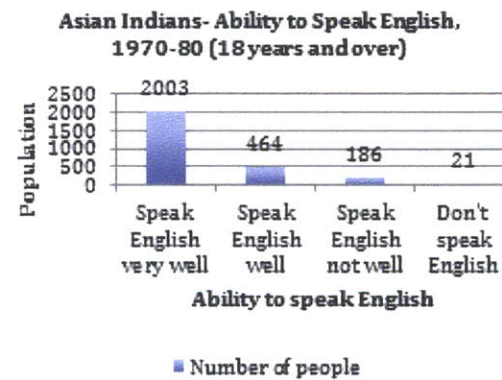
(ii) Education and Ability to speak English:

Many of the immigrants who settled in Boston at this time were well-educated and spoke English very well (see Figure 20 and Figure 21).

According to the U.S. Census report, over 90 per cent of the Asian Indian immigrants in Massachusetts in 1980 were high school graduates and 72 per cent of them had attained 4 or more years of college education (see Figure 18). These characteristics not only helped them integrate into the society but also prevented them from being

subjected to hate crimes that other Asian groups were facing at this time. Media reports in the late 70s and 80s were abuzz with hate crimes being subjected at Asian immigrants (from East Asia) who were stereotyped because of their distinct appearance, perceived inability to speak English, large numbers and willingness to work as cheap labor that arose fears of them taking away jobs from the locals.

Asian Indians did not gather for political reasons yet and did not generate much media attention. Media reports in the newspapers and journals till the late 70s were still focused on the Kashmir issue between India and Pakistan and the political tensions in South Asia. Asian Indian immigrants largely sailed through this period also because of their ability to communicate in English and an inclination towards research-oriented or high-skilled jobs that prevented them from standing out as an obvious threat to the locals.

The following charts show that over 90 per cent of the population in the children and adults age group spoke English very well.

(iii) Income and Labor Characteristics:

Boston's economy suffered a setback in the 1970s when the U.S. Defense that was funding several research projects and institutions in Boston Metropolitan Area and the Route 128 corridor severely cut down on their investment (Moments). This led to massive unemployment in Greater Boston. Asian Indian immigrants who settled in Boston in these years depict a broad spectrum across income groups.

According to Figure 22, that is based on the income levels of foreign born immigrants in Massachusetts, Indians employed in Massachusetts earned the highest salary closely followed by Filipinos Asian Indian immigrant workers who came to Boston
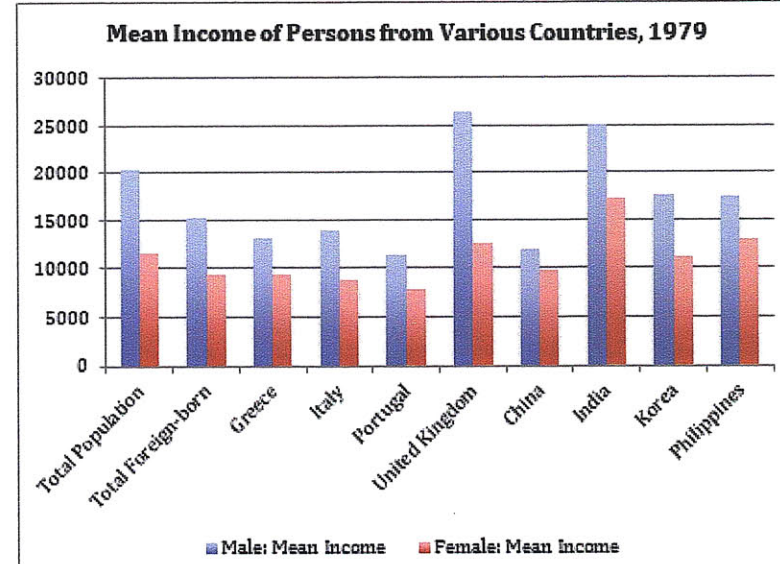

Figure 22: Median Income of foreign-born immigrants, Massachusetts, 1970-80, Src: U.S. Census Bureau, 1980 (Table 196-A)

Figure 23: Mean Income of foreign-born males-females, 1979, Src: U.S. Census Bureau, 1980 (Table 196-A)

Asian Indians- Number of workers in families in 1979

Figure 24: Number of workers in a family in Asian Indian households, Massachusetts Src: U.S. Census Bureau 1980 (Table 196-A)

were extremely well-educated and possessed skills in advanced sciences necessary for the high paying jobs in the high technology sector in Boston. The average salary of the total population of Massachusetts was lower than that of Indian, Filipinos and the
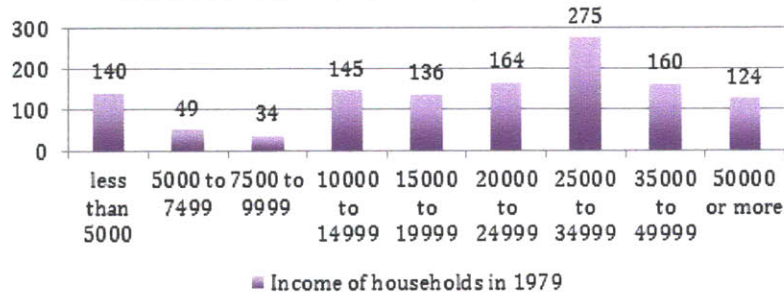
Asian Indians- Income of households in 1979

Figure 25: Income distribution of Asian Indian households, Src: U.S. Census Bureau, 1980 (Table 196-A)

British. The salary of Chinese immigrants also stands out for being the lowest one indicating that they took up the low-skilled, lower-paying jobs in restaurants, laundries and similar industries.

Figure 23 shows that although females tended to earn less than the males, Indian females comparatively earned the highest salaries just like their male counterparts showing a higher level of education among Indian females.

Asian Indian immigrants in this period were also the first generation settlers. As a result, there is a greater tendency among these early immigrants to have both husband and wife or have 2 or more members in a household work for a living to pay for the cost of moving to another country and make the initial settlement comfortable (see Figure 24). This could however, also represent those Asian Indian immigrants who did not get represented in the mean income graphs studied before. These immigrant workers could be those who moved to Boston to look for a better life and work opportunities that were not available in the high technology sector.

Figure 25 is a chart of income distribution of Asian Indian households in Massachusetts in 1979. The population was fairly distributed across income categories, with a slightly skewed inclination towards the mid and high income groups. The highest number of households in any one category concentrated in the $25000-$34000 income group. There were 284 households earning more than $35000 (higher income) in 1979.

A total of 445 Asian Indian immigrants were concentrated in the

[8] Patel is the surname of a Gujarati Indian community
[9] Pat in their last name stands for land

lower mid-income categories (from $10000-$24999). Asian Indians in the mid to lower income groups represent students and a working population that was not employed in the high-technology sector.

Some of the Asian Indian immigrants reflected in the mid to lower income earning group came from certain Indian communities that have over the years developed their own specialty segments and niche industries. The period of 70s and 80s was an era of first generation immigrants who started these industries and trends in Boston and the rest of the U.S. These immigrants are among the owners and workers in ethnic stores and restaurants and the hospitality industry.

There are two distinct Asian Indian communities that stand out for their contribution to these niche industries:

Patels and the Gujarati community:
The Gujarati community that includes the Patels hail from the western state of Gujarat in India. Bookkeepers and keepers of land record[9], the Patels are known for their business acumen and interest in investment. It is the tendency of chain migration among the Patel community that has given birth to a phenomenon widely known as 'Patel-Motel' in the U.S. This phrase refers to the likelihood of finding a motel owned by an Indian whose last name is Patel, in any given state or town in any part of the U.S.

Motels and accommodations for leisure stay were a phenomenon of the post-Second World War period when highways were built and owning and driving cars was a comfort and leisure to many. However, by 1970s, many of the original American motel owners were aging and in the depressed economy of the 70s in places like Massachusetts, considered selling these properties that were getting old and less profitable due to the impact of unemployment and rise in gas prices on their business (Tunku, 1999).

However, the Patels and many others from the Gujarati community saw the hotel industry as an investment opportunity. Even if these mid-range motels were less profitable and failing, the Gujarati immigrants would buy them. There were dual advantages of this investment- the property served as a home for their family and did not cost extra rent (Tunku, 1999).

The outcome of chain migration came into play once these properties were purchased. Maintaining a motel needed extra hands for upkeep and maintenance. It was cheaper for the immigrants to get their family members to work in the hotel instead of hiring employees. This was similar to the Chinese operating their laundries and restaurant business. As a result, the Patels migrated with their family members. Their cultural tendency of investment led them to invest in more than one property once they achieved some success in their first property. This needed more hands as well. It is common knowledge in the Indian community and stories in the media also hint at the pattern of Patels getting their children married to someone in India and bringing them over to the U.S. to continue the business expansion. This maintains a constant influx of Indian immigrants in the U.S.

There were many other reasons why the Patels invested in the business of motels. Motels like the ones that the Patels owned provided partial service. These motels provided accommodation and rooms equipped with refrigerators and in later years, microwave ovens when they were cheaper and easily available. None of these motels had a hotel with full-blown kitchens in their premises to serve their

guests. This eliminated the need to cook meat for its guests making the business suitable to the vegetarian Gujarati community. Another reason was that operating a motel needed limited English speaking skills, which is something that was again suitable for this community. It was likely that some family members who helped in running this business could not speak fluent English. But this did not prevent them from successfully running the business (Tunku, 1999).

Chain migration was also responsible for letting the Patels and other Gujaratis develop something like a cartel in the hotel industry and eliminate competition from immigrants of other nationality. Operating this business needed a big initial capital investment and among the members of Gujarati communities like Patels, their surnames or villages and towns of origin bind them in brotherhood. Many Patels and other Gujaratis were immigrating to the U.S. at this time and they found it easier to seek each other for loans and initial capital investment. This was the biggest impediment for many immigrants from other communities who wanted to enter this business.

Members of this community also settled in the Boston Metropolitan area and other towns of Massachusetts along highways and purchased several Days Inn, Super 8 and similar motels along the industrial corridor that people frequented for business or leisure.

The North Indian Restaurateurs:
Another Asian immigrant community that emerged as an entrepreneurial group in the late 1970s and 1980s was the North Indian community of immigrants, mainly from Punjab, India. This community saw an opportunity in introducing ethnic Indian cuisine to the palate of Americans in Boston. Ethnic Indian restaurants in New York City were gaining popularity among locals and entrepreneurs from this

Indian community got invested in this business towards late 1970s.

Although there are stories of ethnic Indian restaurants that opened in Boston in the 60s (Boston.com) and it is likely that some of the earliest families that migrated to Boston had women cooking at home and in some cases, taking catering orders and working out of their homes. However, the first Indian restaurants in Greater Boston were set up in Cambridge in the late 70s and early 80s. The owners hailed from Punjab (Royal Bharat Inc., Bombay Club). Several such owners cherish their history and have published their stories on their website. They claim to have noticed the absence of Indian restaurants in this region and set up small restaurants with a small capital that they raised from their savings or relatives. For all of these entrepreneurs, their families played an important role. The spouses helped in setting up and operating the business and in some cases, kept another job to pay for the household till the business picked up (Royal Bharat Inc., Bombay Club).

Indian restaurants were an immediate hit among the locals and were followed by similar restaurants catering to North Indian cuisine in the 80s. One of the major reasons for the success of North Indian restaurants among Americans was that these restaurants served meat and there was an interest in the American community about the ethnic oriental and Indian cuisine. India Pavilion and Passage to India are among the first Indian restaurants in Cambridge (Royal Bharat Inc.) whereas Kebab n' Kurry is one such restaurant started in the basement of a Back Bay building in the early 80s (Bombay Club).

One of the biggest difficulties for these restaurants was finding a place in Boston that sold ethnic Indian spices and grocery. Some restaurateurs mention in the stories on their website that they traveled to New

York that had the closest Indian community and ethnic stores (Bombay Club, Menon et al.). This also gave rise to the first Indian grocery store in Cambridge, India Food and Spices that was started in 1984.

The all-vegetarian Indian restaurants, mostly owned by immigrants from the southern states of India followed much later.

The ones described above are macro trends among these communities and do not necessarily imply that members of these communities did not work in other sectors. Apart from these, certain other members of the Asian Indian community who were settled in Boston for a longer period and more stable, began working on establishing cultural markers that they were familiar with from their home country.

South India and Temples:
South India comprises the states Andhra Pradesh, Kerala, Karnataka and Tamil Nadu and union territories Lakshadweep and Tamil Nadu. The southern states of India are a reason for the continuation of English as an official language of India. They hailed from a non-Hindi speaking belt and opposed the imposition of Hindi as the official language of India. They are known for their strong support for English as the official administrative language of India and education in English, a consistently high rate of literacy compared to the rest of India and their inclination towards education and the sciences. The South Indians are likely to be among the first high-skilled migrants to Boston. Cultural markers that the early settlers left behind can be helpful in telling stories of these communities.

Apart from the abovementioned characteristics, the South India is known for an abundance of beautifully designed temples and specially trained architects and sculptors who built these temples.

One of the earliest references to a Hindu Temple in Boston is probably the International Society for Krishna Consciousness (ISKCON) temple in Boston that has its founding history dating back to 1965 when Srila Prabhupada, the founder of this community in the US conducted the first such prayers on the western soil in Boston. ISKCON is mainly made up of monotheist members of the Gaudiya Vaishnava members of the Hindu community who hail from the state of Karnataka in India (ISKCON).

In late 70s, a bigger project for setting up a temple in the Boston suburbs was developed when some Asian Indian immigrants who had settled in Massachusetts thought of how impressed they were with the Ganesh Temple built in New York and how they wished they could have something similar in Massachusetts (Sri Lakshmi Temple, 2007) This group decided to execute this idea and founded New England Hindu Temple Inc in 1978 Each member initially contributed $101 to raise funds for this project. They organized their first congregation, a pooja[10] in Melrose and raised some more funds. They moved their congregation to a more easily accessible Needham (on Route 128) and purchased a plot of land in Ashland. They decided to name the temple after Sri Lakshmi, the presiding deity in this temple. In the Hindu culture, Lakshmi is considered to be the Goddess of wealth and the thought of dedicating the temple to Lakshmi resonated with everyone since they had settled in Boston in the pursuit of wealth, prosperity and well-being.

They employed the services of Sri Ganapathy Sthapathy, a well-known temple architect from the Institute of Ar-

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[10] Pooja is a holy function organized on auspicious occasions where worshippers pray to a deity and seek its blessings.

chitecture and Sculpture, Tamil Nadu who had earlier designed the Ganesh Temple that they were all so impressed with in New York. The temple was completely built in 1986.

Asian Indian immigrants from Africa:

Apart from these immigrants from Asia who identified their nationality as Indians, the 70s and 80s also saw migration of Asian Indians from Africa, especially East Africa. Indians from the western and northern parts of India (prior to British rule) traveled to East Africa for trade. Many more Indians were brought into this region as slaves during the British rule when the British colonized India as well as countries in East and West Africa. Indians were taken as slaves and laborers to work on railroad in the British colony of Nigeria.

Following decolonization in the 1960s when Kenya, Uganda and Tanzania, countries that constituted East Africa became free, Asian Indians either left or were forced out of these countries. This was also the case in Nigeria where Indians fled after the Nigerian Civil War that ended in the 1970s In East Africa, the most notable case of forced migration occurred in the 70s when Idi Amin, a dictator who ruled Uganda forced Indians out of the county. Many of these Indians fled and moved to Britain, Canada, US or moved back to India. Some of those who moved to the US at this time came to Massachusetts[11] due to the opportunities in the state.

Indian immigrants from East Africa thus joined the group of high skilled and educated immigrants from South Asia who

[11]Vera Mindy Chokalingam better known as Mindy Kaling who starred as Kelly Kapoor in the TV show The Office is the child of Asian Indian immigrants who lived in Nigeria before moving to Cambridge, MA, Src: http://en.wikipedia.org/wiki/Mindy_Kaling

came to work in the information technology and aligned industries in and around Boston. Immigrants who moved to Boston in these years recognize that they were comfortably settled in their home countries with a steady job and a good salary and moving to the US was a matter of choice since it provided an opportunity to move away from excessive family ties and start a new trajectory of career growth and economic ascent.

Other immigrants:

It is also interesting to note that US Census identifies about 9 of immigrants who identified their origins as India as Whites. India was colonized up to 1947 and it is likely that the people who migrated to Boston from India were originally British who had continued to live in India for some years before migrating to the United Kingdom or the US.

Apart from this, the 80s saw a significant rise in the population of immigrants from other parts of South Asia. Prominent among these was the rise of the Pakistani population. Immigrants from Bangladesh, Sri Lanka and Burma also started moving to the Boston Metropolitan Area in small numbers.

Where did they go?

A majority of the Asian Indian population in the 70s and South Asian groups of the 80s continued to concentrate in the Greater Boston Area. The concentration of Asian Indian immigrants in Boston Metropolitan area is dense as is visible in Table 5 and Figure 26.

	Massachusetts	Boston	Lawrence-Haverhill (MA)	Providence-Warwick-Pawtucket (MA)	Springfield-Chicopee-Holyoke (MA)	Worcester
1975-1980	2015	1427	14	131	0	179
1970-1974	1485	1008	35	195	52	160

Table 5: Population of Asian Indian immigrants in Metropolitan Areas (SMSAs) of Massachusetts, US Census Bureau, 1980
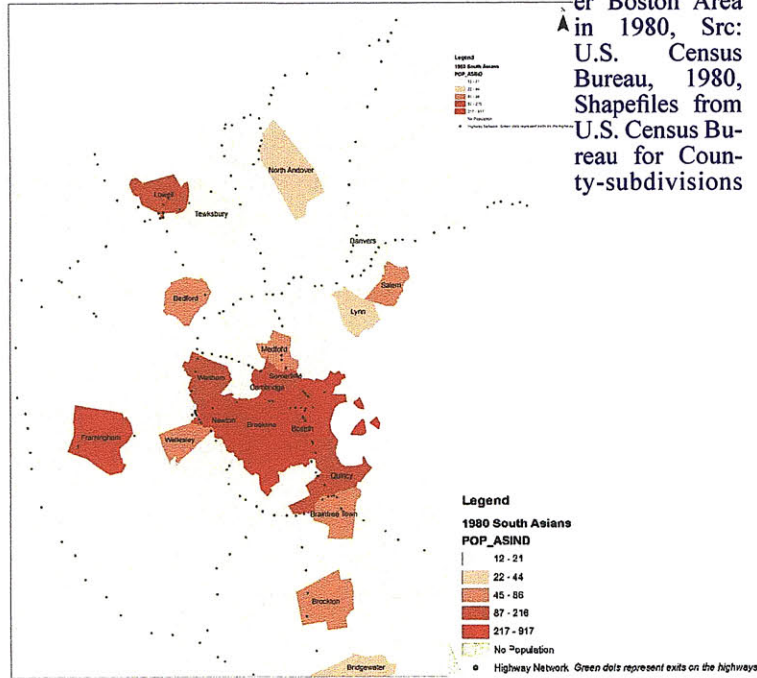
South Asians All in Greater Boston Area, 1980

Legend
1980 South Asians
POP_ASIND
| 12 - 21
| 22 - 44
| 45 - 86
| 87 - 216
| 217 - 917
| No Population
● Highway Network *Green dots represent exits on the highways*

Figure 26: South Asians in Greater Boston Area in 1980, Src: U.S. Census Bureau, 1980, Shapefiles from U.S. Census Bureau for County-subdivisions

Places	Asian Indian	Places	Bangladeshi	Places	Burmese	Places	Pakistani	Places	Sri Lankan
Boston City	1962	Cambridge City	51	Boston City	41	Boston City	244	Boston City	50
Cambridge City	1386	Boston City	41	Cambridge City	11	Cambridge City	113	Somerville City	30
Lowell City	1150	Stoneham Town	24	Natick Town	6	Brockton City	52	Cambridge City	20
Somerville City	658	Lowell City	22	Somerville City	6	Shrewsbury Town	47	Malden City	20
Waltham City	653	Leominster City	16	Great Barrington Town	3	Somerville City	36	Winchester Town	16
Framingham Town	642	Lexington Town	16	Lawrence City	3	Brookline Town	31	Amherst Town	15
Worcester City	557	Stoughton Town	12	Quincy City	3	Barnstable Town	30	Everett City	12
Burlington Town	529	Sturbridge Town	12	Randolph Town	3	Hyannis CDP	28	Framingham Town	10
Amherst Town	461	Worcester City	10	Stoughton Town	3	Fitchburg City	27	Medford City	10
Shrewsbury Town	401	Sudbury Town	9	Milton Town	2	Framingham Town	27	Southborough Town	9
Brookline Town	358	Amherst Town	7	Norwood Town	2	Framingham CDP	27	Worcester City	8
Newton City	350	Somerville City	7	South Hadley Town	2	Billerica Town	25	Lowell City	6
Lexington Town	328	Sunderland Town	7	Sunderland Town	2	Lowell City	25	Needham Town	6
Malden City	266	Watertown Town	7	Weymouth Town	2	Waltham City	25	Newton City	6
Andover Town	262	Burlington Town	6	Worcester City	2	Quincy City	24	North Amherst CDP	6
Chelmsford Town	259	Malden City	5			South Hadley Town	24	Northampton City	6
Marlborough City	232	North Amherst CDP	5			Newton City	20	Reading Town	6
Woburn City	224	Shrewsbury Town	5					Winthrop Town	6
Arlington Town	212	Woburn City	5						
Brockton City	212								
Acton Town	204								

Table 6: Most populated pockets of South Asian settlement in Massachusetts by nationality, 1980-90, Src: US Census Bureau, 1990: http://www.census.gov/prod/cen1990/cp1/cp-1-23.pdf (Table 6)

However, another circumferential corridor around Massachusetts, the Interstate Highway 495 [I-495] was emerging as the outer boundary of the Greater Boston area and some industries in the 70s and 80s had begun moving to the locations between Route 128 and I-495 that were easily accessible along these highway corridors Pockets of Asian Indian communities developed in Worcester in the 70s and more Asian Indian communities towards Route I-495 started emerging in the 80s. As a result of this, notable differences can be observed in the topmost neighborhoods of choice for the Asian Indian immigrant settlers who had been in Boston longer than the other South Asian communities.

Table 6 represents some of the denser agglomerations of South Asians for each nationality. It can be clearly observed the except
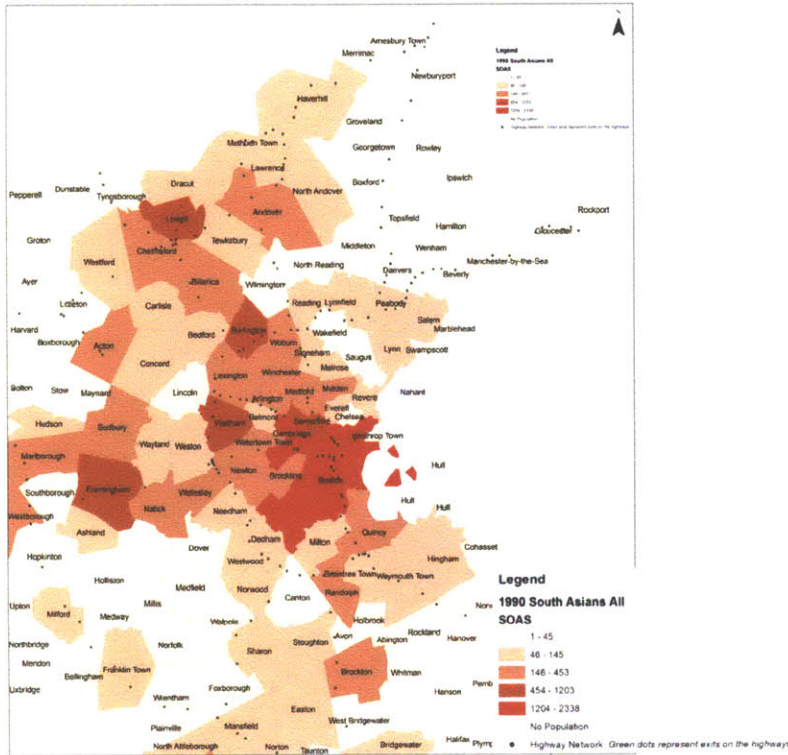
South Asians All in Greater Boston Area, 1990

Figure 27: The growth and spread of population from 80s to the 90s is visible and distinct. Src: U.S. Census Bureau, 1990,: http://www.census.gov/prod/cen1990/cp1/cp-1-23.pdf (Table 6) Shapefiles from U.S. Census Bureau for county subdivisions

for the Sri Lankans, Boston and Cambridge ranked as the top two densest cities for all groups of South Asian immigrants.

There was a visible transition in the settlement of Asian Indians from the 70s to the 80s. Although they continued to live along Route 128 as can be seen by their densest settlements in Massa-

chusetts in Table 6, some of the Indian immigrants had moved into the outer periphery of I-495. Population of Andover and Worcester grew even more in this period and a small suburban town of Shrewsbury strategically located between Framingham and Worcester with easy access to the interstate highway corridors and Route 128 developed as a rapidly growing settlement.

Figure 27 shows a transition from the South Asian population clusters in the 80s to the 90s. As the original Asian Indian immigrant population spread outwards with the influx of the newer working population from India, new denser pockets that were not as prominent in the 70s developed in the 80s. The darker colors in Figure 27 trace the periphery of Route 128 and I-495 where a majority of these high technology companies were located.

In addition to this, some of the first waves of immigration from other parts of South Asia to Massachusetts appeared in the 80s as depicted in Table 6. These waves also added to the population growth.

Push Factors- Why did they leave their home countries:
The 70s and 80s were decades immediately following the abolishment of the ban on Asian immigrants that had restricted their numbers in the earlier decades. Many of the Asian Indian immigrants who moved to Boston in this period moved to reunite and settle with their families. Others came to look for opportunities of career and economic growth that an economically struggling India could not offer.

Media reports also indicate that the higher number of Pakistanis could also include immigrants from Afghanistan who were trying to flee from a war torn country. Many AfghaCnis in this period chose to immigrate via Pakistan to the US.

Figure 28: High technology companies spread outwards to the I-495 corridor before the advent of the dot-com boom. Route 128 and I-495 formed two outer boundaries of Boston., Image Src: Google Earth, Names of Companies, Src: Moments timeline

As discussed earlier in this paper, some of the Indian immigrants did not really migrate from India but moved from Africa to escape political tensions and dangers of a forced migration.

Pull Factors- Why did they come to Boston:

Boston's economy was struggling in the 70s and there was a tight cap on employment. Some of those immigrants who moved to Boston in this period came to reunite with their families or find employment in lower-paying industries. Some of the first ethnic restaurants, grocery stores and motels in Boston emerged in this period. With a boom in development in health sciences and biotechnology, there were many medical professionals and scientists moving to Boston.

Through the 70s and 80s, agglomeration of high technology industries continued along Route 128. These industries continued to support Massachusetts economy through the 80s and were touted as the 'Massachusetts Miracle.' Such industries expanded into the outer periphery of Greater Boston that was created by the circular Interstate 495. Figure 28 shows high technology industries that survived through the 60s and 70s and the new ones that emerged in the 80s.

Legend

1 Dot = 5

✕ POPPAK

POPSRIL

POPASIND

POPBANG

✕ POPBURM

No Population

Figure 29: At the beginning of 1990s, the South Asian immigrant population in Greater Boston was a medley of Asian Indians (yellow) and newer waves of immigrants from other countries of South Asia, Data: US Census Bureau, 1990: http://www.census.gov/prod/cen1990/cp1/cp-1-23.pdf, Table 6, Image Src: U.S. Census Bureau, County Subdivisions

CHAPTER 7: 1990s- RAPID GROWTH

The decade of 1990s spelt a dramatic boom in the IT industry. Greater Boston, that was increasingly losing out to the Silicon Valley as America's high technology sector suffered further as major dot com industries that emerged in this period located themselves on the west coast.

South Asian immigrant population in California and New York increased rapidly in this decade. The numbers also rose at a fast rate for Massachusetts. But compared to their growth in these other states, the numbers were not as phenomenal. However, in this decade, the South Asian population that settled in Massachusetts became more aligned in the characteristics they possessed and in their skill set. It was a predominantly well-educated, professional, high-skilled South Asian population that settled in Massachusetts.

Who were the people?

Between 1990s and 2000s, the Asian Indian population was the second fastest growing population in Metro Boston at a growth rate of 129 per cent [second to Hmong population- 355 per cent] (Asian American Center). The growth seems phenomenal when one compares this to the overall rate of growth in Boston, which was less than 6 per cent.

	1990	2000	% Change	% AAs in 2000
Bangladesh alone	–	544	–	0.2%
Cambodian	13,405	18,890	40.9%	8.5%
Chinese	50,713	78,415	54.6%	35.1%
Filipino	5,523	7,415	34.3%	3.3%
Hmong	228	1,038	355.3%	0.5%
Indian	17,978	41,240	129.4%	18.5%
Indonesian	–	670	-	0.3%
Japanese	7,912	9,699	22.6%	4.3%
Korean	10,107	15,615	54.5%	7.0%
Laotian	3,797	3,576	-5.8%	1.6%
Malaysian	–	199	–	0.1%
Pakastani	–	1,821	–	0.8%
Sri Lankan	–	602	–	0.3%
Taiwanese	–	2,208	–	1.0%
Thai	1,314	1,969	49.8%	0.9%
Vietnamese	14,502	31,511	117.3%	14.1%
Other Asian	–	533	–	0.2%
Other Asian, not specified	–	3,655	–	1.6%
Total Asian (one ethnicity)	–	219,600	–	98.3%
Total Asian*	131,453	223,424	70.0%	100.0%

Data Sets: U.S. Census 1990 Summary Tape File 1 (STF 1) 100% Data and U.S. Census 2000 Summary File 2 (STF 2) 100% Data

* This total reflects Asians who identified themselves as one or more Asian subgroups.

Table 7: After the Hmongs, Asian Indians had the fastest population growth between 1990 and 2000. Population by Asian sub-groups. Src- Institute for Asian American Studies (page 4), Data: U.S. Census Bureau

Table 7 gives a percentage change for South Asian groups in Boston from 1990 to 2000 (Institute for Asian American Studies). Apart from a phenomenal rise of the Asian Indian community, also noteworthy is the emergence of Bangladeshi, Pakistani and Sri Lankan communities in Boston between 1990 and 2000. There were 544 Bangladeshis, 1821 Pakistanis and 602 Sri Lankans in this region by the beginning of 2000.

The table also shows that the share of Asian Indians among the Asian population became 18.5 per cent by the end of the 20th century. The increase meant that almost one in five Asians in Massachusetts was

Indian
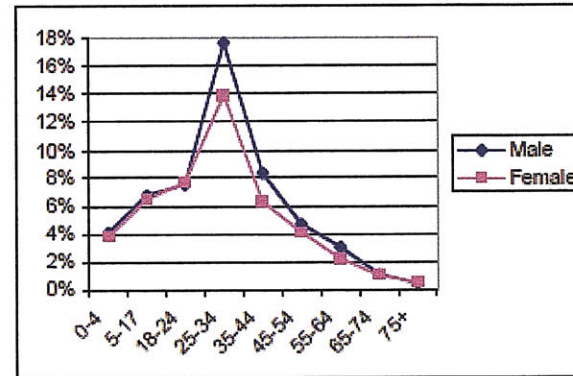
Figure 30: The proportion of Indians in the working age group was high in Massachusetts. There were consistently slightly lower number of females in this age group. Src: Institute for Asian American Studies, page 8, Data: U.S. Census Bureau 2010: http://www.census.gov/prod/cen1990/cp1/cp-1-23.pdf (Table 26,55,62)

an Indian, a mark of visible growth for Asian Indians in Massachusetts.

The population of Asian Indians [53.8% to 46.2%] and Pakistanis [56.4% to 43.6%] in this period showed a higher proportion of male population (Institute for Asian American Studies) as seen in Figure 30. This pattern was reminiscent of the trend observed in earlier decades where there are higher number of males in the working age group and higher number of females in the 65 years and above age group.

Changes favorable to high technology industries and workers in India took place in the 1990s. New immigration policies were enforced in the U.S. in 1990 that prioritized skill-set and immediate family in the criteria for acceptance of potential immigrants.

However, the most phenomenal characteristic of South Asians who immigrated to Massachusetts was a vast difference in the trajectory

Cambodian
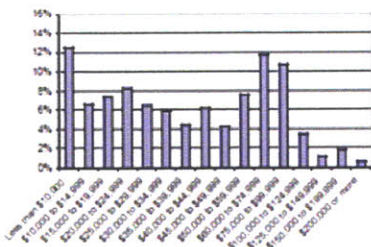
Chinese
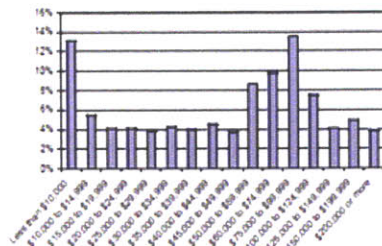
Indian
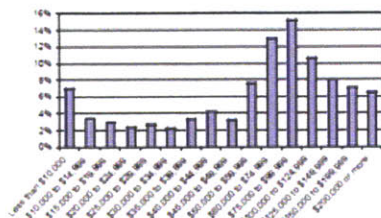
Vietnamese
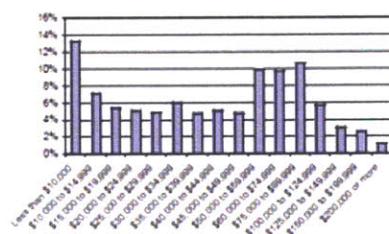
Figure 31: Household Income Distribution for Asian sub-groups in Massachusetts. The graphs are bimodal for every sub-group above except the Asian Indians that is skewed to the right in the higher income bracket. Src: Institute for Asian American Studies (page 13), Data: U.S. Census Bureau, 2010

of their income from other Asians. Figure 31, sourced from the Asian Americans in Metro Boston Report (Institute for Asian American Studies) shows the striking difference in the immigrant population groups from different regions of Asia. The Cambodians, the Chinese and the Vietnamese showed a bi-modal income graph with the concentration of a large proportion of their population in two distinct income groups. The Indian immigrant population leaned towards the furthest end of the income graph indicating a high influx of Asian Indian immigrants with professional skills and higher levels of education.

Table 12 . Poverty Status of Families by Race and Latino Origin

Asian Am.	White	Black or Afr. Am.	Nat. Am.	Latino	TOTAL POP
12.3%	4.4%	17.7%	18.7%	26.2%	6.4%

Table 13. Poverty Status of Families by Asian Subgroup

Cambodian	Chinese	Filipino	Hmong	Indian	Japanese
23.9%	9.9%	7.4%	17.4%	5.3%	13.0%

Korean	Laotian	Pakistani	Thai	Vietnamese
14.6%	5.0%	23.3%	10.6%	21.2%

Table 8: Poverty status of families by Race and Asian Sub-group in Massachusetts. Pakistani immigrants have a quarter of their population in poverty. Src: Institute for Asian American Studies (table 14) Data: U.S. Census Bureau, 2000

The 1990s thus marked a major transformation in the income distribution of Asian Indian population from previous decades that was more dispersed across the income groups. Change in immigration policies tending towards skills and merit and the focused and steady growth of high technology sector and education institutions in Massachusetts was primarily responsible for attracting this population.

The sub-groups of South Asian immigrants however, were at extreme ends of the spectrum. Table 8 presents data on poverty among Asians in Massachusetts.

Pakistani [23.3 per cent] and Cambodians [23.9 per

Table 19. Average Household Size by Asian Subgroup

Cambodian	Chinese	Filipino	Hmong	Indian	Japanese
4.6	2.9	2.7	6.5	2.7	2.0

Korean	Laotian	Pakistani	Thai	Vietnamese
2.4	4.4	3.8	2.3	3.9

Table 9: Average Household Size for Asians in Massachusetts, Src: Institute for Asian American Studies (page 20), Data Src: U.S. Census Bureau, 2000

cent] made up the highest proportion of Asian immigrants in the below poverty group of residents in Massachusetts. Asian Indians who immigrated to the U.S. in the 1960s did not come as families. However, the transition period saw an upsurge of families. However, the trend was a bit different for Pakistani immigrants as noticed in table 9 (Institute for Asian American Studies).

Pakistanis immigrating to Massachusetts in the 1990s were some of the early settlers from the Pakistani sub-group in Boston. Although Pakistanis had begun coming to Massachusetts in late 70s and 80s, their presence became significant in the years succeeding the 90s. However, in this early period of struggle and settlement, the household size of Pakistani immigrants was higher than the household size of its South Asian neighbor. This indicates a greater tendency among Pakistanis to immigrate as families. Lack of employment opportunity for every family member and the need for schooling for their children could be a reason that this group had a higher percentage of its population in the below poverty status group in Massachusetts.
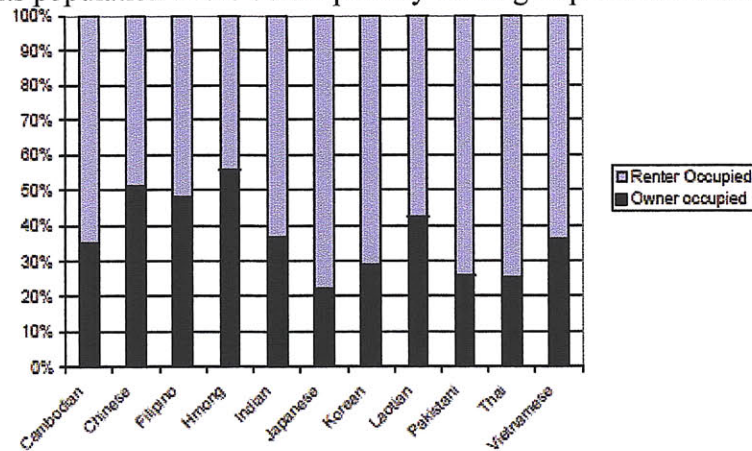
Figure 32: Home-ownership patterns, tenure among Asian sub-groups in Massachusetts, Src: Institute for Asian American Studies (page 20), Data: U.S. Census Bureau, 2000

Overall, less than 40 per cent of Indians and Pakistanis invested in buying homes and lived in renter occupied housing- a sign of greater presence of newly immigrated population (Figure 32).

While 72.6 per cent of Indians were employed in management, professional and related occupations, less than 50 per cent Pakistanis were employed in these occupations and an almost equal proportion was employed in sales and office occupations. The representation of Pakistanis in the Sales and office occupations was

	Cambodian	Chinese	Filipino	Hmong	Indian	Japanese
Management, professional, and related occupations	16.3%	57.2%	53.2%	15.0%	72.6%	67.0%
Service occupations	7.6%	15.1%	15.5%	4.0%	5.4%	9.2%
Sales and office occupations	20.5%	17.7%	20.1%	19.0%	14.0%	19.3%
Farming, fishing, and forestry occupations	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Construction, extraction, and maintenance occupations	4.1%	1.9%	2.7%	4.6%	1.3%	0.6%
Production, transportation, and material moving occupations	51.6%	8.0%	8.5%	57.5%	6.7%	3.8%

	Korean	Laotian	Pakistani	Thai	Vietnamese
Management, professional, and related occupations	55.9%	11.9%	44.8%	39.9%	26.4%
Service occupations	9.2%	7.1%	8.1%	27.7%	13.2%
Sales and office occupations	21.7%	13.9%	40.1%	18.3%	20.4%
Farming, fishing, and forestry occupations	0.0%	0.6%	0.0%	0.0%	0.3%
Construction, extraction, and maintenance occupations	0.8%	4.9%	1.1%	2.2%	7.2%
Production, transportation, and material moving occupations	12.3%	61.6%	5.9%	12.0%	32.5%

Table 10: Occupations for Asians employed in the Civilian Labor Force, Massachusetts 1990-2000, Image Src: Institute for Asian American Studies, Data Source: U.S. Census Bureau, 2000 (page 17)

the highest for any Asian Sub-group. A high proportion of Thai in the service occupations could be due to their large presence in the restaurant business in Massachusetts. Asian Indians did not take to intense labor-oriented jobs in construction, maintenance, transportation and material moving. This was also the case with Pakistanis in Massachusetts in the 1990s, according to table 10.

Where did they go?

The population of Asian Indians in Massachusetts was greatly concentrated in the Boston-Worcester-Lawrence area. Figure 33 gives a comparison of the proportion of Asian Indian population to other Asian sub-groups. However, the Asian Indian population did spread to other areas of Massachusetts in the 1990s as can be seen in figure 33 and table 11 where the Boston-Worcester-Lawrence belt has the highest population of Asian Indians. However, Springfield and Providence-Fall River-Warwick metro areas

	Asian Indian	Chinese	Filipino	Japanese	Korean	Vietnamese	Other Asian
Barnstable-Yarmouth, MA	163	262	97	70	111	64	167
Boston-Worcester-Lawrence, MA Portion	40478	80008	7208	9611	15433	31235	35136
Pittsfield, MA	320	121	41	46	77	78	96
Providence-Fall River-Warwick, MA Portion	756	598	187	83	165	276	2156
Springfield, MA	1816	2897	564	553	1284	2220	1956

Table 11: Where did the Asian immigrant population live in the 1990s? The above table looks at metropolitan areas and in cases where the areas overlap neighboring states, the population given here is only for the Massachusetts portion of the metropolitan area. Src: U.S. Census Bureau, 2000

Indian population to the outer periphery of Metro Boston. Almost all of the most populated suburbs are along Route 128 with the exception of Shrewsbury and Worcester closest to the I-495 which forms the outer periphery of Metro Boston.

Another recorded group from South Asia in the U.S. Census Report 2000, Pakistan, had its immigrant population settled in Boston (267) and Cambridge (125), a tendency depicted by almost all immigrant groups that initially moved to the central urban core before moving outwards into the suburbs.

Push Factors: Why did they leave their homeland?

Boston-Worcester-Lawrence, MA Portion

Figure 33: Asian population in Boston-Worcester-Lawrence region, 2000. Src: U.S. Census Bureau, 2000 (See table 11)

have a significant proportion of Asian Indian population as well.

Table 12 shows the cities and suburbs where the largest groups of Asian Indian immigrants settled (Institute for Asian American Studies). It shows an interesting shift in movement of the

Indian	
Boston	4,442
Cambridge	2,720
Lowell	2,424
Waltham	1,580
Burlington	1,570
Framingham	1,488
Somerville	1,363
Shrewsbury	1,148
Quincy	1,127
Worcester	1,021

Table 12: Ten largest agglomerations of Asian Indian Population, Src: Institute for Asian American Studies, Page 6

The 1990s marked a period of massive immigration from India to the other parts of the world. India adopted a liberalization policy in 1990s that opened its doors to foreign investors. Indians seeking employment in multinational organizations saw this

as an opportunity to seek employment with such firms. The difference in the value of an American dollar to the Indian Rupee was great and earning in American Dollars seemed like an attractive prospect to the highly skilled immigrants who were likely to find jobs in the U.S. in the era of merit-based immigration.

The dot com boom of the 1990s led to a growth of engineering and high technology companies in the U.S., a sector conducive to the skill sets of South Asians, especially from India. With a greater emphasis on skill-sets and merit as criteria for U.S. immigration, India saw one of the biggest economic migration that it had seen in the 20th century.

Pull Factors: Why did they come to Boston?
Mosaic browser (that later became Netscape Navigator) revolutionalized the use of internet and made it a household name. A consequence of this revolution was a rise in dot-com industries. Seeing a potential in the use of internet to conduct businesses, new companies interested in e-commerce emerged. The rage was so immense that when these companies opened their stock for initial public offering, the number of investors interested in buying their shares increased at a phenomenal rate. Anything ending in dot-com or beginning with an 'e-' became a trend in this period. Several dot com companies of this time became an overnight sensation. This led to fears that the dot-com bubble that was rising in the 1990s would soon burst. This did not stop the companies from growing and by the end of 1990s, Silicon Valley had become home to some of the biggest giants of this era- Yahoo, eBay, Cisco and later, Google. Amazon, headquartered in Washington also emerged in this period.

Massachusetts continued to have a more guarded approach to the revolution in this period. Some of the biggest employers in the high technology sector in Massachusetts in this period were companies founded in the late 1970s and mid 1980s- EMC and Mathworks. However, information technology [IT] giants from California and other high technology companies from the west coast began investing in Massachusetts towards the end of the 20th century and early 2000s by setting up new branches or acquiring smaller companies in Massachusetts. Apart from the IT industries, Greater Boston flourished in its biotechnology sector. Biogen, Genzyme [founded in 1981] (Genzyme), EMD Millipore [The Merck Group] and the Massachusetts General Hospital continued to be the biggest employers in the biotechnology sector. Massachusetts continued to hold its dominant historic position in biotechnology and allied sciences. Medical and health science programs at schools in Greater Boston also attracted immigrant student population from this field.

CHAPTER 8: 2000s- NEW WAVES

Immigration policies in the U.S. received a very serious attention when September 11, 2001 terror attacks in New York shook the nation. The steps involved tightening border security and emphasizing attention towards illegal immigration in the U.S. A consequence of these decisions was that the U.S. immigration policies relied on evidence of professional skills and immediate family as the most important criteria for allowing immigration.

This further streamlined South Asian immigration and reflected in the household, education and income categories of South Asian immigrants, notably in Massachusetts. There was a noticeable change in Massachusetts' policies and approach towards start-ups and innovation, seed funding and tax incentives that also contributed to the growth of young Asian Indian entrepreneurs in this region.

Who were the people?
A majority of the findings for the 2000s are based on the American Community Survey [ACS] Report for 2010, 5-year estimates for Massachusetts. Since ACS was only initiated in 2000 and the details it provided evolved over the years, information on South Asians for years before 2005 is not available. However, the five year estimates tell a story of the South Asian immigrants in the decade of 2000-2009. In the ACS data, South Asians are identified as South
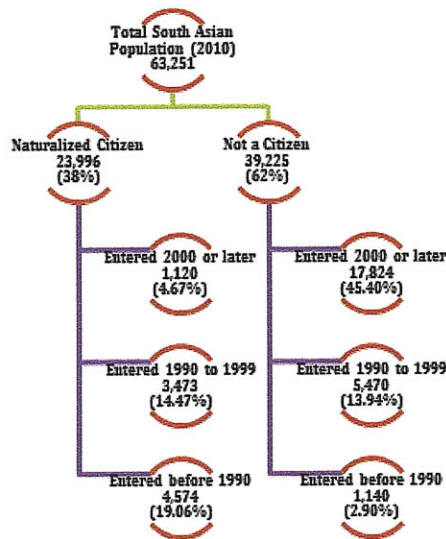
Figure 35: Educational attainment of South Asians in Massachusetts, Src: American Community Survey, 2010, 5 year estimates, ACS_10_5YR_S0505
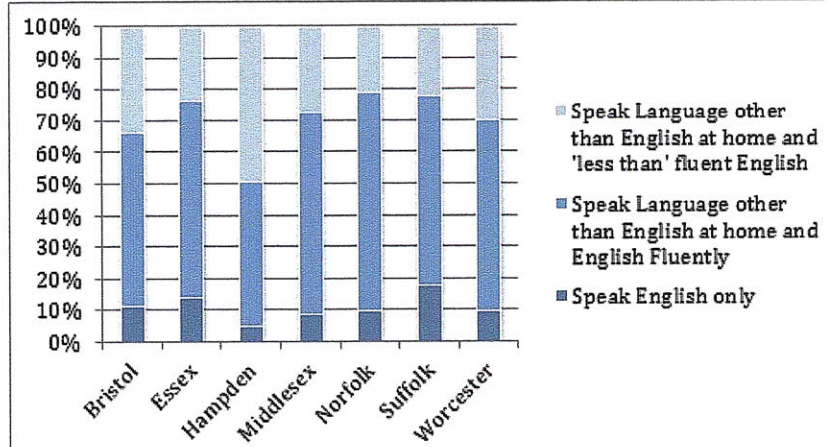
Figure 36: Ability to speak English and Second language at home, South Asians in Massachusetts by counties, American Community Survey, 2010, 5 year estimates, ACS_10_5YR_S0505

Central Asians. The definition adopted in this thesis for South Asians considers these nations [see Glossary] and hence, a difference in nomenclature would not affect the data used for this study.

According to figure 34, more than half of those who identified their origins as South Asians were not citizens of the U.S. Almost half [45.40 per cent] of those who were non-citizens came to Massachusetts in 2000 or later. This suggests that a majority of the South Asian population in Massachusetts is a non-citizen working population or enrolled in schools as students. It also suggests that the influx of South Asian immigrants has grown maintaining a higher proportion of South Asian population in the younger, working age group.

Going back to the beginning of the 21st century, media reports following the 2001 terror attacks published stories on discrimination and attacks on South Asians in many parts of the U.S. Border security regulations for entry in the U.S. had further tightened.

Immigration to the U.S. from South Asia that succeeded these years of tightened immigration control was heavily skills-based with another immediate priority to close fam-

ily members. Immigrants who came from South Asia were largely well-educated, highly skilled, professional or exhibited promises of gaining skills through education in the U.S.

Figure 35 shows the educational attainment levels of South Asians in Massachusetts in 2010. The rise in the graph towards the right end of the horizontal axis shows that a higher number of South Asians had a bachelor's or a higher degree of education. The lower level of educational attainment in Hampden County of Massachusetts that is furthest away from Metro Boston core is striking.

The level of comfort with communicating in English however, shows variations by counties (Figure 36). The lower level of educational attainment of Hampden county is also reflected in the ability to speak English among its South Asian residents. Almost 50 per cent of those in the Hampden County claimed limited comfort with speaking in English.

It is also noteworthy that in almost all counties of Massachusetts, South Asians spoke English and another language at home. This is a characteristic of many first generation immigrants who try to retain their mother tongue and other cultural affiliations at home and within the community. The second generation of immigrants is likely to feel closer to their new homeland and identify with the American culture. It is also likely that the second generation is subject to some of the cultural obligations continued by their parents who are the first generation immigrants. It means that a majority of the population that speaks a second language at home has a strong presence of first generation immigrants. This indicates that the influx of new immigrants from South Asia into Massachusetts is greater than the settled

population who are citizens and second generation immigrants.

The higher rate of comfort with speaking in English among South Asians can be attributed to two major cultural reasons. The medium of instruction in higher level educational institutions in countries like India is predominantly English. The other more crucial factor that necessitates ability to communicate in English among South Asians is the vast diversity in languages and dialects spoken across the Indian sub-continent. English is one of India's official languages of administration. The colonial legacy of English serves as a uniting factor among South Asians who come from diverse linguistic backgrounds. The ability to speak English also helped South Asians immigrate more easily than other Asians into the U.S.

In a report based on immigration trends in Boston in 2000, the Institute for Asian American Studies noted that the median household income for Asian Indians, the biggest group among South Asians was higher than any other Asian subgroup (Table 13) (Institute for Asian American Studies).

The trend is reflected in 2010 data from the ACS that depicts the

Table 9. Median Household Income by Asian Subgroup

Cambodian	Chinese	Filipino	Hmong	Indian	Japanese
$37,295	$52,121	$60,524	$46,875	$71,771	$38,033

Korean	Laotian	Pakistani	Thai	Vietnamese
$40,408	$50,893	$45,174	$44,167	$42,402

Table 13: Median Household Income of Asian Groups, 2000 Image Src: Institute of Asian American Studies (Page 12), Data Source, US Census Bureau, 2010

income distribution of South Asians by counties. Figure 37 shows the income distribution for South Asians. The trend continues from the 1990s where South Asians represented the cream of the Asian American immigrants in Massachusetts earning higher than any

Earnings in the past 12 months, South Asians, Massachusetts-2010

Legend: Bristol, Essex, Hampden, Middlesex, Norfolk, Suffolk, Worcester
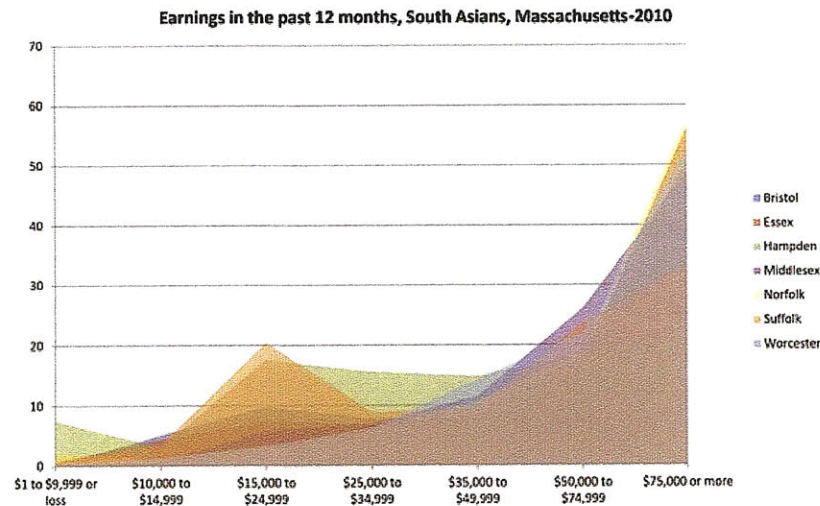
Figure 37: South Asians in Massachusetts- earnings in the past 12 months for full-time, year-round workers, Source: American Community Survey, 2010, 5 year estimates

other Asian sub-group. The bulk of the South Asian population is concentrated in the higher income group of $75,000 or more earnings in 2010 indicating that a majority of the South Asian population in Massachusetts is a working population employed in the high-technology sector of Greater Boston needing high-skilled labor. A smaller peak for the Suffolk county is representative of the student population in Boston. For example, Northeastern University in Boston, Suffolk county reported a 74 per cent increase in the number of Asian American students enrolled in degree programs at the university (Asian American Center).

A dip in the orange section representing Suffolk County on the income graph in Figure 37 also indicates that South Asians earning higher tend to live outwards in the suburbs and that the lower income earning population is concentrated in the urban core.

About 41 per cent of South Asians settled in Hampden County earn $50,000 or more, an exception for the rest of the South Asian community where more than 50 per cent of the population earns in the higher income bracket. The results are surprising since Hampden county is home to Springfield, one of the two major cities that form a Knowledge-Corridor in the western end of Massachusetts and have emerging high technology companies in the region.

The income patterns are further substantiated with employ-

Counties	Population 16 years and over with earnings	$1 to $9,999 or loss	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 to $74,999	$75,000 or more
Bristol	978	0	5.1	9.8	7.8	7.6	18.9	50.8
Essex	1624	0.6	4.4	7.3	6.7	8.1	16.7	56.2
Hampden	942	7.5	3.1	17.6	15.6	14.9	18.4	22.9
Middlesex	14888	0.3	0.7	5.7	7	11.5	26.1	48.7
Norfolk	4721	1.9	1.2	3.2	6.2	10.7	18.9	57.9
Suffolk	2485	0.8	3.5	20.5	8.9	9.5	23.6	33.2
Worcester	3906	0.5	1.2	3.2	6.2	14.3	22	52.7

Table 14: Percentage of South Asian population in Massachusetts by income groups. Src: American Community Survey, 2010 (5-year estimates)

ment data for South Asian immigrants aged 16 and above. The outermost circle in figure 38 indicates the percentage of South Asian immigrants in civilian labor force and employed in Massachusetts in 2010. The unemployed population of South Asians in Massachusetts across all counties is miniscule.

The working population of South Asians in Massachusetts shows a commitment to live longer in the state. This is reflected in the higher proportion of married couple families of South Asians settled in Massachusetts. Except for the Suffolk County, more than 70 per cent of those settled in all other counties of Massachusetts reported in the census data are married couples (Figure 39).

The desire to live longer in the state among South Asian immi-

Employment Status, South Asians in Massachusetts, 2010
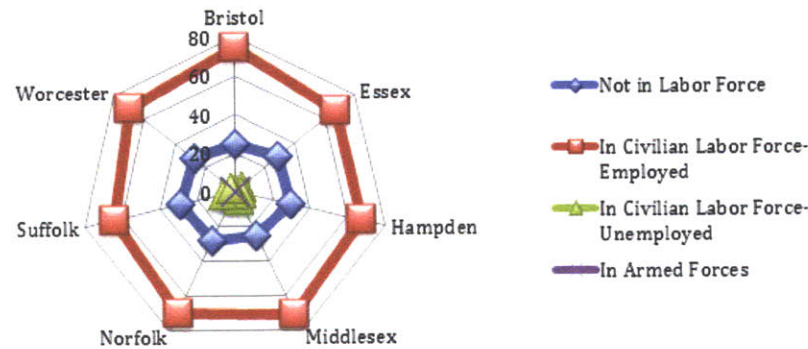
Figure 38: Employment Status of South Asians in Massachusetts, the further outward the population for a county is, higher is the proportion of these immigrants in the county area. Src: ACS 2010, 5-year estimates, ACS_10_5YR_S0505

grants is further seen in the home ownership patterns among these immigrants. Except for the Suffolk and Hampden counties, almost half of the South Asians living in all of the other counties reported a greater tendency to buy residential properties (Table 15). The household size for owner-occupied housing
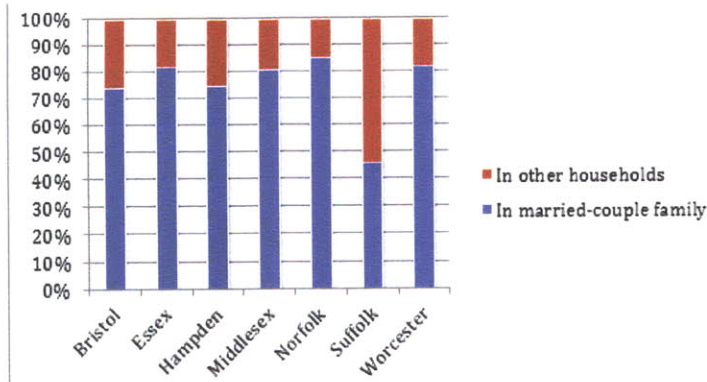
Figure 39: Household type of South Asian families- married-couple or other families. Src: ACS 2010, 5-year estimates.

is also bigger indicating the presence of families among South Asians. This was also observed through the study of figure 39.

Counties	Occupied housing units	Owner-occupied housing units	Renter-occupied housing units	Average household size of owner-occupied unit	Average household size of renter-occupied unit
Bristol	860	52.9	47.1	3.19	1.87
Essex	1465	59.5	40.5	3.27	2.63
Hampden	1110	33.2	66.8	3.52	3
Middlesex	13152	49.9	50.1	3.33	2.64
Norfolk	4098	43.6	56.4	3.3	2.65
Suffolk	3048	29	71	3.04	2.3
Worcester	3489	49.8	50.2	3.51	2.63

Table 15: Home ownership- Owner vs. Renter Occupied Housing by counties. South Asians in Massachuseetts, Src: ACS 2010, 5-year estimates, ACS_10_5YR_S0505

The number of students admitted to graduate schools in Metro Boston increased significantly in this decade as noted previously in the case of Northeastern University and in Tabel 16 from the statistics provided by the International Students Office, MIT.

The numbers indicate that more than half of the students came to pursue their graduate level degrees at MIT. This pool of graduates from schools in the Greater Boston Area, mostly in engineering, medicine and biotechnology provide a supply for existing major employers like EMC and Mathworks; newly created IT giants of the late 90s such as Google, Amazon and Cisco that

	2011	2000	Percentage change
Total Asia	1674	1089	53.72%
India	295	158	86.71%
Afghanistan		1	-100.00%
Bangladesh	5	13	-61.54%
Bhutan			
Burma (Myanmar)	1	2	-50.00%
Nepal	13	6	116.67%
Pakistan	30	31	-3.23%
Sri Lanka	9	6	50.00%

Table 16: Number of students from South Asia admitted to MIT every year. Src: International Student Statistics, MIT International Students Office. http://web.mit.edu/iso/about/statistics.shtml

acquired smaller companies in Massachusetts or established their offices in this region; and many other small to mid-size companies in this region. This was also true for the biotechnology industry and employers such as Novartis, Biogen and Genzyme.

This is an attractive prospect not only for these organizations but also for the South Asian immigrants looking for advanced education and better work opportunities. This is a major driving force that lures students from South Asia to Boston.

The South Asian population constitutes a small percentage of the total population of Massachusetts but makes up a greater share of taxable population. Table 17 is a representation of the earnings of South Asian

INCOME IN THE PAST 12 MONTHS (IN 2010 INFLATION-ADJUSTED DOLLARS)

Counties	Households	With earnings		With Social Security income	
		Percentage Population	Mean earnings (dollars)	Percentage Population	Mean Social Security income (dollars)
Bristol	860	96.4	111,634.00	12.4	15,107.00
Essex	1,465	97.1	122,274.00	6	17,085.00
Hampden	1,110	89.7	66,041.00	9.3	17,451.00
Middlesex	13,152	95.8	122,731.00	8.1	14,807.00
Norfolk	4,098	95.6	141,049.00	6.7	18,329.00
Suffolk	3,048	86.8	101,988.00	2.1	10,480.00
Worcester	3,489	93.1	112,584.00	4.7	12,850.00

Table 17: Income in the past 12 months, South Asians in Massachusetts, Src: ACS 2010, 5 year estimates, ACS_10_5YR_S0505

immigrant population and their share in the social security income.

Where did they go?

Figure 40 is a representation of the distribution of South Asian population by age. A higher presence of South Asians in the 25-44 years age group shows that there was a great influx of immigrants from South Asia that maintained the higher proportion of youth among the South Asian population, a characteristic that
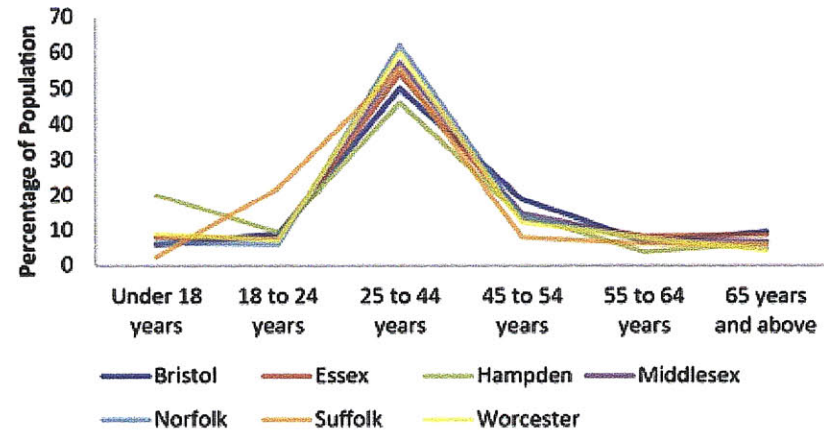
Figure 40: South Asian population in different age groups. Population is heavily concentrated at the center of the graph. Src: ACS 2010, 5 year estimates, ACS_10_5YR_S0505

has been prevalent since the inception of this trend in the 60s.

About 92 per cent South Asians from the Suffolk county who were enrolled in schools went to college or graduate school. The proportion of students enrolled in high school or lower grade was higher in Hampden, Essex and Worcester counties (Figure 41).

The 2000s also saw the emergence of a new trend among im-

School Enrollment, South Asians in Massachusetts-2010
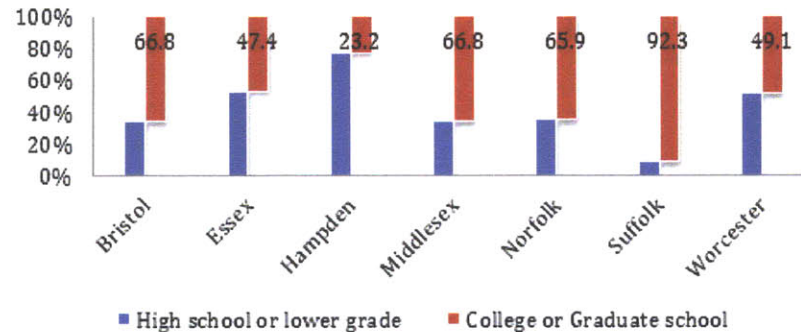
Figure 41: South Asians in Massachusetts, Enrollment in schools by counties. Src: ACS 2010, 5-year estimates, ACS_10_5YR_S0505

Figure 42: Founders who have started companies between 1995-2005 in Massachusetts. Share of founders by nation of origin. Src: Wadhwa, Saxenian et al.,. 2007, page 17

Chart 8a: Industries in which Immigrants from India are Founding Companies
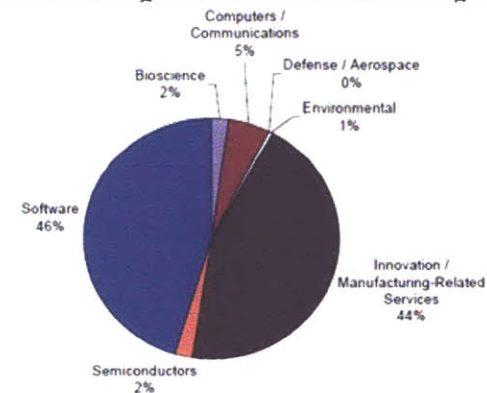
Figure 43: Industries in which Asian Indian immigrants in the US are predominantly founding companies. Src: Wadhwa, Saxenian et al., 2007, page 20

migrants in the U.S. An outcome of the dot-com boom that affected the U.S. in the 1990s and 2000s led to a rise of entrepreneurs in software, engineering and technology fields all over the U.S., especially in technology clusters and agglomerations.

Massachusetts attracted immigrants to this state seeking such opportunities. The state increasingly attracted young, brilliant immigrants who studied at schools like MIT and started their own organizations. South Asians have ranked high in the share of founders who started companies in Greater Boston in the last decade. Figure 42 (Wadhwa, Saxenian et al., 2007) is a representation of the share of founders by national origin in Massachusetts.

India, with a share of 10 per cent among founders of foreign origin, is second only to Israel and shares a spot with Germany in the national origin of founders establishing engineering and technology companies in Massachusetts. A detailed analysis of Indian immigrant entrepreneurs in tech-

nology also brings to light their preference in industries. Figure 43 is a representation of industries in which Indian immigrants have founded companies (Wadhwa, Saxenian et al., 2007).

The inclination of South Asians towards engineering and high

59

technology fields can also be seen among non-entrepreneurial working population of Massachusetts. Figure 44 shows the industries in which South Asians were employed in 2010. The further away from the center the colors are, the more inclined is the South Asian working population to be employed in that sector.

In figure 44, it is evident that a majority of South Asians in the suburb were employed in the professional, scientific and management fields. In the Suffolk county, the education and health care sector seem to be the primary employers. Hampden county shows
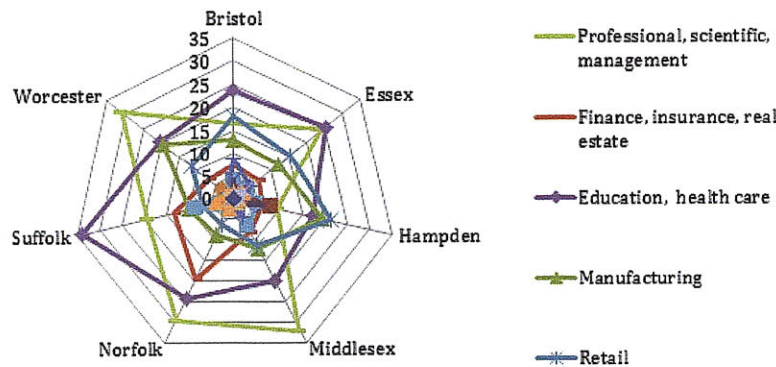
Figure 44: South Asians in Massachusetts by county and Industry, Src: ACS 2010, 5 year estimates, ACS_10_5YR_S0505

the highest employment rate in the retail sector followed by manufacturing and education and health care. Those employed in professional, scientific and management field are the lowest in this county. This is also reflected in the income trends of South Asian immigrants in Hampden county referred to earlier in this paper. A pattern that has continued through all of the decades of South Asian immigration in Massachusetts is that the male-female ratio is close to equal but leans on the higher side for the working males.
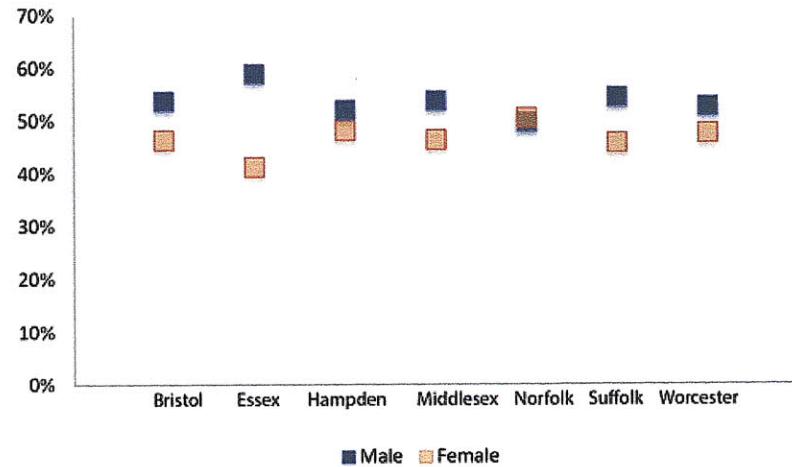
Figure 45: Sex ratio, South Asians in Massachusetts Src: ACS 2010 survey, 5 year estimates, ACS_10_5YR_S0505

This is exactly the opposite of the pattern seen among Filipinos and Japanese (Institute for Asian American Studies, Page 7) where the immigrants are predominantly females. Figure 45 gives a detailed understanding of how the male-female ratio changes across counties. The difference in the number of males and females from the South Asian community is the most pronounced for Essex county and almost equal for Norfolk, Hampden and Worcester counties.

Vehicles Available

Counties	None	1 or more
Bristol	7.4	92.6
Essex	6.3	93.7
Hampden	23.4	76.6
Middlesex	9.6	90.4
Norfolk	6.6	93.4
Suffolk	43.8	56.2
Worcester	6	94

Table 18: Vehicles available, South Asians in Massachusetts, Src: ACS 2010-5 year estimates, ACS_10_5YR_S0505

South Asians largely lived in the suburbs and drove to their workplace. Table 18 provides information on vehicle ownership of South Asians by counties. Except for the Suffolk and Hampden counties, over 90 per cent of those living in the suburbs owned one of more vehicles. Suffolk County, that has a lower number of vehicle owners is well-connected internally with transportation network and comprises student population with lower earnings.

Push Factors: Why did they leave their homeland?

Following the dot-com boom, consultancies offering services to engineering and technology companies grew rapidly, especially in India. Multi-national companies such as Patni Systems, IBM from the U.S. and Infosys in India increasingly undertook projects and outsourced development and customer support work to India. A consequence of this was creation of new jobs in India for engineers and those with technical expertise. The same was also true for management professionals and the Business Process Outsourcing (BPOs) that became a rage in India due to the massive number of jobs they created that employed the youth and catered to their aspiration of working with international clients.

TABLE 1

Four-Year Bachelor's Degrees in Engineering, Computer Science, and Information Technology Awarded from 1999 to 2004 in the United States, India, and China

	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
United States	108,750	114,241	121,263	134,406	137,437	133,854
India		82,107	109,376	129,000	139,000	170,000
China: MoE and CERN				282,610	361,270	
China: MoE Yearbook	212,905	219,563	252,024	351,537	442,463	517,225

Note: Gray highlighted data may be a substantial overestimate.

Table 19: Number of undergraduate degrees in engineering and computer sciences earned in the U.S., India and China between 1999 and 2004. Src: Wadhwa, Gereffi et al., 2007, page 75 (Page 3 of the article pdf file)

MIT Intake of Students from India for Graduate Programs

Year	2011	2010	2009	2008	2007	2006	2005
India	245	233	221	246	215	212	221
Year	2004	2003	2002	2001	2000	1999	1998
India	209	202	185	168	146	135	119

Table 20: International Student Statistics from MIT International Students' office. Src: MIT International Students Office, http://web.mit.edu/iso/about/statistics.shtml

Many of these organizations that outsourced projects to India also got these employees to come to the main offices in the U.S. on a temporary basis to work for a few months or a few years. Many of the South Asian immigrants who migrated to the U.S. in 2000s were a product of this new trend of outsourcing of work to the Indian sub-continent.

This trend also influenced the youth and they increasingly took to engineering disciplines. Between 1999 and 2000, there was a significant jump in the number of engineering degrees awarded to students in India. Table 19, based on a study of engineers in India, U.S. and China sheds some light on this development (Wadhwa, Gereffi et al., 2007). Between 2000 and 2001, the number of students who earned a bachelor's degree jumped by around 27,000 whereas the jump was merely about 7000 in the U.S. This also reflects in the later years in table 19 where the jumps are smaller for the U.S. and higher for the Indians.

However, engineering degrees awarded at the masters' level tell another story. Figure 46 from the same report (Wadhwa, Gereffi et al., 2007) show that the number of Master's and Doctoral degrees awarded in the U.S. are higher than in India. Table 20, based on statistics provided by the MIT International Students' Office also tells a story of the number of Indians coming to the U.S. to get an advanced professional degree.

FIGURE 1

Ten-Year Trend in Engineering and Technology Master's Degrees in the United States, China, and India (Actual and Estimated Data)

Note: 2001-02 Chinese data (hashed line) from the Ministry of Education represent a significant outlier and thus were removed from our analysis.

FIGURE 2

Ten-Year Trend in Engineering and Technology PhD Degrees in the United States, China, and India

Note: 2001-02 Chinese data (hashed line) from the Ministry of Education represent a significant outlier and were removed from our analysis.
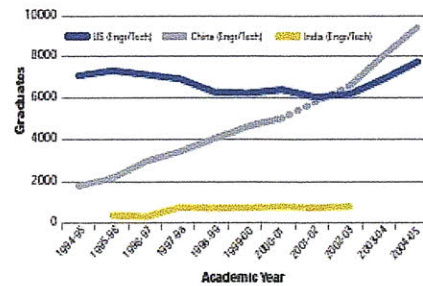
Figure 46: Students gaining Master's and PhD degrees in India, U.S., China, Src: Wadhwa, Gereffi et al., 2007, page 79 (Page 7 of the article pdf file)

The rage of the dot com boom, opportunities of employment and better life in the U.S. and the prospect of working in the high technology sector in the U.S. attracted many engineers with a bachelor's degree to pursue their graduate studies in the U.S.

The desire to pursue graduate studies in the U.S. was further supported with increase in the acceptance of students from the Indian sub-continent. The table of statistics from the International Students Office at MIT reflects this trend. Also, it is a matter of prestige among middle class Asian Indian families to have their children pursuing advanced studies in specialized skills abroad.

In spite of the recession that hit the U.S. and all global markets, employment did not suffer massively for the South Asian immigrants in Boston. The American Community Survey for 2007, 2008 and 2009 does not show a prominent dip in the employment status of South Asians. The unemployment rate for Asian Indians remained steady between 6-7 per cent in this period (ACS 2006, 2007, 2008- 1 year estimates).

Pull Factors: Why did they come to Boston?

The decade of 1990 saw a great increase in the flow of Asian immigrants to the west coast. The growth of high technology sector and a conducive environment for starting companies and employment in Silicon Valley, California made many Asian immigrants gravitate towards California. This trend reflects to some extent in figure 47 that shows the states where immigrants are founding companies in the U.S. (Wadhwa, Saxenian et al., 2007). Massa-

Table 2: U.S. States Where Immigrants are Founding Engineering and Technology Companies
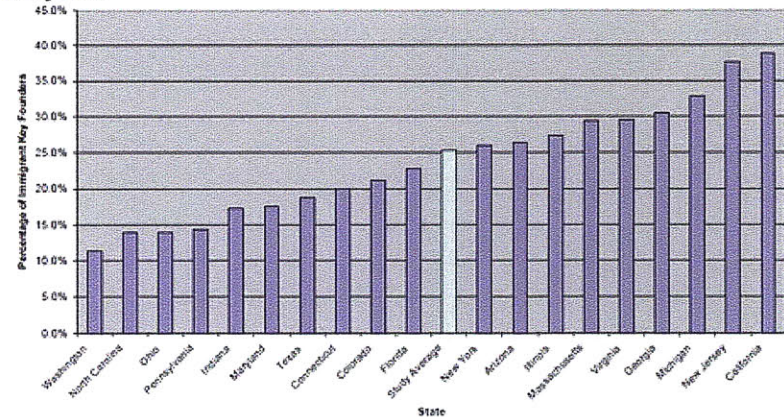
Figure 47: U.S. States where Immigrants are forming high technology companies. Src: Wadhwa, Saxenian et al., 2007, page 13)

chusetts is above the national average but lower than California [highest Chinese population in the Asian sub-group] and New Jersey [highest Asian Indian population in the Asian sub-group].

A study of engineering and technology companies already founded by immigrants between 1995 and 2005 also tells a similar story. It is likely that the opportunities available in California, New Jersey and Florida were more conducive for forming technology companies. However, as previously mentioned, educational institutions in Metro Boston continue to attract South Asian students to the area. Also, over the last decade, Massachusetts has seen a steady growth of start-ups, mid-range companies and inflow of IT giants from the west coast setting up offices in Massachusetts. Some of the more recent trends involve development of Kendall Square in Cambridge near MIT where such big high technology companies from computer and bio medical sciences have set up their offices to tap into the pool of talent generated at major schools in Metro Boston such as MIT and Harvard University among others.

Chart 3: Breakdown of Engineering and Technology Companies Founded by Immigrants from 1995 to 2005 by State
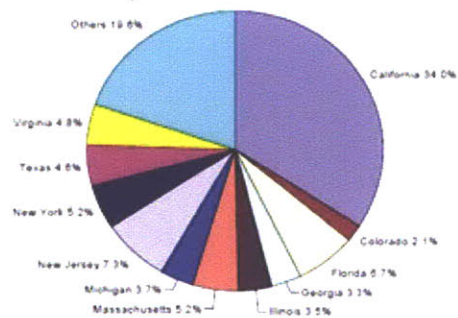
Figure 48: States where immigrants have founded high technology companies between 1995-2005, Src: Wadhwa, Saxenian et al., 2007, page 13

SECTION III

Section III presents a conclusion to this paper. There are two chapters in this section- Conclusion and an Afterword.

The Conclusion summarizes the paper and describes briefly some of the observations made in this paper.

However, working on this paper also led to several questions. The Afterword is a space dedicated to such questions and scope for future research.

CHAPTER 9: CONCLUSION

The first real wave of immigration from South Asia to the United States as is seen today began in the post Second-World War period after the Immigration and Nationality Act, 1965 (Hart-Celler Act) was implemented. This Act abolished the quota system that had maintained the predominance of the white race in the US and it opened doors for people from Asia who could enter United States in greater numbers.

South Asian immigration, especially the immigration of Asian Indians was predominantly economic in nature. Right from the beginning of the first wave of immigrants in the 1960s (following the Hart Celler Act), immigrants from India were attracted to the abundant education, research and employment opportunities in high technology industries in Greater Boston.

The paper studied this wave of South Asian immigrant community in Massachusetts and how it has evolved over the years. It studies these waves through the decades from their inception in the 1960s to the present describing the early years of first generation struggler and their transition into a more mature and evolved community.

Immigration is always inspired by factors that attract potential immigrants to newer communities and make them leave their homeland. This paper analyzes the factors that led to people leaving their home countries in South Asia in

each decade and propelled them to settle in Massachusetts.

To study these factors, this paper relies primarily on the US Census data and backs it up with qualitative research based on journal and media article and on personal experiences of the author and informal conversations with other members of the community in Boston.

The first South Asian immigrants to be reported in the US Census are Asian Indians. Early records of Asian Indians refer to this community as Hindus. This term was replaced with a more comprehensive and inclusive- 'Asian Indians' in later decades.

Although Asian Indians came to Massachusetts intermittently in the early 1900s to study at educational institutes like MIT and Harvard, immigration as a trend among the Asian Indians did not emerge until 1965 when the Hart Celler Act came into force. Immigration from 1965-69 doubled compared to 1960-64. Many of those who came in the 60s were students and young, skilled professionals seeking research and educational opportunities and work.

However, the 1965 Hart Celler Act cleared a major barrier and this paper studies how in the following decades, immigrant families from India came to Massachusetts in significant numbers. These were however, the first settlers and the years of struggle are evident in their income pattern which is a lot more distributed across income groups. However, a higher concentration of population towards the higher end of income groups hinted at the future of skilled, professional South Asian immigrants.

Late 70s and 80s saw the emergence of the first cultural markers and the signs of an ethnic community. There were temples, ethnic restaurants and ethnic grocery stores built in this period in Greater Boston.

The South Asian immigrant population followed the trends of its predecessors in the US and following the first few years, this population began moving into the suburbs to settle along Route 128 where a majority of the high technology industries were concentrated. Biotechnology sector proliferated in Greater Boston through the 70s and 80s. Newer organizations spread beyond the inner periphery of Route 128 and moved to the outer boundary of I-495. Asian Indian immigrants followed their movement and moved further into the suburbs and newer communities.

The 90s came with a dotcom boom that fascinated engineers and internet users in the US as well as India. The number of South Asians immigrating to the US increased in this period. However, with the emergence of the Silicon Valley as the new home of innovation and other tech clusters forming in different pockets of the US, the highly skilled Asian population gravitated towards this sector. Massachusetts saw a steady growth of the South Asian population in these years. For a state that has shown a steady and controlled growth of its population over the years, the growth of Asian Indians between 1990 and 2000 was the fastest. Also, immigrants from other parts of South Asia who had started coming to Boston in the late 80s became visible. Population from Bangladesh, Nepal and Pakistan continued to settle in greater numbers in Boston and Cambridge.

In 2000s, several IT and biotechnology companies founded on the west coast and the Silicon Valley moved to Boston. These companies wanted to tap into the supply of brilliant engineers, scientists and researchers that MIT and Harvard University were producing. In 2000s, schools in Bos-

ton area significantly increased their intake of Asian students.

The story of South Asian immigrants tells the story of people moving to seek prosperity and ambition- be it in the area of work or education. South Asian immigrants immigrated largely for economic reasons.

Their pattern since the 1960s has followed the growth of Massachusetts. It was closely tied to the growth of Boston's high technology industries and educational institutes like MIT, Harvard University and Boston University among other schools in the area. When the technological revolution shifted to the west coast in the 80s and 90s, Asian sub-groups such as Indians, Chinese and the Koreans gravitated to the west coast.

Boston continued to attract pool of new immigrants to its educational and research institutes and the rapidly growing biotechnology sector. EMC, Bose Corporation and Mathworks among others backed Boston's IT power after the demise of Wang Laboratories and Digital Equipment Corporation. Several IT and manufacturing industries headquartered on the west coast opened offices in Massachusetts to tap into the supply of MIT and Harvard University engineers and researchers.

Massachusetts does not have the population density of New York or northern New Jersey and the entire New York City-Newark- Jersey City metropolitan area that benefits from the population spillover from New York. It also does not have the magnanimous growth of the Silicon Valley, California. But it has a steadier and controlled growth and some of the biggest universities such as MIT and Harvard University that generate a large pool of talented engineers, scientists and researchers. Industries

in the high technology area are attracted to this supply of talent and just like the immigrants, are drawn to the state to tap into this supply of graduates from these universities in Greater Boston.

More recently, there has been a visible change in Massachusetts' approach towards investment in innovation-related industries and start-ups. There are more generous seed funding and venture capital schemes and other tax incentives for innovative start-ups and successful mid-range organizations based in Massachusetts needing capital. Private institutes in the state like MIT have raised their support to the innovation-based entrepreneurial spirit through the MIT 100K competition among other ventures. Companies like Akamai Technologies were products of MIT 100K competition. This has also given rise to entrepreneurial tendencies among young Asian Indian immigrants as was studied in the paper.

In spite of a growth of five decades, the population of South Asians in Boston is predominantly in the young, working age group and a majority of the population is educated and in the high income group. It indicates that apart from the second generation Asian Indians whose parents settled in this country, Massachusetts sees a large and continuous influx of first generation immigrants- students and working population from South Asia, especially India. This keeps income graphs skewed to the right in the high-income groups and the age graph peaked at the middle in the young, working age group.

It is likely that as the population settles and matures, there would be an increasing proportion of population in the older age group. This will happen when the number of newly arriving immigrants is lower than the ones settled here.

This may also impact the income patterns of Asian Indians whose population is majorly concentrated in the high-income groups. It is likely that the income patterns would start appearing bimodal with population in the high income and low income group if the aging population that has retired or doing less amount of skilled work is counted in this graph. The pattern would be more like the Chinese immigrants who arrived in great numbers in the US and today, have a large proportion of their population in the old age group.

Also, a study of the 1990s and 2000s showed that there are vast differences in the South Asian sub-groups. A higher rate of poverty among Pakistanis and signs of a population that is more dispersed across the high-skilled educational and professional sector and other less-skilled retail and sales occupations shows that a general study of South Asians without studying each individual sub-group would not give the real story. Other South Asian sub-groups are likely to portray different characteristics from the Asian Indian immigrants in Massachusetts who are predominantly educated and employed in the high-skilled sector.

Asian Indian population is unique within the rest of South Asia because of the characteristics pointed out in this thesis. It is unlikely that other South Asian communities will represent the same trend. Other South Asian groups will have a mix of students, professional and highly skilled immigrants and low-skilled working class immigrants seeking opportunities in Boston.

CHAPTER 10: AFTERWORD

This paper provides a basis for research on South Asian immigrants, especially the Asian Indians in Massachusetts. At the time this paper was written, other South Asian immigrant subgroups were newly emerging. This did not give enough data to study or understand their patterns of growth. Apart from making inferences based on the available data leading to believe that other South Asian sub-groups would not depict the same pattern of growth of Asian Indian immigrants, there has not been a long-enough time gap since the inception of immigration from other parts of South Asia to make stronger observations.

In the future, it would be interesting to study the growth patterns of other South Asian immigrant communities and compare them to the growth of Asian Indians. Towards the end of this paper, in the decade of 2000-2010, this paper came across an interesting finding for the South Asian immigrant groups. The patterns of income growth, education and industries for the South Asian immigrant settlers of the Hampden county, Massachusetts are markedly different from other counties of Massachusetts. The differences are not positive- the population is less educated and they come from a lower-income group. The time frame allotted to this paper did not allow enough opportunities to study the Hamden County which stood out among the rest of the counties because of these differences. The county, home to Springfield, with schools such

as University of Massachusetts, Amherst nearby is also the location of a newly developed Knowledge-Corridor, a collaboration of Hartford, Connecticut and Springfield, Massachusetts to operate as twin cities and attract economic growth to the area. However, the population changes in this county in the last decade leave a lot of questions unanswered and should lead to a future study.

SECTION IV

This section contains the Glossary, the Bibliography. and the Appendices.

The subsection on glossary provides information on terms used in this thesis and their meanings. The Bibliography section provides a list of references and works cited in this thesis.

The Appendices follow the bibliography and contain tables and data that were used to derive some of the charts and tables used in the thesis. They also contain a list of figures and tables used in this paper.

GLOSSARY

A lot of closely related and often mistakenly interchanged terms are used in this paper. This glossary is an attempt to provide the definitions and context in which these terms are used in the paper.

Boston/Metro-Boston/Boston Metropolitan Area: This region comprises Boston City and the immediate outer core surrounding it. Its outer boundary is the Route 128 corridor.

Greater Boston/Greater Boston Area: This region comprises a more complex definition including all of those regions that fall within Boston Metropolitan Area and Boston CMSA as defined by the census. Asian Indians/ Indians: Refers to Asian Indians who immigrated from the country of India. It does not refer to Native/American Indians.

South Asia/South Central Asia: South Asia is often used interchangeably with the Indian-subcontinent. The term 'South Asia' is more globally accepted term because of its emphasis on the geographic location that binds it together. The nations of South Asia exhibit similarities in geography, physical appearance and to some extent, cultural similarities. However, the use of the term 'Indian sub-continent' puts special emphasis on India, the most prominent country in the South Asian region. In this paper, the term 'Indian sub-continent' is used to mean the same region as South Asia but deliberately used in some plac-

es to emphasize the dominance of immigration from India.

Countries of South Asia/Indian-sub-continent/South Central Asia: As identified in the U.S. Census reports, these terms refer to countries from the southern part of Asia, specifically, India, Pakistan, Bangladesh, Sri Lanka, Bhutan, Nepal, Burma (Myanmar), Afghanistan, Maldives. Out of these, India, Pakistan, Bangladesh, Sri Lanka, Bhutan, Nepal, Burma and Afghanistan are identified as independent minorities in later Census and American Community Survey Reports.

Asian Indians/ Indians: This term refers to people from the country of India. The term, 'Indians' can be mistaken with native Indians or American Indians, hence 'Asian Indians' is used throughout the thesis to differentiate this immigrant group. The term 'Indians' used in some places also refers to the people from India. There are no references to American or native Indians anywhere in this thesis .

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APPENDICES

This contains a comprehensive list of tables, charts and data used to derive tables and figures cited in the thesis. The appendices are divided into sections based on the sections in the paper.

Appendix I is useful for section I of this paper and Appendix II has data pertaining to Section II of this paper.

Preceding the appendix is a list of figures and tables that have appeared in this paper.

List of Figures:

Figure 12: Waves of immigration from South Asia begin in the 1960s. Asian Indians are the most prominent minority group among the South Asians and were recognized in the U.S. Census 1980 and later reports.

The figure compares the growth of Asian Indians and all Asians in Massachusetts. The proportion of Asian Indians among Asians increased rapidly between 1990 and 2010.

List of Tables:

Appendix I
For Section I tables and maps:

The following tables and charts were used to derive rate of growth of Asian population in Massachusetts.

I-1:
Source: U.S. Census Bureau: http://www.census.gov/population/www/documentation/twps0056/appC.pdf

Census Year	Total Population	White	African American	American Indian, Eskimo and Aleut	Asian and Pacific Islander	Other Race	Two or more races
2010	6,547,629	5,265,236	434,398	18,850	351,991	305,151	172,003
2000	6,349,097	5,367,286	343,454	15,015	240,613	236,724	146,005
1990	6,016,425	5,405,374	300,130	12,241	143,392	155,288	
1980	5,737,037	5,362,836	221,279	7,743	49,501	95,678	
1970	5,689,170	5,477,624	175,817	4,475	22,389	8,865	
1960	5,148,578	5,023,144	111,842	2,118	9,478	1,996	
1950	4,690,514	4,611,503	73,171	1,201	4,393	246	

I-2:
Source: Based on Appendix I-1. The figure shows the growth in proportion of Asian Population over the decades

Population Distribution by Race in Massachusetts 1950-2010

Legend: White, African American, American Indian, Eskimo and Aleut, Asian and Pacific Islander, Other Race, Two or more races
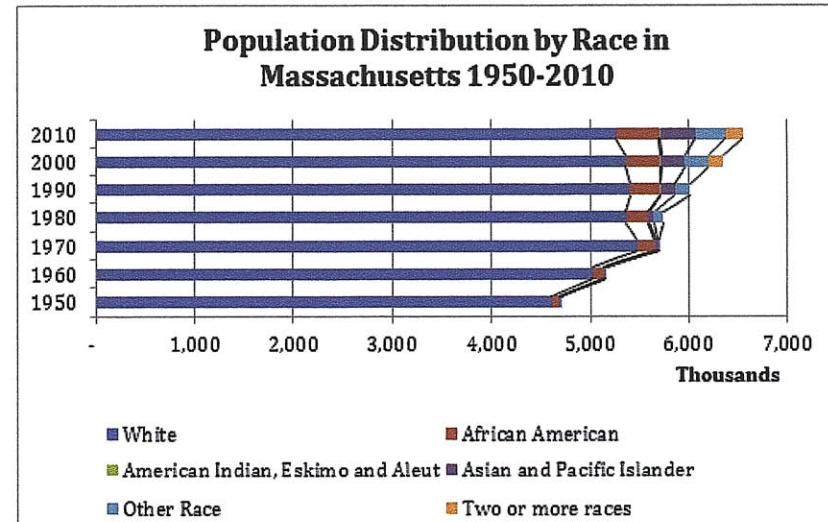
I-3:
Source: U.S. Census Bureau: http://www.census.gov/population/www/documentation/twps0056/appC.pdf and U.S. Census Bureau Report 1980 (Table 195)

The table gives rate of growth of Asian Indian population and its comparison with the Asian population (Table 1).

There was no data on the 50s, 60s and 70s for the Asian Indian population. However, Census report 1980 had data for the 50s, 60s and 70s for Asian Indians by year of entry in the U.S (Table 195). This data was used to get an estimate of the number of people of Asian Indian origin in Boston in these decades and to trace their growth.

Census Year	Asian	Asian Indians	Chinese	Vietnamese
2010	349,768	77,177	122,957	42,915
2000	238,124	43,801	84,392	33,962
1990	142,137	19,719	53,792	15,449
1980	48785	8,387	25,015	3,172
1970	22084	987	14012	
1960	9478	100	6,745	
1950	4393	58	3,627	
1940	2965	20	2,513	
1930	3380	42	2973	

I-4:

Source: U.S. Census Bureau Report 2010

This is the data used to derive the map for Asian Indian Clusters (Figure 4). The intent was to use this map for identifying pockets containing the highest Asian Indian population. This table lists the states in the U.S. by their Asian Indian population as it appeared in the 2010 U.S. Census

US Census 2010, Asian Indian Clusters

State	Asian Indian Population	State	Asian Indian Population
California	159973	Kansas	3956
New York	140985	South Carolina	3900
New Jersey	79440	Colorado	3836
Illinois	64200	Oregon	3508
Texas	55795	Iowa	3021
Florida	31457	Kentucky	2922
Pennsylvania	28396	Delaware	2183
Maryland	28330	West Virginia	1981
Michigan	23845	Rhode Island	1975
Ohio	20848	Mississippi	1872
Virginia	20494	Nevada	1825
Massachusetts	19719	New Hampshire	1697
Georgia	13926	District of Columbia	1601
Connecticut	11755	New Mexico	1593
North Carolina	9847	Utah	1557
Minnesota	8234	Arkansas	1329
Washington	8205	Nebraska	1218
Indiana	7095	Hawaii	1015
Wisconsin	6914	Maine	607
Missouri	6111	Vermont	529
Tennessee	5911	North Dakota	482
Arizona	5663	Idaho	473
Louisiana	5083	Alaska	472
Oklahoma	4546	South Dakota	287
Alabama	4348	Montana	248
		Wyoming	240

I-5:

Source: http://2010.census.gov/news/pdf/20120321_asian_slides.pdf

This is a detailed break up of the data presented in figure 3 sourced from the same document. The following images identify the clusters of South Asian population by sub-groups

Asian Indian Population

(Reflects where the Asian Indian population was the largest detailed Asian group in the state)

Source: 2010 Census
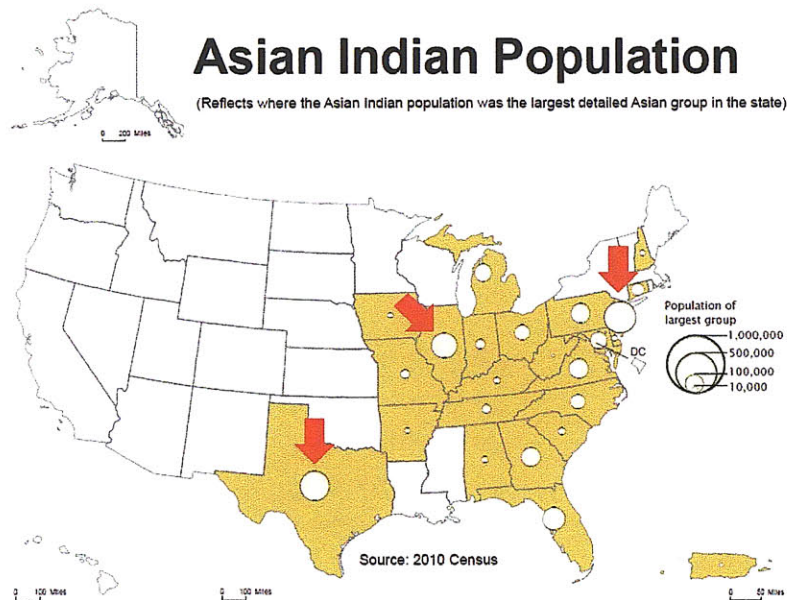
I-5.a
Src: http://2010.census.gov/news/pdf/20120321_asian_slides.pdf , Slide 38

I-5.b
Src: http://2010.census.gov/news/pdf/20120321_asian_slides.pdf , slide 45

Pakistani Population

(Reflects where the Pakistani population was one of the top five detailed Asian groups within the 20 metros with the largest Asian alone-or-in-combination population)

Source: 2010 Census

Asian Indian Population

(Reflects where the Asian Indian population was one of the top five detailed Asian groups within the 20 metros with the largest Asian alone-or-in-combination population)
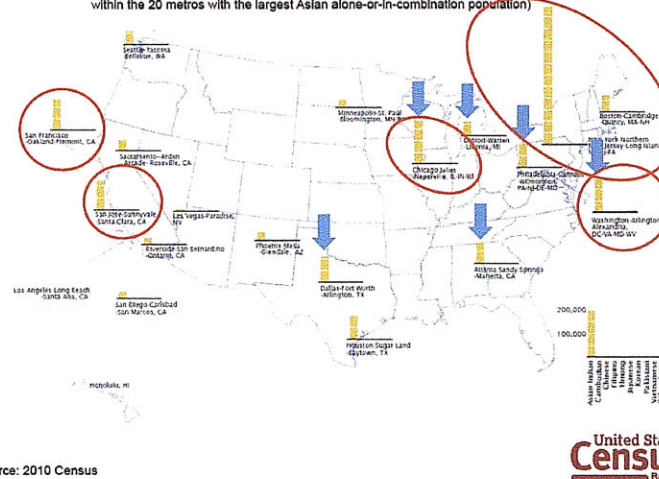
Source: 2010 Census

I-5.c Src: http://2010.census.gov/news/pdf/20120321_asian_slides.pdf, slide 50

Appendix II
For Section II tables and maps:

II-1
Source:
The following data was used to create the chart used in figures 11 and 12.
U.S. Census Bureau: http://www.census.gov/population/www/ documentation/twps0056/appC.pdf and U.S. Census Bureau Report 1980 (Table 195)

Census Year	Asian	Asian Indians	Chinese	Vietnamese
2010	349,768	77,177	122,957	42,915
2000	238,124	43,801	84,392	33,962
1990	142,137	19,719	53,792	15,449
1980	48785	8,387	25,015	3,172
1970	22084	987	14012	
1960	9478	100	6,745	
1950	4393	58	3,627	
1940	2965	20	2,513	
1930	3380	42	2973	

	Asian	Asian Indians
2010	349,768	77,177
2000	238,124	43,801
1990	142,137	19,719
1980	48785	8,387
1970	22084	987
1960	9478	100
1950	4393	58
1940	2965	20
1930	3380	42

II-2
Source:
The following table was used to map figure 14 amd 26. Asian Indians were recorded as a minority for the first time in the 1980 U.S. Census report. This was the first representation of a South Asian nation and helped trace their growth in Boston and the rest of United States over the years. All of the county subdivisions not mentioned in the table had no reported Asian Indian population.

County_Subdiv	POP_ASIND	County_Subdiv	POP_ASIND
Boston	917	New Bedford	30
Cambridge	607	Fall River	28
Worcester	263	Holyoke	28
Framingham	258	South Hadley	22
Newton	258	Dartmouth	21
Brookline	229	Danvers	20
Waltham	216	Tewksbury	20
Lowell	166	Northampton	19
Somerville	160	Fitchburg	16
Quincy	122	Westfield	16
Springfield	95	Williamstown	12
Amherst	93	Beverly	1
Brockton	86	Bourne	1
Medford	61	Easton	1
Braintree Town	60	Harvard	1
Wellesley	56	Haverhill	1
Bedford	48	Lenox	1
Salem	46	North Adams	1
North Andover	44	Norton	1
Bridgewater	32	Taunton	1
Lynn	32	Wrentham	1

II-3:

Source: U.S. Census Bureau 1980 Report (Table 50: General characteristics for selected racial groups for counties: 400 or more of the specified racial group)

The following tables were used to generate figure 15 and 16

	Essex	Middlesex	Norfolk	Suffolk	Worcester
In Households	478	3674	994	978	746
Householder	186	1250	345	424	271
Non-family householder	74	284	85	192	66
Spouse	109	848	218	183	188
Other relatives	172	1422	398	274	266
Non-relatives	11	154	33	97	21

Age	Male	Female
Total Persons	3741	3359
Under 10 years	669	665
10 to 19 years	435	366
20 to 29 years	784	691
30 to 39 years	1096	805
40 to 49 years	515	247
50 to 59 years	129	133
60 to 69 years	45	160
70 years and over	68	292

II-4

Source: U.S. Census Bureau Report 1980 (Table 50: General characteristics for selected racial groups for counties: 400 or more of the specified racial group)

The following table was used to generate figure 17. The chart represents complex population data by sex and for each of the counties.

Age	Female Essex	Male Essex	Female Middlesex	Male Middlesex	Female Norfolk	Male Norfolk	Female Suffolk	Male Suffolk	Female Worcester	Male Worcester
Total Persons	267	214	1751	2046	497	526	471	570	373	385
Under 10 years	41	46	394	379	99	111	64	60	62	73
10 to 19 years	25	18	201	235	59	82	41	53	40	47
20 to 29 years	35	24	369	419	85	66	123	201	79	74
30 to 39 years	46	63	463	611	119	143	92	155	85	124
40 to 49 years	20	32	120	298	49	89	32	51	26	45
50 to 59 years	14	10	47	60	22	21	32	28	18	10
60 to 69 years	24	6	68	20	11	6	35	9	22	4
70 years and over	62	15	89	24	53	8	52	13	36	8

II-5

Source: U.S. Census Bureau Report 1980 (Table 50: General characteristics for selected racial groups for counties: 400 or more of the specified racial group)

The following tables were used to generate figures 18, 20 and 21.

Educational Attainment	Percent
Less than 5 years of elementary school	1.9
High School Graduates	91.6
4 or more years of college	72.1

Age and Ability to speak English

Ability to Speak English	Number of People
Speak a language other than English at home	3000
5 to 17 years	326
Speak English very well	237
Speak English well	41
Speak English not well	48
Don't speak English	0
18 years and over	2674
Speak English very well	2003
Speak English well	464
Speak English not well	186
Don't speak English	21

II-6

Source: U.S. Census Bureau Report 1980 (Table 50: General characteristics for selected racial groups for counties: 400 or more of the specified racial group)

The following data was used to generate figures 22 and 23.

	Total Population	Total Foreign-born	Greece	Italy	Portugal	United Kingdom	China	India	Korea	Philippines
Median	17575	15484	15609	17085	17619	22981	12904	23750	13504	23153
Mean Income (Males)	20378	15202	13138	13839	11292	26412	11973	25063	17707	17404
Mean income (Females)	11653	9487	9343	8781	7839	12609	9871	17269	11235	12982

II-7

Source: U.S. Census Bureau Report, 1980 (Table 196-A)
The following tables were used to generate figures 24 and 25

Workers in Family in 1979	
families	972
no workers	33
1 worker	305
2 workers	562
3 or more workers	72
mean number of workers	1.7

Income in 1979	Households	Percent
less than 5000	140	11.41%
5000 to 7499	49	3.99%
7500 to 9999	34	2.77%
10000 to 14999	145	11.82%
15000 to 19999	136	11.08%
20000 to 24999	164	13.37%
25000 to 34999	275	22.41%
35000 to 49999	160	13.04%
50000 or more	124	10.11%

II-8

Source: U.S. Census Bureau Report 1980
The following figure shows the total number of Asian Indians in Massachusetts counties. The graph is heavily skewed towards Middlesex county. The population continued to live in Metropolitan areas in the 70s. But there were signs of population spreading into other areas of Massachusetts.

Total Asian Indians in Massachusetts Counties, 1980

II-9
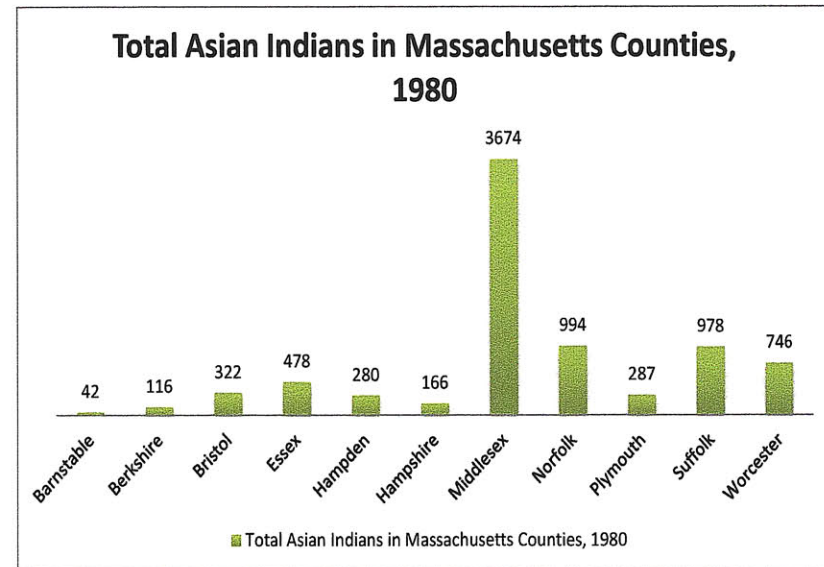
Source: US Census Bureau, 1990: http://www.census.gov/prod/cen1990/cp1/cp-1-23.pdf (Table 6), There were 261 places in Massachusetts with a population of 1 or above when the 1990 Census Report was published. It shows the new waves of immigrants from South Asia that arrived in the 1980s. While Asian Indians were the only minorities to be included in the U.S. Census 1980 for an increase in their population. The 1990 Census includes more groups of minorities from South Asia that were slowly appearing in the Boston community- Bangladesh, Burma, Pakistan, Sri Lanka.

The following is a list used to map figures 27 and 29. Places with a population of 45 or less are not included in this list.

The list is followed by maps of South Asian population subgroups and shows their concentration in the Greater Boston area.

NAME	POPASIND	POPBANG	POPBURM	POPPAK	POPSRIL	South Asians
Boston	1962	41	41	244	50	2338
Cambridge	1386	51	11	113	20	1581
Lowell	1150	22	0	25	6	1203
Somerville	658	7	6	36	30	737
Framingham	642	2	1	27	10	682
Waltham	653	2	0	25	1	681
Worcester	557	1	2	8	8	585
Burlington	529	6	0	9	3	547
Amherst	461	7	0	17	15	500
Shrewsbury	401	5	0	47	0	453
Brookline	358	3	1	31	4	397
Newton	350	1	1	20	6	378
Lexington	328	16	0	13	3	360
Malden	266	5	0	12	20	303
Andover	262	0	0	12	0	274
Chelmsford	259	0	0	9	0	268
Brockton	212	1	0	52	1	266
Marlborough	232	2	0	2	5	241
Woburn	224	5	0	8	2	239
Arlington	212	1	0	4	0	217
Acton	204	3	0	0	0	207
Medford	182	2	0	12	10	206
Billerica	177	1	0	25	0	203
Attleboro	190	0	0	9	0	199
Northborough	192	4	0	0	0	196
Springfield	188	1	0	4	2	195
Sudbury	185	9	0	1	0	195
Natick	156	0	6	17	0	179
Northampton	159	1	0	12	6	178
Randolph	166	4	3	3	2	178
Winchester	154	1	0	0	16	171
Quincy	143	0	3	24	0	170
Westborough	162	0	0	8	0	170
Wellesley	157	0	0	4	5	166
Watertown Town	142	7	0	12	0	161
Leominster	125	16	0	4	0	145
Weston	140	0	0	0	0	140
North Andover	128	0	0	8	0	136
South Hadley	101	2	2	24	5	134
Longmeadow	123	0	0	8	0	131

NAME	POPASIND	POPBANG	POPBURM	POPPAK	POPSRIL	South Asians
Sharon	119	4	0	5	2	130
Belmont	122	0	1	5	0	128
Needham	110	1	1	5	6	123
North Attleborough	109	4	0	10	0	123
Methuen Town	119	0	0	3	0	122
Norwood	109	0	2	7	0	118
Dracut	114	0	0	0	0	114
Milford	108	4	0	2	0	114
Weymouth Town	94	0	2	12	0	108
Lawrence	93	0	3	3	0	99
Lynn	97	0	0	0	1	98
Bedford	93	0	0	3	0	96
Peabody	92	0	0	2	0	94
Pittsfield	84	0	0	5	1	90
Stoughton	64	12	3	4	0	83
Braintree Town	66	0	0	12	4	82
Tewksbury	80	0	0	0	1	81
Ashland	74	0	0	0	4	78
Hudson	66	0	0	8	0	74
Everett	58	0	0	2	12	72
Lynnfield	66	0	0	5	0	71
Holyoke	64	0	0	5	0	69
Stoneham	37	24	0	7	0	68
Westford	66	0	0	0	0	66
Barnstable Town	35	0	0	30	0	65
Fitchburg	38	0	0	27	0	65
Haverhill	62	0	0	0	1	63
Concord	60	0	0	1	0	61
Bridgewater	50	0	0	10	0	60
Holden	60	0	0	0	0	60
Mansfield	57	0	0	0	2	59
Dedham	50	0	0	5	3	58
West Springfield Town	47	0	0	11	0	58
Easton	57	0	0	0	0	57
Westfield	45	0	0	12	0	57
Salem	53	0	0	3	0	56
Wayland	54	0	0	0	0	54
Westwood	34	1	0	18	0	53
Millbury	50	0	0	2	0	52
Milton	47	0	2	2	0	51

NAME	POPASIND	POPBANG	POPBURM	POPPAK	POPSRIL	South Asians
Reading	36	0	0	8	6	50
Carlisle	49	0	0	0	0	49
Franklin Town	49	0	0	0	0	49
Hingham	45	0	0	4	0	49
Melrose	44	0	0	2	3	49
Revere	46	0	0	3	0	49
Norton	44	0	0	4	0	48

Population of Asian Indians: The legend represents the number of people in each of the color categories. Asian Indian population at the beginning of the 90s was concentrated in the city. However, there were many pockets around Route 128 that had a population of 200 and more. Apart from Boston city, Somerville, Waltham, Framingham and Burlington had high density of Indians.

Legend

1990 Asian Indian

POPASIND

- 1 - 74
- 75 - 212
- 213 - 401
- 402 - 658
- 659 - 1962
- No Population
- Highway Network *Green dots represent exits on the highways*
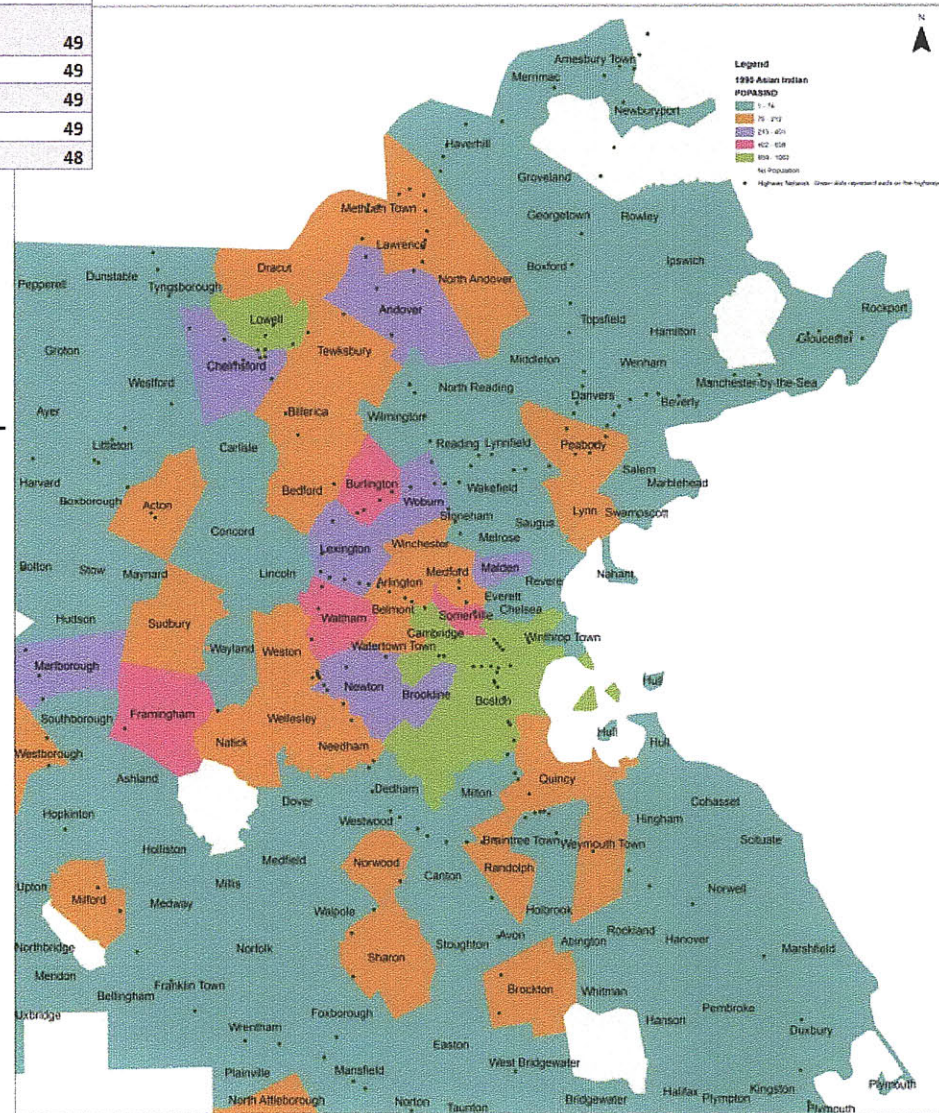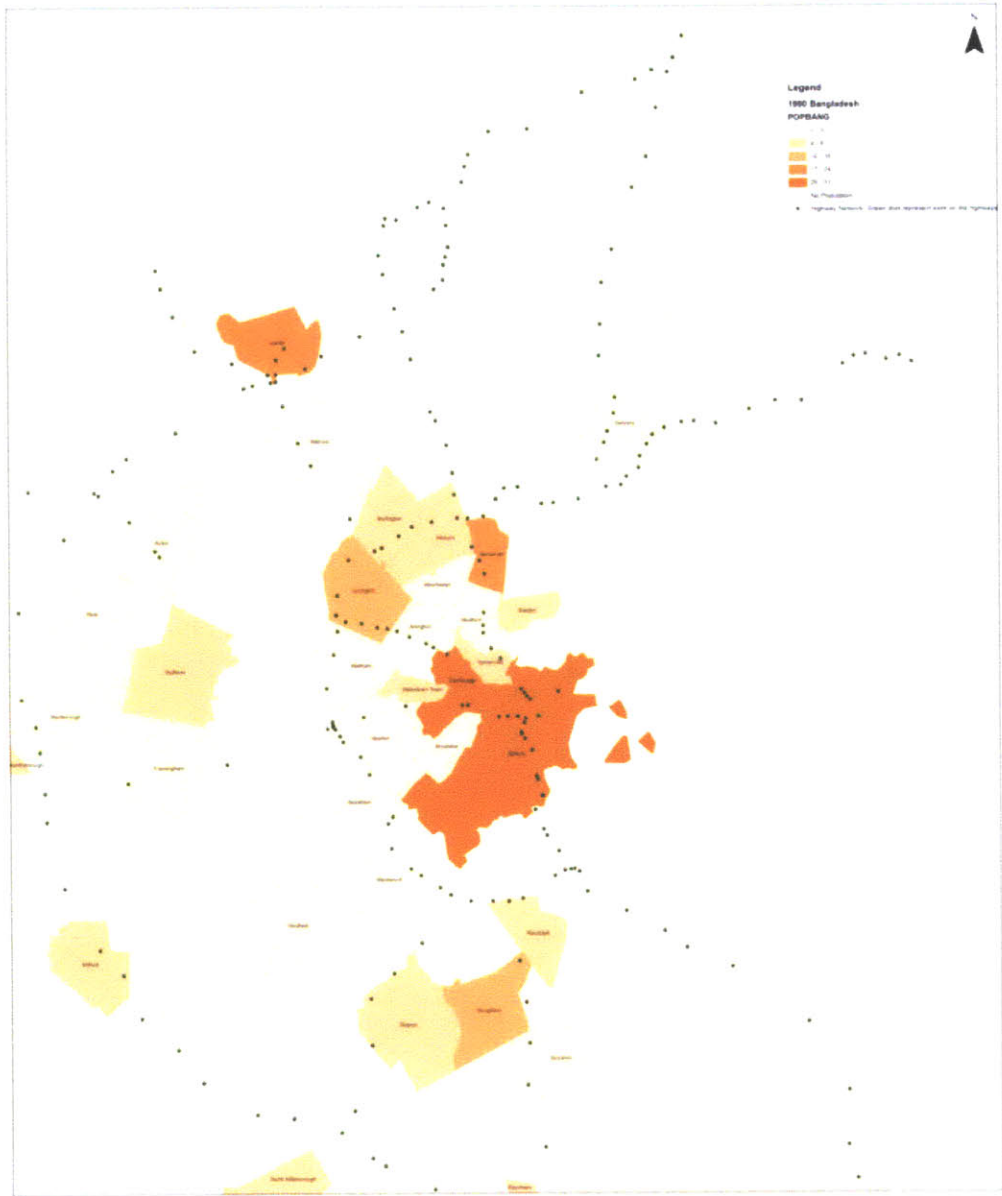
Bangladeshi population: The legend represents the number of people in each of the color categories.

The numbers in the legend indicate that this was the beginning of Bangladeshi immigration in Massachusetts. The highest population for Bangladeshi immigrants was concentrated in Boston city [25-51 persons]. Lowell was another dense pocket furthest away from Boston City.

Legend

1990 Bangladesh
POPBANG

	1 - 3
	4 - 9
	10 - 16
	17 - 24
	25 - 51
	No Population
●	Highway Network *Green dots represent exits on the highways*

Burmese Population in Greater Boston Area, 1990
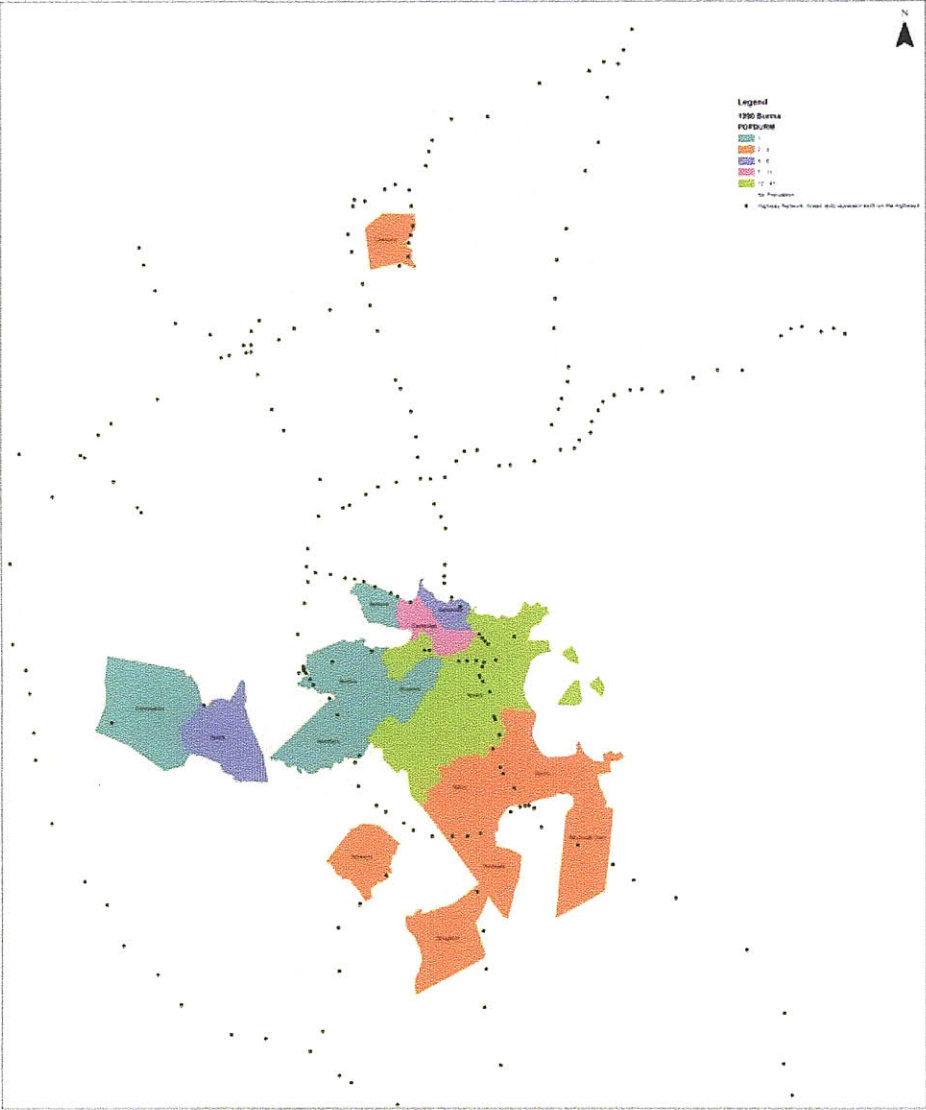
Burmese Population: The legend represents the number of people in each of the color categories.

Just like the Bangladeshis, this was the beginning of an immigration pattern for the Burmese. There were about 12-41 persons in the Boston-Cambridge-Somerville region. It is likely that many of these were students.

However, unlike the Bangladeshis, the Burmese did not venture far from the city center at this time.

Legend

1990 Burma

POPBURM

- 1
- 2 - 3
- 4 - 6
- 7 - 11
- 12 - 41
- No Population
- ● Highway Network *Green dots represent exits on the highways*

Pakistani Population in Greater Boston Area, 1990
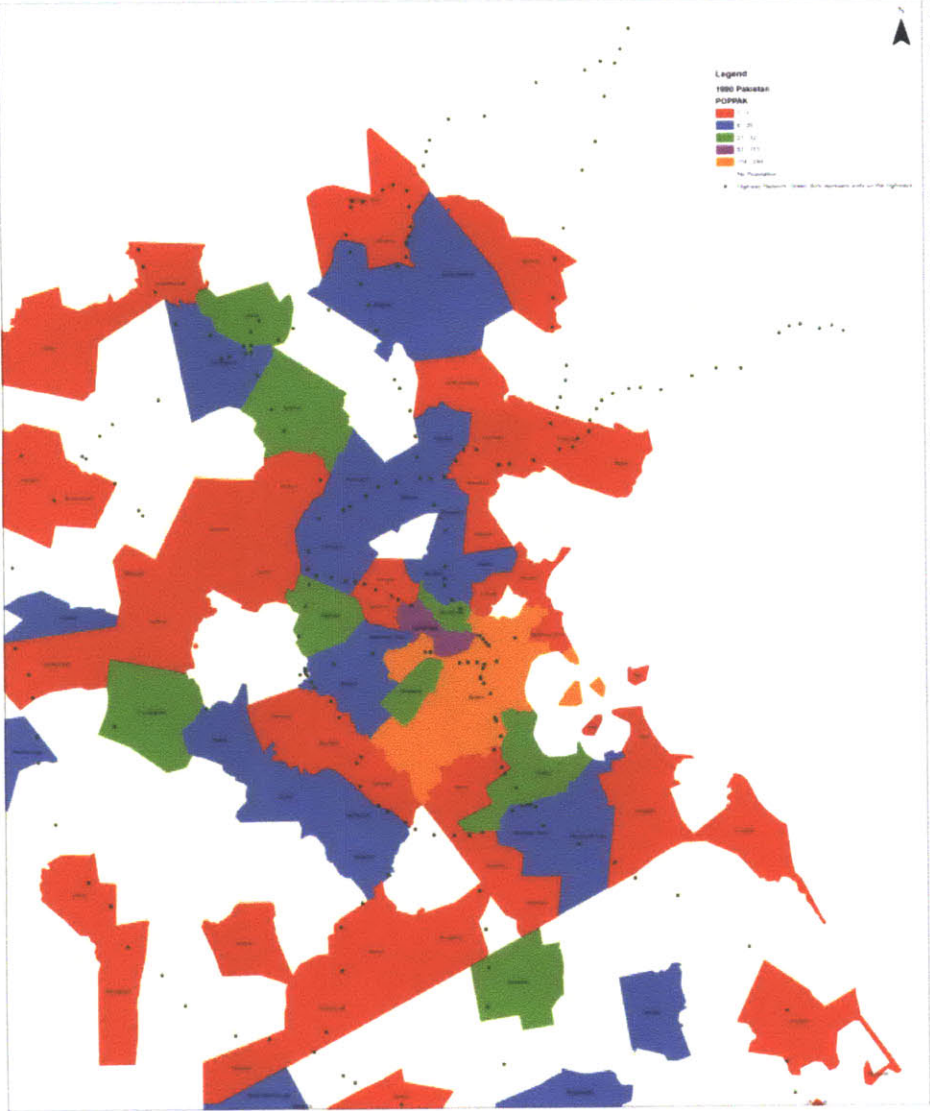
Pakistani Population: The legend represents the number of people in each of the color categories.

Pakistan was the second South Asian sub-group that had a rapidly increasing population in Massachusetts. However, the highest concentration of population for the Pakistanis [244] had one-eighth the number of people that the Asian Indians [1,962] had in their most dense pocket in Greater Boston region.

Just like the case with all other groups, Pakistani immigrants concentrated in the Boston-Cambridge-Somerville-Medford area.
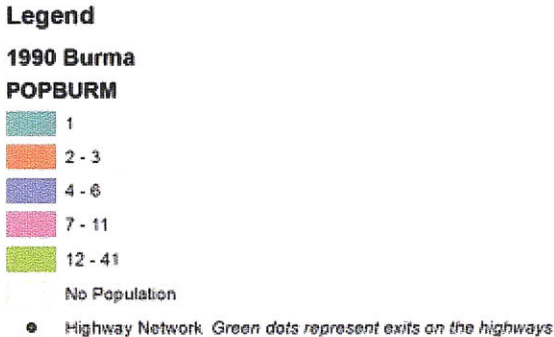
They ventured further than other South Asian sub-groups, except the Indians indicating that their immigration pattern had begun slightly earlier than other South Asian sub-groups but later than the Indians.

Legend

1990 Pakistan

POPPAK

- 1 - 5
- 6 - 20
- 21 - 52
- 53 - 113
- 114 - 244
- No Population
- ● Highway Network *Green dots represent exits on the highways*
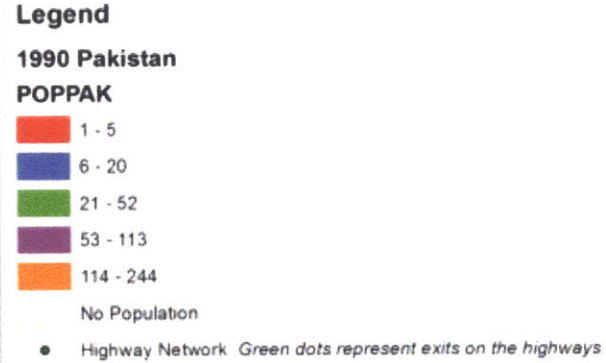
Sri Lankan Population: The legend represents the number of people in each of the color categories.

The Sri Lankans portrayed a growth similar to other South Asian sub-groups that had newly arrived. There is a small visible concentration of population in the city area of Boston. However, it was dispersed along Route 128 and there were a couple of pockets near Boston's outer periphery I-495 indicating that the population that arrived at this time was a working population employed along the high technology corrifors.

Sri Lankan Population in Greater Boston Area, 1990

Legend

1990 Sri Lanka

POPSRIL

- 1 - 3
- 4 - 8
- 9 - 16
- 17 - 30
- 31 - 50
- No Population
- ● Highway Network *Green dots represent exits on the highways*
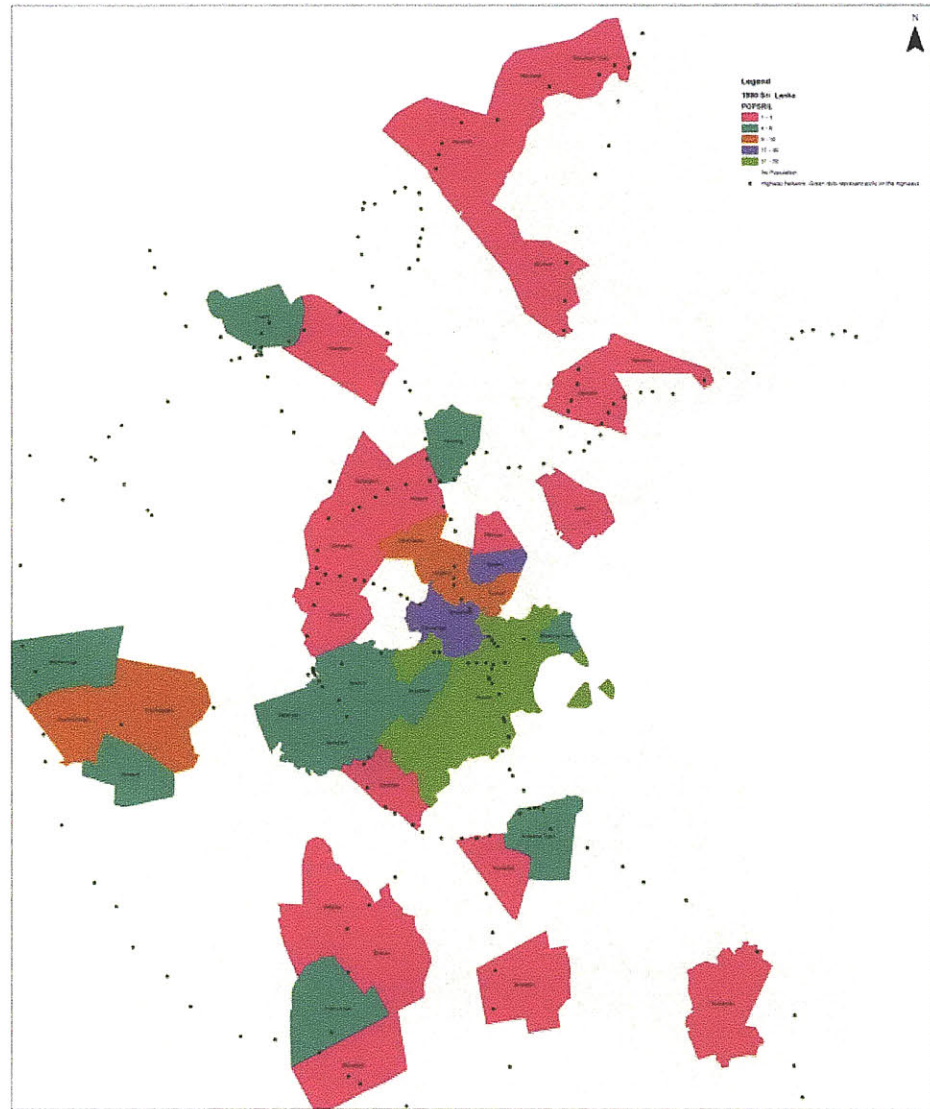
II-10

The following is a set of tables and data used to generate census-based content for chapter 8.

II-10.a: The following table was used to generate figure 34, citizenship of people

Total Population for whom citizenship was determined				
		Naturalized	**Not a citizen**	**Not a citizen**
	63251	23996	39255	4647
		38	62	19
Naturalized Citizen		**Entered 2000 or later**	**Entered 1990 to 1999**	**Entered before 1990**
	23996	1120	3473	4574
		4.67	14.47	19.06
Not a Citizen		**Entered 2000 or later**	**Entered 1990 to 1999**	**Entered before 1990**
	39255	17824	5470	1140
		45.40	13.94	2.90

II-10.b: A significantly high proportion of population was enrolled in schools in 2000s. For Suffolk county, out of the students enrolled in school, 92.3 per cent students were enrolled in college or graduate school. Likewise, 76.8 per cent of Hampden county's population was enrolled in high school or lower grade. It was observed in the paper that Hampden county represented the lowest income earning population groups.

School Enrollment

Counties	Population 3 years and over enrolled in school	High school or lower grade	College or Graduate school
Bristol	325	33.2	66.8
Essex	568	52.7	47.4
Hampden	697	76.8	23.2
Middlesex	5604	33.1	66.8
Norfolk	1400	34	65.9
Suffolk	2299	7.7	92.3
Worcester	1360	50.9	49.1

II-10.c: The following table was used to generate figure 35, educational attainment of the population (by percentage)

Educational Attainment

Counties	Population 25 years and over	Less than high school graduate	High school graduate (includes equivalency)	Some college or associate's degree	Bachelor's degree	Graduate or professional degree
Bristol	1520	10.5	7.8	3	34	44.8
Essex	2802	6.6	9.1	7.7	36.4	40.1
Hampden	1880	11	25.5	19.4	23.1	21
Middlesex	26893	7.5	7.5	7.1	28.6	49.2
Norfolk	8192	3.6	4.2	4.9	35.9	51.3
Suffolk	5280	4.1	5.7	10.4	26.7	53.2
Worcester	6621	4.2	5.2	5.9	34.1	50.6

II-10.d: The following table was used to generate figure 36, Ability to speak English (by percentage)

Language spoken at home and ability to speak English

Counties	Population 5 years and over	Speak English only	Language other than English at home		
			Total	Speak English fluently	Speak English 'less than' very well
Bristol	1789	11.6	88.4	54.5	33.9
Essex	3318	14.1	85.9	62.5	23.4
Hampden	2601	4.8	95.2	46	49.2
Middlesex	31025	9	91	63.7	27.3
Norfolk	9157	9.8	90.2	69.7	20.5
Suffolk	6971	17.9	82.1	60.2	21.9
Worcester	7747	9.8	90.2	60.3	29.9

II-10.e: The following table was used to generate figure 38, civilian labor force (By percentage)

Employment Status

Counties	Population 16 years and over	Not in Labor Force	In labor force	In Civilian Labor Force		Column1	In Armed Forces
				Employed	Unemployed		
Bristol	1681	24.9	75.1	74.1	1		0
Essex	3111	28.8	71.2	66.9	4.4		0
Hampden	2229	29.6	70.4	67.1	3.3		0
Middlesex	29796	25.2	74.8	70.5	4.3		0.1
Norfolk	8844	28	72	69.8	2.1		0
Suffolk	6854	29.2	70.8	64.5	6.2		0
Worcester	7211	27.3	72.7	70	2.7		0

II-10.f: Civilian Employed population in various categories (by percentage)

Class of Worker

Counties	Civilian employed population 16 years and over	Private wage and salary workers	Government workers	Self-employed workers in own not incorporated business	Unpaid family workers
Bristol	1246	89.2	8.9	1.9	0
Essex	2080	90.6	5.3	3.3	0.8
Hampden	1495	83.5	9	4.3	3.3
Middlesex	20997	92.2	5.5	2.3	0
Norfolk	6176	94.7	3.5	1.8	0
Suffolk	4424	92	4.2	3.4	0.3
Worcester	5050	92.6	5.2	2.2	0

II-10.g: Occupation of the civilian labor force

Counties	Civilian employed population 16 years and over	Management, business, science, and arts occupations	Service occupations	Sales and office occupations	Natural resources, construction, and maintenance occupations	Production, transportation, and material moving occupations
Bristol	1246	68.1	2	17.1	0	12.8
Essex	2080	66.5	3.7	19.9	0	9.9
Hampden	1495	41.6	7.3	20.9	8.1	22.1
Middlesex	20997	70.3	8.3	15.7	1.1	4.7
Norfolk	6176	82.3	2.9	11.2	0.8	2.8
Suffolk	4424	66.5	9.7	16.1	1.6	6.2
Worcester	5050	83	3.2	11.3	0.8	1.6

II-10.h: Industry of those employed

Industry

Counties	Civilian employed population 16 years and over	Agriculture, forestry, fishing and hunting, and mining	Construction	Manufacturing	Wholesale trade	Retail trade	Transportation and warehousing, and utilities	Information	Finance, insurance, real estate, rental	Professional, scientific, management, administrative and waste management	Educational services, and health care and social assistance	Arts, entertainment, and recreation, and accommodation and food services	Other services (except public administration)	Public administration
Bristol	1246	0	1.1	13	4	18.1	0.6	9	7.4	16.5	23.7	4	1.4	1.4
Essex	2080	0	1.4	12.1	0.7	15.3	1.4	4.3	6.7	24.3	25.2	3.4	2.5	2.7
Hampden	1495	0	8.1	19.4	6.5	21.2	2.5	1.9	6.1	9.5	17.3	5	1.1	1.5
Middlesex	20997	0	0.9	11.8	1.5	11.2	1.5	4.3	8.2	31.9	19.7	6.5	1	1.5
Norfolk	6176	0	0.3	8.9	1	6.2	2.5	2.1	19.6	29.5	24.1	2.7	2.3	0.7
Suffolk	4424	0	0	10.1	0.2	7.1	1	1.4	13.2	19.4	33.9	8.7	4.1	1
Worcester	5050	0.3	0.2	19.5	0.7	11.5	3.1	1.7	6.8	31	20.2	2.4	2	0.6

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