To marry or not to marry: Diverging Age at First Marriage among Southeast Asian in the U.S. Hong, Savet University of California, Berkeley

Abstract. Since 1975, there has been a flow of immigration, largely refugees, to the United States from Southeast Asia, yet the stream of literature on this group has been limited. As this segment of the population continues to permanently settle and grow within the United States, it is necessary to understand its characteristics in order to better understand the implications this may have on the general composition of the country's population as a whole and the intersection of policy decisions. Taking a step in this direction, this paper uses IPUMS to examine male and female mean age at first marriage of seven Southeast Asian groups (Cambodian, Laotian, Vietnamese, Thai, Filipino, Indonesian and Malaysian) across nine geographical regions for 1990 and 2000. The analysis shows unusual variation between the sexes, ethnic groups, and census years. The findings are discussed in terms of the method used and the dynamic flow of this population.

In Demography, nuptiality has largely been studied within the context of fertility (Trussell 1976; Brien and Sheran 2003), whereby, the timing of union formation, i.e. marriage, can be considered as an indicator of the risk of exposure to childbearing. Apart from this, on the individual level, the age of marriage can influence the availability of suitable partners on the marriage market, and it can have an impact on the stability or duration of marriage (Lehrer 2003). These possible consequences for individuals, families, and society imply the importance to monitor and observe the age of marriage.

The median age of first marriage for men and women in the United States, according to the Census Bureau, over the past 32 years has gradually increased. As shown in Table 1, over this period the increase in median age at first marriage for men is 4 years (from 23.5 to 27.5) and 4.5 years (from 21.1 to 25.6 ) for women. Over the past two census years from 1990 to 2000, the change in age of first marriage for men is less than a year while the median age of first marriage for women increased more than a year. The continuing rise in age of first marriage at the national level has raised some concerns in the public, but is the concern relevant for all race and ethnic groups in the US or in all regions? In an attempt to address this question, this study calculates the
age of first marriage of a relatively new segment of this country's population, Southeast Asian (SEA), and about $75 \%$ of the people in the seven groups that will be considered here are immigrants. These seven Southeast Asian groups are Vietnamese, Laotian, Cambodian, Thai, Filipino, Indonesian and Malaysian.

## SOUTHEAST ASIAN IN THE US

As the 2000 Census shows, the collective population for these seven SEA groups is estimated to be over 4.2 millions (206,052 Cambodian, 2,364,815 Filipino, 63,073 Indonesian, 198,203 Laotian, 18,566 Malaysian, 150,283 Thai, and 1,223,736 Vietnamese). Among these Southeast Asian groups, Filipino is the largest and has the longest history of immigration to the US. Their immigration started following the Spanish-American War in 1889 when the US acquired the Philippines. This change enabled Filipinos to be considered as "nationals," and they were thus free to move within the US during a time when migration laws were anti-Asian immigrants (Fong 1998).

Immigration legislations that were exclusionary and quotas based on national origin were abandoned with the passage of the McCarren-Walter Act in 1952 followed by the Immigration and Nationality Act 1965. These legislations created categories for entrants based on those with special skills, relatives of US citizens (preferences given for the purpose of family reunification), and refugees.

Under the later category, the displaced Vietnamese, Laotian and Cambodian came to the US following the end of the Vietnam War in 1975. Unlike the refugees, Thai, Malaysian and Indonesian immigration to the US were for other reasons. Because of the timing of these immigrations, and the selective nature of the flow, this influx is noticeable in their age pyramids for the past two decennial census years as shown in Figures 1-14. These figures show a pronounced bulge for the prime working age groups and distinctive changes that is characterized
by fertility and migration. Consider for instance Figure 13 and 14. In 1990 Malaysian were largely composed of 20-35 years old and were dominantly women. Also, no one in the sample were of the age 10-20, and, if there were no additional immigration, ten years later this absent cohort should be 20-30, but in the 2000 census instead of a missing cohort, this age group represented a substantial share of the Malaysian population. These changes will have interesting implications on the results of the age of first marriage.

## DATA AND METHOD

Because of the recent history of Southeast Asian immigration to the US, it would be ideal to have data from the 1980 census to the most recent census. However, since the data used is the $1 \%$ census sample from the Integrated Public Use Microdata Series (IPUMS), and the census does not have detailed racial categories for the seven SEA groups in 1980, this restricts the analysis to the last two censuses, 1990 and 2000.

In addition, another limitation of the dataset is that it does not have information on the age of first marriage. Should the data be available, the median age of first marriage could be calculated similar to the one presented in Table 1, and the mean age of first marriage (MAFM), a representative mean age of first marriage could also be derived using the formula

$$
M A F M=\frac{\sum n_{x} \cdot x}{\sum n_{x}}
$$

In this formula x is the age of first marriage and n is the counts of those whose first marriage were at age x . This technique provides a direct measure that is representative of the population age of first marriage.

Even though this direct method may be representative, it does not provide a meaningful value for comparison between populations. Because this method provides a weighted mean age of first marriage, MAFM will be greatly influenced by the age structure. In a young population,
the MAFM will be low while the MAFM for an aging population will be high. An indirect method that would not be influenced by the age structure is necessary in order to compare the age of marriage for all seven SEA ethnic groups.

Considering the limitation of the data and the above method, a classic indirect method, called the singulate mean age at first marriage (SMAFM) which was developed by John Hajnal (1953), is employed. This is a cohort measure applied to period data to provide an indirect estimate of the mean age at first marriage. The technique requires only data on the proportion of single for each age group.

Furthermore, the use of SMAFM also requires that the following conditions are met: 1) age is never negative; 2 ) being ever-married is an irreversible state; 3 ) only those who will eventually obtained the status ever-married will figure into the calculation. An analogy used to understand conditions 2 and 3 is the concept of marriage is like death in the lifetable (Wachter 2007). Members born into a cohort are born into the single state, but once they leave this status through marriage, they join the ever-married population (married, divorced, widowed) and cannot reclaim the never-married status, in the same manner as those who have died cannot reclaim life since death is a permanent condition and is irreversible. Therefore, the calculation for this method is similar to the lifetable and the singulate mean age of first marriage can be interpreted as the expectation of life in the single state at birth.

In addition to the conditions stipulated above, SMAFM method assumes that mortality and migration are negligible and therefore are not factored into the calculation. Another important assumption is that the marriage rates have not been changing in recent decades. This implies that the proportion single in each age group is constant over time; that is, from cohort to cohort they share the same experience, so that a period record like the census captures the
experience of a single cohort passing through its life at the rates found in the period data. An additional assumption that is used in practice but not built into the formula is that no one marries under the age of fifteen.

Under these assumptions, the proportion single or never-married are used to find its compliment, the proportion ever-married and the SMAFM formula is thus applied as follows:

$$
S M A F M=\sum n_{x} \cdot\left(1-\frac{F(x)}{F_{u t t}}\right)
$$

In this formula, SMAFM is defined as the cumulative sum of single life. $F(x)$ represents the proportion ever-married for each age group, $F_{u l t}$ represents the first maximum proportion evermarried, and $n$ is the width of each age interval. For the purpose of simplification, in this paper five year age interval is used, assuming that that there is little variation within the age group, and the age range factoring into the calculation will be from 15 to 55 , assuming that there is little or no marriages under 15 years of age and there is an insignificant amount of first marriage after 55 .

## RESULTS

Table 2 presents the result from the SMAFM calculation for male and female of all seven SEA groups for 1990 and 2000. The female SMAFM in 1990 are in the early to mid-twenties, except for Malaysian which is 19.1. Likewise for men, while Malaysian male SMAFM is at 22.9 , the SMAFM for the other ethnic groups are significantly higher, ranging from the late twenties to the early thirties. By 2000, Malaysian no longer had the youngest age of marriage. Instead, Malaysian had the highest SMAFM at 28.8 for female while Cambodian had the earliest SMAFM of 22.3. For men, the SMAFM values were in the late twenties to early thirties, and the SMAFM for Malaysian men, 28.6, was neither the highest nor the lowest. The highest was 33 years old for Thai men and the lowest was 23.4 years old for Indonesian.

Overall, there was an increase in the SMAFM for both sexes in each ethnic group from 1990 to 2000, except for slight decline of less than a year for Vietnamese male and Indonesian female and more than 1.5 years decrease for Cambodian female and Indonesian male. The increases for these ethnic groups are minimal compared to the considerable increase of 9.7 years for Malaysian women. Furthermore, the difference between male and female SMAFM in 1990 was either around 3 or 6 years difference, whereas there was a greater range of difference in 2000. There was almost no difference in 2000 for Malaysian men and women to as wide a difference as 6 years for Cambodian men and women.

While at the national level there are some differences in the SMAFM calculated for each of these ethnic groups, the variability becomes broader at the regional level. ${ }^{1}$ For instance, this can be observed in Table 3 which presents results from SMAFM calculations for female in 1990 by region and ethnicity. These calculations show the singulate mean age of first marriage varied from as low as 15 years of age for Vietnamese in the Mountain Division, Cambodian in the East North Central Division, and Thai in West South Central Division, to as high as 35 years of age for Malaysian in the Middle Atlantic Division. The mean SMAFM, by row, varied from as low as 21 in the West South Central Division to as high as 24.8 in the Pacific Division. While the mean SMAFM by column for all groups except Indonesian and Malaysian, to the nearest whole age, is 23 years. The overall mean SMAFM for female is 23.2 .This is closer to the mean SMAFM for each ethnic group except for Indonesian and Malaysian which remained relatively high, over 25.

The overall SMAFM for men from the same race and ethnic groups in the same year is higher than that of women, with a mean of 26.7. Yet, as shown in Table 4, the lowest singulate mean age of first marriage is for Cambodian in the Pacific Division and the highest SMAFM is
also for Cambodian but in the West North Central Division and East South Central Division and for Thai in New England. When computing the mean SMAFM by column or by row, the modal distribution is around 26 years of age.

The variability in the SMAFM for female in 1990 could still be observed in 2000. As shown in Table 5, Malaysian still had the highest age of first marriage, and it increased five years since 1990 to an estimated 40 years of age. Of the three ethnic groups with the lowest SMAFM in 1990, Cambodian females still maintained the lowest singulate mean age of first marriage in 2000. Also, Laotian female in the East North Central Division had a similar SMAFM result. Even with these low SMAFM values, the mean SMAFM for each female ethnic group in 2000, by ethnic groups, compared to 1990 has increased to around 25 . And the overall mean has increased from 23.2 in 1990 to 25.9 in 2000.

Unlike the changes observed for female between the two decades, the difference for male is not as great, with its overall mean SMAFM being 26.9, a slight increase of .2 years between the two census years. As shown in Table 6, Thai had the highest SMAFM of 35, and the lowest remains at 15 but now it is for Vietnamese instead of Cambodian. In terms of the mean SMAFM by ethnicity (column) or by region (row), it is not as consistent as it was in 1990. When calculating the means by column, the mean distributed around 24.8 and 26.7 ; and when it is by row, the distribution by region ranged around 26.7 to 28.3 .

## DISCUSSION

As the results show there is some variability in SMAFM values for the seven SEA groups at the national level for men and women but not to the same extent seen at the regional level in the two periods. Extreme aberration in SMAFM at the regional level, 15 or 40 years of age, could be the consequence of the small sample size for the ethnic groups in these regions. With

[^0]the limited sample size and the size of the proportion of those ever-single, it is possible for an ethnic group in a particular region to have only individuals too young to leave the single status and entered the ever-married population which makes calculation of SMAFM difficult since there will not be a maximum proportion married, or producing high SMAFM values if the only married proportion is at a much older age. Or conversely, to have a sample of only those who are married, without individuals in the single-state.

An acknowledgement that must be made, which could also be considered a limitation of the method, is the period effect. That is to say, those who are older have had the opportunity of getting married earlier while the later cohorts have not had the opportunity to enter into matrimony. Thus, the age of marriage from the SMAFM calculation may not be representative of everyone in the ever-married state.

Despite these limitations, the SMAFM values could also suggest that there is something distinctive about the ethnic population nested within these regions. Either the individuals in these communities are marring young or delaying their marriage until late in life. The living environment in one area may be more conducive than another in encouraging people to marry and have families or to remain single. The pool of eligible partners in the marriage market in a particular region may either be broad or narrow, and this can influence the proportion of married individuals and timing of marriage. Therefore, one region may have a higher proportion of those of one age group than another.

In addition, since these regions are not isolated and there are no barriers to inhibit the movement of these people, migration can influence the selective nature of settlement of these ethnically diverse groups. Certain locales have established ethnic communities that help facilitate the transition of new members, maintain their cultural identities and practices. These niches
attract individuals of certain characteristics, one of which may include marital practices that encourage marriage at young ages. In addition to the cultural and ethnic affinity, economic motivations may factor into the decisions of individuals to migrate to certain regions. Changes in the economy may induce people to move to other states where they could find better opportunities, more affordable living conditions, or earn a suitable income to establish a family prior to marriage. A consequence of individuals' decisions to move is that it changes the ethnic composition of the population at the regional level from one census year to the next, which contributes to the variation in the SMAFM of each ethnic group in the different regions.

Furthermore, at the aggregate level the ethnic migration within the US that is detected at the regional level disappears. Even though the regional variation is suppressed, there is a difference at the national level in the migration pattern between 1990 and 2000. As noted earlier, Figure 1-14 show this noticeable difference in the flow of immigration. These age pyramids demonstrate that the flow of immigration favors particular age groups and favors the female sex. Moreover, it is possible that the selective nature of immigration will also distort the proportion of those either single or married at all age categories above age 15. This distortion will mean that the proportion married from cohort to cohort is not at the same rate, a fundamental assumption in SMAFM. Moreover, these results contribute to the understanding that immigration, particularly of immigrant populations, is not a negligible factor in the use of SMAFM.

## CONCLUSION

In this paper, SMAFM is applied to the Southeast Asian population in the US in the past two decennial censuses at the regional and national levels. The results showed unexpected singulate mean age at first marriage, and as discussed above this could be a consequence of the regional migration and immigration pattern in the two decades; however, prior to exploring
further detailed social conditions of these seven Southeast Asian groups as explanatory factors in the variation of mean age at first marriage, it would be necessary to examine the choice of model itself. As presented here, the model used to estimate the mean age at first marriage does not take into account immigration which can significantly influence the proportion never-married or evermarried population at either an early or late age group. This will dramatically affect the results of a SMAFM calculation, and this may not produce an appropriate estimate of the mean age at first marriage of the married population. In order to obtain more accurate estimates using SMAFM, it would be necessary to improve the model to take into account changes in migration. The other alternative would be to find an alternative model to use as an indicator to estimate the mean age at first marriage.

Additional research could also be performed on the second generation of Southeast Asian in the US. Because this population is a closed population in the sense that membership into this status can only be achieved through birth, and there will not be an issue of immigration factoring into their SMAFM calculation. Moreover, comparing their age of first marriage to the native population could shed light on the assimilation process.

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Table 1. 2000 US median age at first marriage for men and women.

| Year | Men | Women |
| :---: | :---: | :---: |
| 2007 | 27.5 | 25.6 |
| 2000 | 26.8 | 25.1 |
| 1990 | 26.1 | 23.9 |
| 1980 | 24.7 | 22.0 |
| 1975 | 23.5 | 21.1 |

Source: US Census Bureau, Current Population Survey, March and Annual Social Economic Supplements.

Table 2. SMAFM by race/ethnicity and sex. 1990 and 2000.

|  | 1990 |  | 2000 |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Female | Male | Female | Male |
| Cambodian | 24.2 | 27.2 | 22.3 | 28.7 |
| Laotian | 23.5 | 26.9 | 26.9 | 30.4 |
| Vietnamese | 25.7 | 31.8 | 27.2 | 31.1 |
| Thai | 26.6 | 32.6 | 27.4 | 33.0 |
| Filipino | 25.5 | 29.0 | 26.4 | 30.8 |
| Indonesian | 27.7 | 30.8 | 27.3 | 23.4 |
| Malaysian | 19.1 | 22.9 | 28.8 | 28.6 |

Table 3. 1990 Female (15-55) SMAFM by Census Region and Race/Ethnicity.

| NORTHEAST REGION | Filipino | Vietnamese | Cambodian | Laotian | Thai | Indonesian | Malaysian |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| New England Division | 25 | 28.0 | 22.6 | 22.8 | 25 | - | - |
| Middle Atlantic Division | 25.1 | 20 | 26.8 | 25.0 | 20 | $32.1^{*}$ | $35.0^{*}$ |
| MIDWEST REGION |  |  |  |  |  |  |  |
| East North Central Division | 23.3 | 27.4 | 15.0 | 20.0 | 21.7 | 30.0 | - |
| West North Central Division | 22.7 | 22.7 | $30.0^{*}$ | 21.8 | $30.0^{*}$ | - | - |
| SOUTH REGION |  |  |  |  |  |  |  |
| South Atlantic Division | 25.5 | 24.8 | 25.0 | 23.2 | 22.9 | $25.0^{*}$ | - |
| East South Central Division | 27.9 | 17.7 | - | $25.0^{*}$ | 25.0 | - | - |
| West South Central Division | 22.9 | 24.5 | 20.0 | 22.6 | 15.0 | $20.0^{*}$ | $24.3^{*}$ |
| WEST REGION |  |  |  |  |  |  |  |
| Mountain Division | 24.7 | 15.0 | 20.0 | 23.8 | $25.0^{*}$ | - | - |
| Pacific Division | 25.5 | 26.5 | 25.3 | 23.3 | 28.3 | 20 | - |

*for missing data after age fifteen, used the data for the intervening age groups to calculate a ten year interval.

Table 4. 1990 Male (15-55) SMAFM by Census Region and Race/Ethnicity.

| NORTHEAST REGION | Filipino | Vietnamese | Cambodian | Laotian | Thai | Indonesian | Malaysian |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| New England Division | 28.2 | 31.4 | 25.6 | 30.4 | 35.0 | - | - |
| Middle Atlantic Division | 28.5 | 30.6 | 27.5 | 32.9 | 20.0 | 20.0 | - |
| MIDWEST REGION |  |  |  |  |  |  |  |
| East North Central Division | 29.9 | 28.4 | 20.0 | 25.0 | 33.6 | $21.1^{*}$ | 20.0 |
| West North Central Division | 25.4 | 29.0 | $35.0^{*}$ | 25.8 | 30.0 | - | - |
| SOUTH REGION |  |  |  |  |  |  |  |
| South Atlantic Division | 27.6 | 31.4 | 25.0 | 26.3 | 20.0 | $25.0^{*}$ | - |
| East South Central Division | 25.0 | 27.4 | $35.0^{*}$ | $26.3^{*}$ | - | - | - |
| West South Central Division | 20.0 | 30.5 | $20.0^{*}$ | 24.1 | 25.0 | - | - |
| WEST REGION |  |  |  |  |  |  |  |
| Mountain Division | 23.8 | 23.6 | $25.0^{*}$ | 20.0 | 30.0 | - | - |
| Pacific Division | 29.6 | 30.5 | 15.0 | 26.4 | 31.2 | 32.4 | - |

*for missing data after age fifteen, used the data for the intervening age groups to calculate a ten year interval.

Table 5. 2000 Female (15-55) SMAFM by Census Region and Race/Ethnicity.

| NORTHEAST REGION | Filipino | Vietnamese | Cambodian | Laotian | Thai | Indonesian | Malaysian |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| New England Division | 20 | 30.2 | 27.8 | 27.1 | 29.1 | 32.5 | 30.0 |
| Middle Atlantic Division | 29.6 | 26.9 | 22.5 | 30.0 | 29.1 | 25.0 | 25.0 |
| MIDWEST REGION |  |  |  |  |  |  |  |
| East North Central |  |  |  |  |  |  |  |
| Division | 27.3 | 26.7 | 26.2 | 15.0 | 24.0 | 27.0 | 26.3 |
| West North Central Division | 24.5 | 27.1 | 25.0 | 25.6 | 27.2 | 25.0 | 40.0 |
|  |  |  |  |  |  |  |  |
| SOUTH REGION |  |  |  |  |  |  |  |
| South Atlantic Division | 23.1 | 28.7 | 21.1 | 20.0 | 17.0 | 20.0 | 25.0 |
| East South Central Division | 25.1 | 24.2 | 15.0 | 30.0 | 20.0 | 25.0 | 35.0 |
| West South Central Division | 24.6 | 25.9 | 31.3 | 28.0 | $29.0^{*}$ | $35.0^{*}$ | $30.0^{*}$ |
| WEST REGION |  |  |  |  |  |  |  |
| Mountain Division | 26.9 | 29.7 | 20.0 | 20.0 | 29.7 | $28.0^{*}$ | - |
| Pacific Division | 26.4 | 27.1 | 22.5 | 23.7 | 27.2 | 28.0 | 30.0 |

*for missing data after age fifteen, used the data for the intervening age groups to calculate a ten year interval.

Table 6. 2000 Male (15-55) SMAFM by Census Region and Race/Ethnicity.

| NORTHEAST REGION | Filipino | Vietnamese | Cambodian | Laotian | Thai | Indonesian | Malaysian |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| New England Division | 20.4 | 28.4 | 30.3 | 26.9 | 27.5 | $20.0^{*}$ | $30.0^{*}$ |
| Middle Atlantic Division | 20.4 | 28.4 | 30.3 | 26.9 | 27.5 | $20.0^{*}$ | $30.0^{*}$ |
| MIDWEST REGION |  |  |  |  |  |  |  |
| East North Central Division | 27.7 | 15.0 | 27.5 | 29.8 | 35.0 | - | - |
| West North Central Division | 30.8 | 18.6 | 33.2 | 29.0 | 29.6 | - | - |
| SOUTH REGION |  |  |  |  |  |  |  |
| South Atlantic Division | 28.8 | 30.9 | 25.0 | 25.5 | 25.0 | 30.0 | - |
| East South Central Division | 27.5 | 15.0 | $32.4^{*}$ | $25.0^{*}$ | - | - | - |
| West South Central Division | 25.4 | 29.2 | 29.4 | 20.0 | $27.5^{*}$ | 22.1 | - |
| WEST REGION |  |  |  |  |  |  |  |
| Mountain Division | 28.4 | 26.7 | 29.0 | 22.3 | 32.8 | 30.7 | - |
| Pacific Division | 30.9 | 31.5 | 23.9 | 18.6 | 33.6 | 23.9 | $30.0^{*}$ |

*for missing data after age fifteen, used the data for the intervening age groups to calculate a ten year interval.

Figure 1 Filipino Age Structure 1990


Figure 2 Filipino Age Structure 2000


Figure 3 Vietnamese Age Structure 1990


Figure 4 Vietnamese Age Structure 2000


Figure 5 Cambodian Age Structure 1990


Figure 6 Cambodian Age Structure 2000


Figure 7 Latoian Age Structure 1990


Figure 8 Laotian Age Structure 2000


Figure 9 Thai Age Structure 1990


Figure 10 Thai Age Structure 2000


Figure 11 Indonesian Age Structure 1990


Figure 12 Indonesian Age Structure 2000


Figure 13 Malaysian Age Structure 1990


Figure 14 Malaysian Age Structure 2000


## APPENDIX

## CENSUS REGIONS

## STATES

| NORTHEAST REGION <br> New England Division | Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont |
| :---: | :---: |
| Middle Atlantic Division | New Jersey, New York, Pennsylvania |
| MIDWEST REGION <br> East North Central Division | Illinois, Indiana, Michigan, Ohio, Wisconsin |
| West North Central Division | Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota |
| SOUTH REGION South Atlantic Division | Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia |
| East South Central Division | Alabama, Kentucky, Mississippi, Tennessee |
| West South Central Division | Arkansas, Louisiana, Oklahoma/Indian Territory, Texas |
| WEST REGION Mountain Division | Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming |
| Pacific Division | Alaska, California, Hawaii, Oregon, Washington |


[^0]:    ${ }^{1}$ See Appendix for the states included in the census regions.

