# Impact of War and Military Service on Marital Timing of Men in Vietnam

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## ABSTRACT

In this paper, I use the life course approach to examine how growing up during wartime and serving in the military affect marital timing of Vietnamese men, net of other demographic and socioeconomic characteristics. My analysis is based on the 1995 Vietnam Longitudinal Survey conducted in the Red River Delta in Northern Vietnam. I find that growing up during wartime caused significant delays in marriage among Vietnamese men, particularly around traditional marriage age. How disruptive wartime is on marital timing, however, depends on length of military service. Short-term military service (i.e., 3 years or less) did not lead to a significant postponement in marriage but longer service did. Beyond "on-time" marriage, military service had only moderate effects on marital timing. Modernization factors such as education and growing up in urban settings remain important predictors of marital timing regardless of the existence of war and heightened military demand.

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## INTRODUCTION

During the 20th century, the Vietnamese marriage and family system underwent dramatic transformation (Liljestrom and Tuong Lai 1991; Pham Van Bich 1999; Werner and Belanger 2002). Studies showed that these changes were largely attributable to the expansion of educational opportunities and non-agricultural employment, cultural shift towards freedom in mate choice, and state policies that determined to promoting individual freedom in family formation (Nguyen Huu Minh 1998). In addition to these "modernization" factors, decades of war in Vietnam from the 1940s to the 1970s were also believed to have left a profound imprint on the Vietnamese marriage and family formation patterns.

Existing studies suggested that the long war caused marriage delays and marriage squeeze (Goodkind 1997; Nguyen Huu Minh 1997). However, the extent to which war and military service affected family formation in Vietnam has not yet been well understood. Previous work did not measure the effects of war and military service directly. They had a tendency to rely solely on macro-level data such as census. They usually overlooked individual variations in wartime experience. Further, several important aspects of military service have not yet been studied. These aspects such as timing of induction into the military and length of service may have had significant effects on marriage behaviors.

In this study, I use the life course approach to describe how growing up during wartime and serving in the military affect marital timing of Vietnamese men. My analysis is based on the 1995 Vietnam Longitudinal Survey conducted in the Red River Delta in Northern Vietnam. I attempt to answer the following research questions: How did war disrupt family formation patterns, particularly timing of marriage? Did war affect all members of wartime cohort equally? Were veterans more likely to postpone marriage than non-veterans? Was the experience of veterans from the wartime cohort similar veterans from other cohorts? What factors explain these similarities or differences? Did long-term military service adversely affect men's likelihood of getting married? What usually comes first, marriage versus military service? Were the effects of war and military service on marital timing modified after taking into account "modernization" factors?

I use both descriptive and multivariate analysis to document the influences of wartime and military service. Three aspects of military service are examined: whether or not one has ever served in the military, timing of induction, and duration of service. I compare the pace of marital timing across cohorts and by military service experience. I also examine marriage-military service sequencing. Using logistic regression methods, I document the determinants of early marriage, "on-time" marriage, and late marriage. I find that military service postponed marriage, particularly for the Red River Delta men who grew up during wartime. Length of service did not affect the timing of early marriage (below age 20) or late marriage (after age 30). But it did affect whether men were likely to be married by age 25. I also observe a trend away from early marriage for all birth cohorts that did not seem to be influenced by military service.

## IMPACT OF WAR ON FAMILY FORMATION FROM THE LIFE COURSE PERSPECTIVE

War upsets normality in transitions to adulthood, including the process of forming a family of procreation through marriage and parenthood, which is usually considered the final stage of becoming an adult (Elder 1987; Hogan 1981). War alters role choices available to birth cohorts and influencing role transitions in which young people make (Gade 1991; Modell and Haggarty 1991). It leads to heightened military demand, disrupted economy, and excessive male mortalities, which in turn affect how and when young people decide to get married and start their family (Cooney and Hogan 1991).

According to US-based studies, the impact of war and military service on marital timing has two dimensions. On one hand, military service may delay first marriage for individual men. Since the military service limits access to potential mates and makes it inconvenient to marry, men who enter the military might have found their marriage market prospects weakened and thus, might be forced to postpone marrying (Hogan 1978). On the other hand, compulsory military service may also urge young people to marry earlier than they should have done had they not been called for service. Modell and Steffey (1988) found that during the World War II, the heightened military demand did not force young people to delay their marriage. Nuptiality rate did not slow down during this period. Studies suggested that state policies may have influenced marriage patterns during wartime (Hogan 1981; Modell and Steffey 1988). For example, the US government policy during the World War II was designed to conserve the already-formed families of soldiers. Men might rush to marry in hope of avoiding the draft through a family deferment.

Marriage, like other life course events, is more or less structured by age-related norms and institutional requirements. War and military service obligations may disrupt normative patterns in family formation. The divergence for normal life course pathways can negatively affect subsequent outcomes (Hogan 1981). Past studies suggested that war and military service had adverse effects on marital stability, depending on timing of induction. Pavalko and Elder (1990) found that World War II veterans who were married by the time of induction experienced a greater risk of divorce than those who were single at induction. For marriages contracted prior to war, both partners were changed by war experience. While the soldiers experienced war trauma that their spouse could not comprehend, the spouse faced economic hardship and total responsibility of family roles and finances. These changes produced marital discord and increased the risk of divorce. The negative effects, however, vary by historical periods. Call and Teachman (1996), for example, did not find any negative effects on marital stability for Vietnam War veterans, who were married prior to the service.

## THE CONTEXT OF VIETNAM

The War Decades in Vietnam: From the 1940s to 1970s, Vietnam underwent military conflicts nearly constantly. Led by the socialist movement, the country waged war against the French between 1945 and 1954. After the war for independence was over, the 1954 Geneva accord led to a partition of Vietnam into North Vietnam (governed by the socialist regime) and South

Vietnam (governed by a pro-French government). The American intervention in the 1960s[1] led to another major outbreak of armed conflicts between the North and the South that lasted over a decade (1965-1975). Vietnam reunified its divided country in 1975. Yet, the border wars against Cambodia and China carried on until the end of the 1970s.

The universal draft law, requiring every eligible man to serve[2], was implemented in 1960 in Northern Vietnam. While the official number of men being mobilized during the war decades has never been published, Vietnam was regarded as one of the most highly mobilized societies in contemporary history (Pike 1986). Even though major armed conflicts were over by 1979, Vietnam continued its compulsory military service program throughout much of the following decade. In the 1980s, Vietnam had one of the world's largest armies with only the Soviet Union, China, the United States, and India having larger regular standing armies (Thayer 1994).

In addition to the massive military mobilization, the war decades were also characterized by high war casualties. High mortalities afflicted young adult males ages 15-29 most (Merli 2000). During the American War alone, about one million Vietnamese died in war-related causes (Hirschman et al. 1995). Another negative consequence of the long war was that a great number of Vietnamese were left disabled (Banister 1993: 12). Disability may have greatly affected one's marriageability and his/her position in marriage market.

Social Changes and Marriage in Vietnam: In Vietnam, marriage is a particularly important life course marker for transitions to adulthood (Belanger and Khuat 2002; Goodkind 1995). Adult children gained autonomy from their parents upon getting married. Unlike many Western societies, entry into marital union stands a better proxy for independence from parents than age or entry into the labor market (Belanger 2000). Traditionally, marriage is nearly universal and usually takes place early. During the 20th century, socioeconomic changes associated with modernization have transformed marriage and family by postponing marital timing and increasing individual freedom in family formation (Nguyen Huu Minh 1998; Pham Van Bich 1999).

After the partition of Vietnam in 1954, Northern Vietnam under the socialist regime witnessed a rapid expansion in educational opportunities (Woodside 1983) and, through an implementation of collective and redistributive economic measures, an increase in employment outside home and outside the agricultural sector (Beresford 1988). The regime also committed to promoting gender equality and individual freedom in family formation. The 1959 Marriage and Family Law stipulated the minimum legal age at marriage at 18 for women and 20 for men. Postponement of marriage until mid-20s was recommended for both men and women by the regime (Van Dyke 1972). These policies on family formation and gender equality were believed to accommodate the concurrent military mobilization (Pham Van Bich 1999). With millions of men mobilized for the war effort, women were asked to take over unprecedented responsibilities for maintaining

[1] The standard reference to the war which took place as a result of the American intervention in Vietnam as the "Vietnam War" reflects an American-centric perception. Since this study attempts to portray the experiences of the Vietnamese, I refer to this war as the "American War" which is the term the Vietnamese use.
[2] North Vietnam's draft deferment policy was applied to the physically disabled, sole remaining sons, young men who were the principal supporter for their families, selected Communist Party functionaries, most talented college students, and technicians with special skills.

agricultural and industrial production. The communist propaganda at the time maintained that one should not think about love and marriage but concentrate on preparing to serve the country.

During the decade following the 1975 reunification, Vietnam experienced a severe stagnation in production and economic growth. This led the socialist regime to introduce the market reform, known as *"doi moi"* (renovation), in the late 1980s. Throughout the 1990s Vietnam witnessed the dismantling of redistributive economic measures, a surge in agricultural production, rapid economic growth, and poverty reduction (Dollar et al. 1998). Over the past recent years many social researchers have attempted to document the impact of *doi moi* on family changes. While empirical results have been mixed, there was evidence that the recent economic growth led to early family formation and revived the influences of Confucian tradition on marriage, particularly post-marital living arrangements and wedding ceremonies (Hirschman and Nguyen 2002; Nguyen Huu Minh 1998).

Consequences of War on Family Formation: Recent empirical studies showed that war caused marriage squeeze and marriage delays among young adults who grew up during times of war (Goodkind 1995, 1997; Nguyen Huu Minh 1997, 1998; Pham Van Bich 1999). Nguyen Huu Minh (1997) drew evidence from various survey data and concluded that war was a key factor leading to later age at marriage for cohorts of women who were in their late teens and early 20s during the American War. Based on the 1989 census, a study by Goodkind (1997) suggested that there was evidence of marriage squeeze among young women in Vietnam during the 1970s and 1980s. The severe imbalance in sex ratios among these cohorts was largely due to excessive male mortalities during wartime and male out-migration during the decade following the reunification. The remnants of war on family formation were also documented in recent qualitative studies. Belanger and Khuat (2002) studied the lives of "war spinsters" in rural Vietnam, who involuntarily stayed single supposedly because of war and adverse economic circumstances. Phinney (2003) investigated the phenomenon in which single Vietnamese women from the wartime generation "asked for a child" from men, with a fee paid depending on the sex of the child, because they saw little prospects of getting married.

Birth cohorts and age were often used as a proxy for wartime experience in previous empirical studies. Measures of military service are usually not included in the analysis. One exception is a study by Nguyen Huu Minh (1997, 1998) in which the author included a measure of military experience (i.e., whether or not one has ever served in the military). Nonetheless, other important aspects of military service including timing of induction and duration of military service have not yet been documented for the case of Vietnam before. According to the life course perspective, both timing of induction and duration of military service significantly explain young people's life course pathways and later outcomes (Elder 1986).

## DATA AND METHODS

My analysis is based on the baseline data of Vietnam Longitudinal Survey (VLS) conducted in 1995. The VLS was carried out in Ha Nam Ninh province located in the Red River Delta. According to the 1989 census, Ha Nam Ninh was one of the most populous and densely settled provinces in northern Vietnam. While the province was not randomly selected, the sample of VLS households is a representative sample of the province. A comparison of major

socioeconomic and demographic indicators of Ha Nam Ninh and the rest of Red River Delta region suggested that the VLS data closely reflected the situation in the Red River Delta. Subsequent to the 1995 VLS baseline survey, Ha Nam Ninh was subdivided into the three provinces of Ha Nam, Nam Dinh, and Ninh Binh, lying between 60 and 100 kilometers from Vietnam's capital city Ha Noi.

In the survey, household and individual questionnaires were administered to 1,855 households in 10 randomly selected communes in the study area with an over-sample of urban communes[3]. Household members between ages 15 and 65 years old were interviewed. The questionnaire features a wide range of questions on marriage and family formation, educational and occupational history, parental and sibling characteristics, and military experience.

The VLS is useful for several considerations. First, the survey is one among very few social surveys that collected retrospective information on military service of the Vietnamese during the 20th century. The VLS provides relatively detailed information on individual's military experience[4], including whether or not one has ever served in the military, year entering and leaving the military, and the number of times serving in the military. Further, the VLS geographic coverage of the Red River Delta provides a "natural experiment" setting for assessing the impacts of war over the life course of the Vietnamese. The population of Red River Delta was extensively mobilized by the socialist regime during times of war and was also heavily bombed during the escalation of the American War.

In this study, I limit my sample to Vietnamese men who were born between 1930 and 1975 (ages 20-65 at the time of interview). This results in a sample size of 1,851. I use the life course approach in this study. This approach provides an analytical framework for examining the role of macro-level events such as war in altering the course of adult development. The figure below illustrates the intersection of periods of war and the life course of young people in Vietnam. I report both birth cohorts and decades in which each birth cohort reached age 20. Age 20 is roughly when many societies refer to as years of early adulthood.

| Birth cohorts | *Decade in which individuals in a birth cohort reached age 20:* | Historical Periods | | | | |
|---|---|---|---|---|---|---|
| | | French War | Post-Geneva Accord | American War | Post-Reunification | Renovation |
| | | 1945-1954 | 1955-1964 | 1965-1975 | 1976-1986 | 1987-- |
| 1930s | *1950s* | Young adult | Young adult | | | |
| 1940s | *1960s* | | Young adult | Young adult | | |
| 1950s | *1970s* | | | Young adult | Young adult | |
| 1960s | *1980s* | | | | Young adult | Young adult |
| 1970s | *1990s* | | | | | Young adult |

[3] For more information on sampling methodology and the complete VLS questionnaire and data coding information, please visit the following website: http://csde.washington.edu/research/vietnam/vls.html. The survey design and data collection procedures were conceptualized and organized by Professor Charles Hirschman (University of Washington) and his colleagues at Vietnam's Institute of Sociology.

[4] In the VLS, the military service reflects only experiences in Vietnam People's Army, which is Vietnam's official army, rather than those in paramilitary forces and in guerillas bands. The Vietnamese term *"quan doi"* used in the VLS questionnaire referred to regular armed forces.

Each birth cohort arrives at their early adulthood years at different historical periods. For example, men who were born in the 1940s and 1950s turned age 20 in the 1960s and 1970s. This means they entered adulthood during the years of the American War and were exposed to heightened military demand, depressed economy, and high mortality risks during their early adulthood years. These conditions may have affected their family formation patterns, particularly their timing and likelihood of marriage. The 1960s and 1970s birth cohorts who reached age 20 during the 1980s and 1990s grew up with little or no first-hand experience of war. They lived through the period of rapid economic growth after the economic renovation. Economic opportunities and an absence of military service requirements may have resulted in very different patterns of marriage and family formation observed among men from this generation.

While the VLS has some outstanding advantages over other data sources, two methodological limitations pertaining to the VLS sample should be discussed. The first concerns selectivity and the second has to do with censoring issues. As for the selectivity issue, the VLS survey only sampled men who survived the war and lived until the time of interview in 1995. Therefore, the experiences during early adult years of those who died during wartime were not accounted for. Given the casualty rates during the American War was very high and young men were most likely to be exposed to mortality risks (Hirschman et al. 1995; Merli 2000), this may have led to an underestimation of certain measures in the VLS such as the number of men with military service.

Censoring problem can be severe among members of the most recent cohorts (i.e., men ages 20-25) because many of them have not yet married at the time of interview. They might get married at a later date but the information about their marriage was censored by the date of the survey. This can bias the analysis if the marriage behaviors of the most recent cohorts are described based only on the experiences of respondents who have married at a relatively early age. In this study, I exclude the youngest cohort in some analyses to avoid the bias. I also compute certain measures that allow me to examine marriage behaviors of this cohort. For example, a measure of ever married by age 20 can be computed for anyone above age 20 in the sample without subjecting to censoring bias. This measure enables me to look at forces that influence early marriage in the Red River Delta (see further explanation below).

## MILITARY SERVICE IN THE RED RIVER DELTA

Fifty-seven percent of men in the VLS sample had military experience. Proportions of veterans in each birth cohort, however, varied quite considerably. The cohort trends in prevalence of military service could be explained by war and military demand. Figure 1 presents three-year moving average of percentages of men ever served in the military for each birth cohort. Note that instead of using year of birth as an index on x-axis, I report year in which each birth cohort reached age 20 to make it convenient for interpretation. By and large, age 20 serves as a proxy for timing when members of a particular cohort reach their early adulthood.

[Figure 1 about here]

The 1960 universal draft law marked a significant increase in the prevalence of military service among the Red River Delta men. Figure 1 shows that around 30-40 percent of men in the cohorts

reaching adulthood prior to1960 were inducted. The number increased steadily for the cohort coming of age after 1960. Between 60 and 70 percent of men who reached age 20 during the 1960s and the 1970s served in the military. Even though the American War was over in 1975, the Red River Delta population continued to be highly mobilized until the mid-1980s. The actual proportion of men with military experience for those growing up during the American War was likely to be higher than the VLS estimation shown here. This was because the VLS sample included only adult males who were war survivors and I have not taken any measures to account for war casualties, which were reported to be very high. Substantial decrease in the prevalence of military service was observed among men who reached their early adulthood in the late 1980s. The percentage of men inducted into the military dropped very sharply from 40 percent in the late 1980s to less than 10 percent in 1995. The major reason for demobilization was the withdrawal of military aid from the Soviet Union, which took place concurrently with Vietnam's economic reform (Thayer 1994).

Like the prevalence of military service, timing of induction and duration of service also varied quite greatly by historical periods. Table 1 summarizes cohort trends in age at induction and length of military service. In this study, I label birth cohorts according to the presence of war, military demand, and other important historical events[5]. Men who came of age prior to the 1960 universal draft law are dubbed as "pre-mobilization generation". I call those who reached age 20 during the period of wartime heightened military demand as "the American War generation". The "reunification generation" refers to men growing up after the war but still subjected to high military mobilization. The youngest cohort reaching early adulthood during the period of demobilization and economic reform is called the "renovation generation".

[Table 1 about here]

Men from the pre-mobilization generation were inducted into the military at an older age compared to those from other cohorts. While nearly 60 percent of them never served, 22 percent were inducted at age 25 or older. When the universal draft law was implemented in 1960, men between ages 18 and 27 were called to serve. Many civilians from the pre-mobilization generation who were already in their mid-20s or older were recruited into the military at this time. After the draft law was established, trends in standardization of draft age were observed. It became increasingly common among cohorts of men who came of age after 1960 to be drafted by late teens or early 20s. New draftees who were in their mid or late 20s were pretty unusual.

According to the 1960 law, a draftee was required to serve for at least 2 years. However, length of service differed from generation to generation. The pre-mobilization and American War generations served for an extended period of time. Unlike American soldiers during the Vietnam era who were required to serve for one year in Vietnam, their Vietnamese counterparts were asked to serve "indefinitely". My analysis shows that long-term service of 7 or more years was common for veterans from these generations. There was a sharp contrast between older men and younger ones in the sample. Long-term service was rare among the reunification and renovation generations. For the renovation cohort, while only one fourth of them had military experience, those who did – served very shortly and left.

[5] The labeling scheme used for birth cohorts in this analysis will be used elsewhere in this paper because it is helpful in grasping the historical events members of a particular birth cohort experienced while they were growing up.

For certain generations such as the cohort growing up during the American War, military service was a rite of passage to adulthood. Many of them entered the military in their late teens and spent their entire early adult years serving in the military. The following analysis examines how the military obligations intervene with young men's transitions to marriage and family formation.

## OVERALL TRENDS IN MARITAL TIMING

In Vietnam, marriage is an important marker in the transition to adulthood. Young people gain autonomy from their parents by getting married and becoming parents (Belanger 2000). The descriptive analysis shown in Figure 2 examines the pace at which young men from each generation in the Red River Delta get married. Note that because the VLS interview took place in 1995, the observations were censored at age 29 for men from the reunification generation (age in 1995 of the youngest members from this cohort) and at age 20 for those from the renovation generation.

[Figure 2 about here]

Child marriage (married before age 15) was uncommon in the Red River Delta. The marriage rates for each generation showed little differences around mid-teens. Men from the pre-mobilization generation, however, started marrying off quickly in their late teens. By age 20, only 65 percent of them remained single, while over 85 percent of men from younger generations did so. The percentage single for pre-mobilization men continued to decrease quickly between ages 21-25 and tapered off during late 20s. For the American War and reunification generations, the pace of marriage began to pick up after age 20, although they were quite considerably behind the pre-mobilization cohort. Between ages 21 and 23 the American War generation were married at a slightly faster rate than the reunification cohort. However, from ages 24 through 29 the reunification cohort outpaced the wartime generation in the marriage rates. Because of data truncation, I cannot observe the marriage rates of the reunification generation beyond age 29. Although marrying at a slower rate, by age 30 it appeared that the marriage rates for the American War cohort caught up with and outpaced those of the pre-mobilization generation. Note that this VLS does not have information on disabilities caused by war. So it is possible that this analysis slightly overestimates the marriage rate of the wartime cohort if we assume that war caused many disabilities among Vietnamese men.

What can we interpret about the effects of growing up during wartime from this descriptive analysis? Results from Figure 2 suggest that wartime caused a postponement in marriage among men in the Red River Delta. The American War cohort married at a much slower pace than men from the pre-mobilization generation (particularly before age 30) as well as those from the reunification generation (at least between ages 24-29). Since marriage was such an important life course event for the Vietnamese, the wartime generation may postpone getting married but they did not give it up. The analysis shows that men from this cohort caught up with other cohorts in their late 20s and early 30s. Excessive male mortalities which led to an imbalance in sex ratios may actually put male survivors from the American War generations in a very favorable position in the marriage market.

Did the delaying effects of wartime apply equally to everyone from the American War generation? Did men who served marry at the same pace as those who did not? Did duration of service matter? Earlier studies had a tendency to generalize the impact of wartime and did not distinguish individual variations in wartime experience. The analysis in Figure 3 examines the pace of marriage for men from the American War generation by their military experience and duration of service.

[Figure 3 about here]

I find that wartime caused delays in marriage but the effects may vary depending on both military experience and length of military service. In general, non-veterans married at a faster pace than veterans. However, the marriage rates for veterans who served less than 3 years and for non-veterans showed little difference. For veterans, the longer one served in the military, the more likely one was to postpone marriage. By age 25, only about one fourth of non-veterans and short-term soldiers remained single. Meanwhile, there were 40 and 55 percent of veterans with medium (4-6 years) and long (7+ years) lengths of service respectively, who were still unmarried. Most marriage delays took place when the wartime cohort was in their 20s. By age 30, most men were married regardless of their military status and duration of service.

Men from the wartime generation – particularly those who served in the military for an extended period of time – postponed their marriage. How and when did their marriage take place relative to the timing of their military service? What were the marriage patterns of veterans from other generations? The analysis shown in Table 2 describes cohort trends in marriage-military sequencing among men with military experience. There are four possible sequences: 1) married at induction, 2) single at induction but married during the service, 3) single throughout and married after the service, and 4) never married by the time of survey.

[Table 2 about here]

More than half of veterans from the pre-mobilization generation were married by the time of induction. These men reached marriageable age before the draft law was in effect. They were recruited into the military at a later age (after they had already started a family). This explains why delaying effects on marriage were not observed for this cohort of men. Patterns in marriage-military sequencing are somewhat different for the American War cohort.

Compared to the earlier generation, a higher proportion of men from this cohort served in the military and most of them were inducted in their late teens or early 20s. This was probably a reason why only 12 percent were married at the time of induction. Most veterans from this generation were single before their entry into the military. Since it was common for this cohort to serve in the military for an extended period of time, I observe that 28 percent of men from this cohort got married during the service. In a descriptive analysis not shown there, I find that there was a high correlation between getting married during the service and long-term service of 7+ years. Veterans who served short (3 years or less) and medium (4-6 years) lengths of service were more likely to get married after the service.

Young age at induction and short-term service were characteristics of most veterans from the reunification and renovation cohorts. It was, therefore, not surprising to observe that very few veterans from these two cohorts were married at the time of induction. A majority of the veterans waited until they had completed the service before they got married.

## DETERMINANTS OF MARITAL TIMING

The descriptive analysis told a compelling story of how marital timing varied across generations of men who grew up during different historical period and, for the case of Vietnam, how war and military service influenced those marriage patterns. War and military service, however, are not the only forces that explain when and how people decide to get married. Studies show that other socioeconomic changes, particularly those associated with modernization, play an important role in shaping family formation patterns. The descriptive analysis shown above has not yet taken into account these socioeconomic factors nor teased out the net effects of war and military service. Since Vietnam observed a rapid expansion of educational opportunities during the early socialist regime around the same time as the mass mobilization, one could argue that marriage delays observed earlier among the wartime generation might perhaps be explained by the fact that this generation spent more time in school.

In this section, I present a multivariate analysis of determinants of marital timing. I attempt to measure the effects of wartime and military service, net of other demographic and socioeconomic factors. There are three dependent variables in this analysis, including 1) ever married by age 20, 2) ever married by age 25, and 3) ever married by age 30. Each of these dummy variables attempts to capture different aspects of marital timing, while allowing me to handle with the issue of data truncation.

For the first dependent variable, *ever married by age 20*, the VLS respondents who were first married before age 20 are given a value of 1; otherwise, they receive a value of 0. This measure attempts to document forces that influence the prevalence of early marriage. According to the 1959 family law, age 20 was a legal/age for men to get married. Marriages contracted before age 20 are considered early marriages. This measure can be computed for the population of men age 20 and above at the time of interview (N=1851). The two other dependent variables, ever married by age 25 and by age 30, are computed using the same logic as the first dependent variable. *Ever married by age 25* can be calculated for men age 25 and above in the sample (N=1,648). This measure is designed to document "on-time" marriage. In a prior analysis (Figure 2), half of men from all birth cohorts married in their early 20s, just before age 25. The last dependent variable, *ever married by age 30*, is computed for the population age 30 and over (N =1,434). Marrying after 30 is somewhat uncommon in Vietnam. According to Figure 2, less than 10 percent of the Red River Delta men did so. This variable is suitable for gauging the postponement of marriage and non-marriage among Vietnamese men.

In general, these dependent variables are very good measures for marital timing and suitable for the cross-sectional data I have at hand. The only handicap is the link between causal forces in marriage postponement can be somewhat obscured because there is not a tight link between the timing of the independent variables and timing of marriage. For example, the proportion ever

married by age 25 includes both those who postponed early (ages 18-22) and those who postponed in the middle range (ages 23-25).

Birth cohort is one of the predictor variables to be included in the analysis. The variable is used as a proxy for whether or not respondents were growing up during periods of wartime and heightened military demand. As in previous descriptive analyses, four birth cohorts are included and labeled according to important historic events taking place during the time members of that particular cohort reached early adulthood (i.e., age 20). These labels include "pre-mobilization", "American War", "reunification", "renovation" generations. Growing up during wartime and periods of heightened military demand is expected to delay marital timing. In this analysis, the effect of military service is captured through a predictor variable that not only takes into account whether or not one serves in the military but also the length of service, including 1) never served 2) short-term service, defined as serving 3 years or less; 3) medium-length service, that is, serving 4-6 years in the military; 4) long-term service, defined as serving 7 years or more.

Individual background characteristics included in the analysis are place of growing up (coded as urban or rural), religion of family of origin (Catholics versus non-Catholics), and educational attainment at age 18 (0-5 years, 6-9 years, 10+ years). Men growing up in urban areas are supposed to get married at a later age than those with rural background. Meanwhile, Catholics are less likely to postpone their marriage than non-Catholics. This variable is included because there is a substantial proportion of Catholics in the VLS study area and they are regarded as being culturally different from others in the Red River Delta. Arranged marriage and co-residence with parents were more common among this group (Nguyen Huu Minh 1998). Education is usually considered as one of the most powerful predictors of marital timing. Men with high education are more likely to marry later than those with lower educational attainment[6].

Father's education and father's work affiliation are used as proxies for socioeconomic status. These father's characteristics refer to when respondents age 10. Men from high socioeconomic status (fathers are well-educated and work in non-agricultural sector) are more likely to postpone their marriage to a later age (perhaps through higher educational attainment). Since the socialist regime encouraged young people to marry later, particularly during wartime, fathers who were state workers might have felt obligated to endorse their children's marriage delays.

In the multivariate analysis, the dependent variable is the "risk" of ever married by age x. The logistic coefficients are expressed in the natural log of the odds ratio relative to an omitted category. To make the results somewhat easier to interpret, I present the exponentiated coefficients [exp(b)] that represent the odds ratio for a particular category relative to the odds ratio for the omitted category. For example, an exp(b) of 1.4 means the "risk" of ever married by age x is 40 percent higher than the omitted category. An exp(b) of 0.4 means that the risk of ever married by age x is 60 percent less likely than for the omitted category.

[6] Education is a time-varying variable. To measure the effect of education on marital timing more accurately, this variable should be measured at a time before the marriage is contracted. For the case of Vietnam, educational attainment at age 18 is safe to use (and better than a measure of highest years of schooling attained) because a majority of the Vietnamese complete schooling around age 16-17, when they finish lower secondary level of education (9 years).

Main questions addressed in the multivariate analysis include: 1) what are the effects of growing up during wartime and serving in the military on the likelihood of getting married early (i.e., married by age 20), getting married on time (married by age 25), and *not* getting married late (married by age 30)? 2) Did the effects of wartime and military service vary by each marital timing? 3) Were the delaying effects of wartime and military observed in the descriptive analysis modified after the introduction of other covariates? 4) Which factor best explained getting married early, getting married on time, and *not* getting married late in Vietnam? 5) Compared with wartime and military service, how well were "modernization" factors in explaining variations in marital timing in the Red River Delta?

Ever Married by Age 20

The analysis in Table 3 attempts to document the determinants of early marriage (i.e., married by age 20) among a sample of Vietnamese men of all marital statuses ages 20-65 (N=1,851). Five models are included. The first model shows the likelihood of early marriage as a function of birth cohort. The second model adds two background characteristics including place of growing up and religion of family of origin. The third model takes into account the effects of socioeconomic status by including variables on father's education and father's work affiliation. The fourth model attempts to document the effects of education (attained at age 18) on early marriage. The final (saturated) model captures the effect of experience in military service and duration of service.

[Table 3 about here]

With other characteristics being equal, growing up during the American War significantly decreased the chance of getting married by age 20. The saturated model (Model 5) shows that the likelihood of early marriage reduced by 64 percent for the wartime cohort. The likelihood decreased even further for men from the reunification and the renovation cohorts. This observation was perhaps explained by the implementation of the 1959 law that stipulated age 20 as a legal minimum age for marriage. Men from the pre-mobilization cohort were most likely to get married early because they reached age 20 before this law became effective. Therefore, they were immune from the subjection of this law.

I observe the negative effect of military service on the likelihood of early marriage after including other covariates into the model. Veterans were less likely than non-veterans to get married before age 20. However, the negative effects for veterans with short-term, medium-term, or long-term service showed very little difference.

While both wartime and military service had statistically significant effects on the likelihood of being married by age 20, the "modernization" factors such as respondent's education at age 18 and place of growing up are better predictors of early marriage. Men with 10 or more years of education and those living in urban areas were much less likely to be married by age 20. In general, father's education and father's work affiliation, as proxies for SES, did not explain the likelihood of early marriage. There was only one exception. Men whose father worked for cooperative (most likely to be in farm sector) were 80 percent more likely to get married by 20 than those whose fathers were government officers. This evidence suggests that fathers who

worked for the state were perhaps more obliged to follow the family law by not having their sons married before the legal minimum age at marriage.

Ever Married by Age 25

Table 4 presents the determinants of "on-time" marriage among Vietnamese men age 25-60 (N=1648). The previous descriptive analysis suggests that the normative years of marriage for Vietnamese men were in the age of early 20s. In this analysis, anyone who was married before age 25 was considered having an "on-time marriage".

[Table 4 about here]

Growing up during wartime did decrease the chance of getting married by 25; however, it was military service that best predicted on-time marriage. Everything being equal, the longer one served in the military, the less likely he was to get married on time. Long-term veterans experienced 70 percent less likelihood, whereas veterans who served medium length had about 40 percent less chance of being married by age 25 compared to those who never served. Despite the delaying effects of medium- and long-term service, it is important to note that short-term service did not deter veterans from getting married on-time.

According to Model 5, after controlling for experience in the military service, I find that there was very little difference between the effects of growing up during wartime and coming of age during the reunification period. Perhaps this suggests that the wartime generation was less likely to marry by 25 because the heightened military demand forced veterans from this cohort to serve for an extended time, while this was not the case for the reunification cohort. For non-veterans who grew up during wartime, they were as likely as those from the reunification cohort to get married on time.

Other important predictors of on-time marriage were the modernization factors. Having high education and growing up in the urban areas decreased the likelihood of getting married on time. The effect of urban background was very constant even after taking level of education into account. Another significant predictor was being Catholics. This evidence confirms previous studies which found Catholics in the Red River Delta to be significantly different from non-Catholics and their marriage pattern to be more traditional. Like the analysis of early marriage, I find that SES was not a significant predictor of the likelihood of being married on time (except for having father who worked for cooperatives).

Ever Married by Age 30

The analysis presented in Table 5 attempts to document factors that explain the likelihood of getting married by 30 among Vietnamese men age 30 and over (N=1,434). According to the descriptive analysis shown earlier, marriages contracted at age 30 or older were not common in the Red River Delta and could be considered late.

[Table 5 about here]

Growing up during wartime did not have statistically significant effects on the likelihood of married by 30 (*not* getting married late). This evidence is consistent with my earlier findings. The marriage rates for men the American War cohort caught up with other cohorts around age 30. This evidence suggests that marriage was such an important life course event. The Vietnamese adjusted to the time of war and high military demands by postponing their marriage but never giving it up. Further, this analysis shows that military service had persistently delaying effects on marital timing. More specifically, men who served were less likely to be married by age 30 than non-veterans. Nonetheless, the effects between various lengths of service did not show much difference.

It is interesting to note that the reunification were significantly much more likely to get married by age 30 than their predecessors. Perhaps this was because this cohort of men came of age during the time of Vietnam's economic expansion in the late 1980s and 1990s. An absence of war and long-term military service obligations, together with increased economic opportunities, enabled the reunification men to get married earlier than their fathers' generation.

Place of growing up, religion, and respondent's education at age 18 were all important predictors in this analysis. Compared with the measures of wartime and military service, these factors could actually better explain why some men in the Red River Delta were married by 30 and why others did not. Growing up in urban areas and having high education negatively affected the likelihood of being married by 30. In other words, men from urban areas and those with high level of schooling were more likely to postpone their marriage. Catholics and those who received only primary education were very much likely to be married by age 30.

## SUMMARY OF FINDINGS

The descriptive and multivariate analyses show very consistent findings. Growing up during wartime caused significant delays in marriage among Vietnamese men, particularly around traditional marriage age. How disruptive wartime is on marital timing, however, depends on length of military service. Short-term military service (i.e., 3 years or less) did not lead to a significant postponement in marriage but longer service did. Beyond "on-time" marriage, military service had only moderate effects on marital timing. Modernization factors such as education and growing up in urban settings remain important predictors regardless of the existence of war and heightened military demand.

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**Figure 1. Percentage (3-year moving average) Ever Served in the Military by Birth Cohort, the Red River Delta Men Born 1930-1975 (N=1,851).**

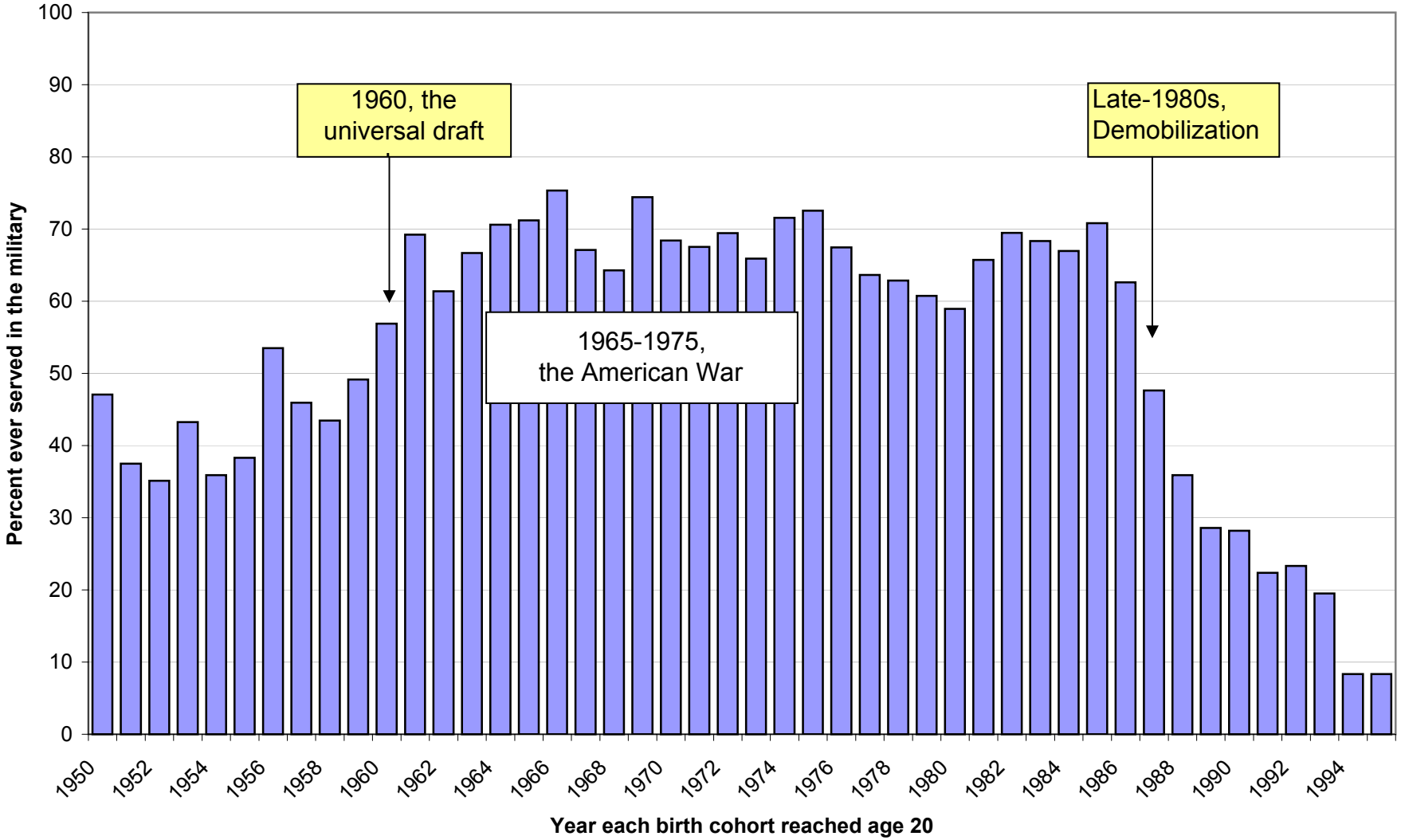

Table 1. Cohort Trends in Timing of Induction and Duration of Military Service by Birth Cohort, the Red River Delta Men Born 1930-1975 (N=1,851).

| | Year in which each birth cohort of men reached age 20: | | | |
|---|---|---|---|---|
| | < 1960 | 1960-1975 | 1976-1986 | 1987-1995 |
| | **Pre-mobilization generation** | **American War generation** | **Reunification generation** | **Renovation generation** |
| | N=199 | N=600 | N=688 | N=364 |
| **% Age at induction** | | | | |
| Total | 100% | 100% | 100% | 100% |
| Never served | 57 | 32 | 34 | 73 |
| Inducted, age 19 or younger | 9 | 35 | 40 | 22 |
| Inducted, age 20-24 | 13 | 27 | 25 | 6 |
| Inducted, age 25 and older | 22 | 6 | 1 | 0 |
| **% Duration of service** | | | | |
| Total | 100% | 100% | 100% | 100% |
| Never served | 57 | 32 | 34 | 73 |
| Served 3 years or less | 18 | 15 | 33 | 25 |
| Served 4-6 years | 11 | 21 | 24 | 2 |
| Served 7 years or more | 15 | 33 | 9 | 0 |

Source: Vietnam Longitudinal Survey, 1995.

**Figure 2. Percent Single by Age by Birth Cohorts, the Red River Delta Men Born 1930-1975 (N=1,851).**

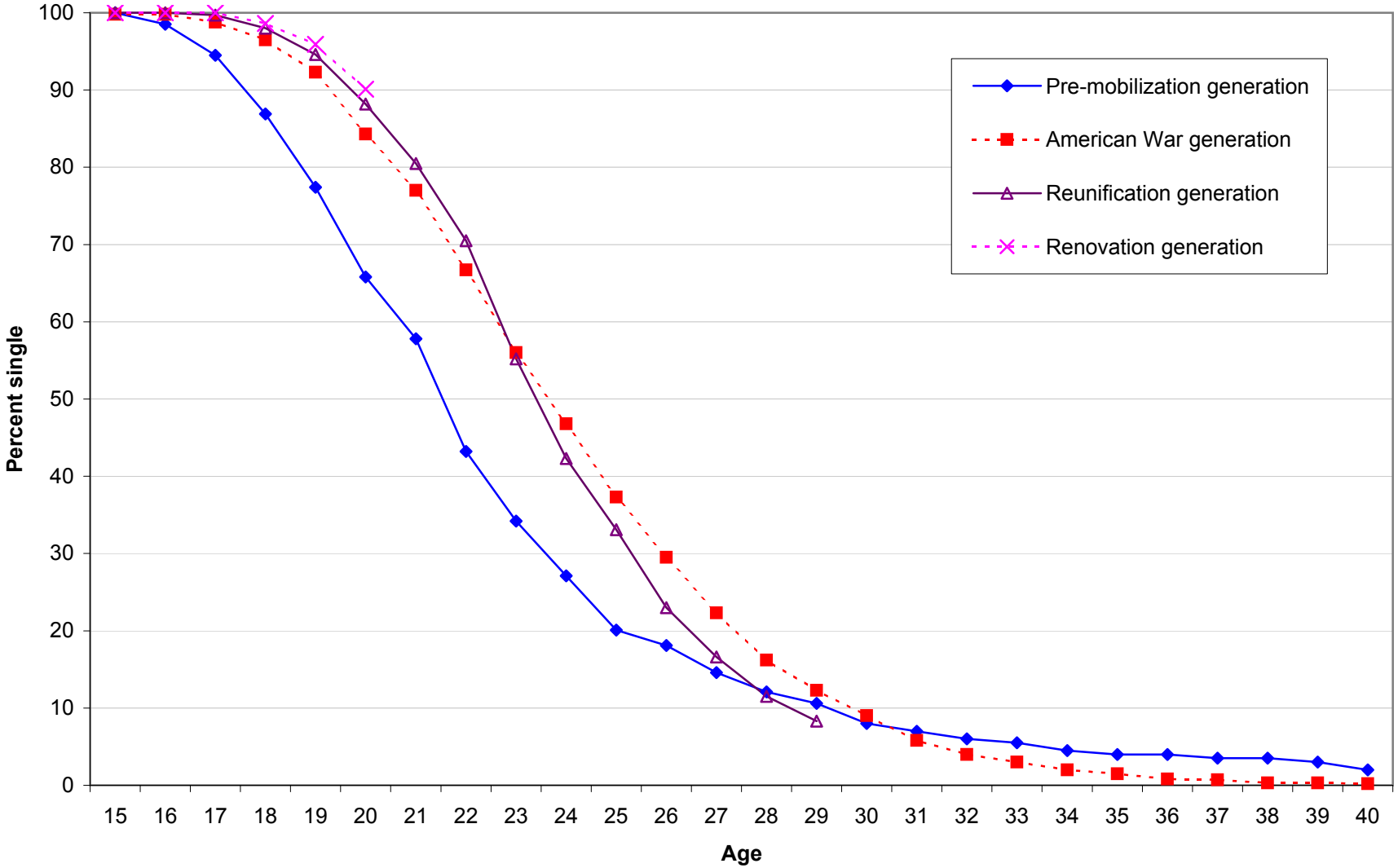

**Figure 3. Percent Single by Age by Military Experience, the Red River Delta Men from the American War Cohort (N= 600).**

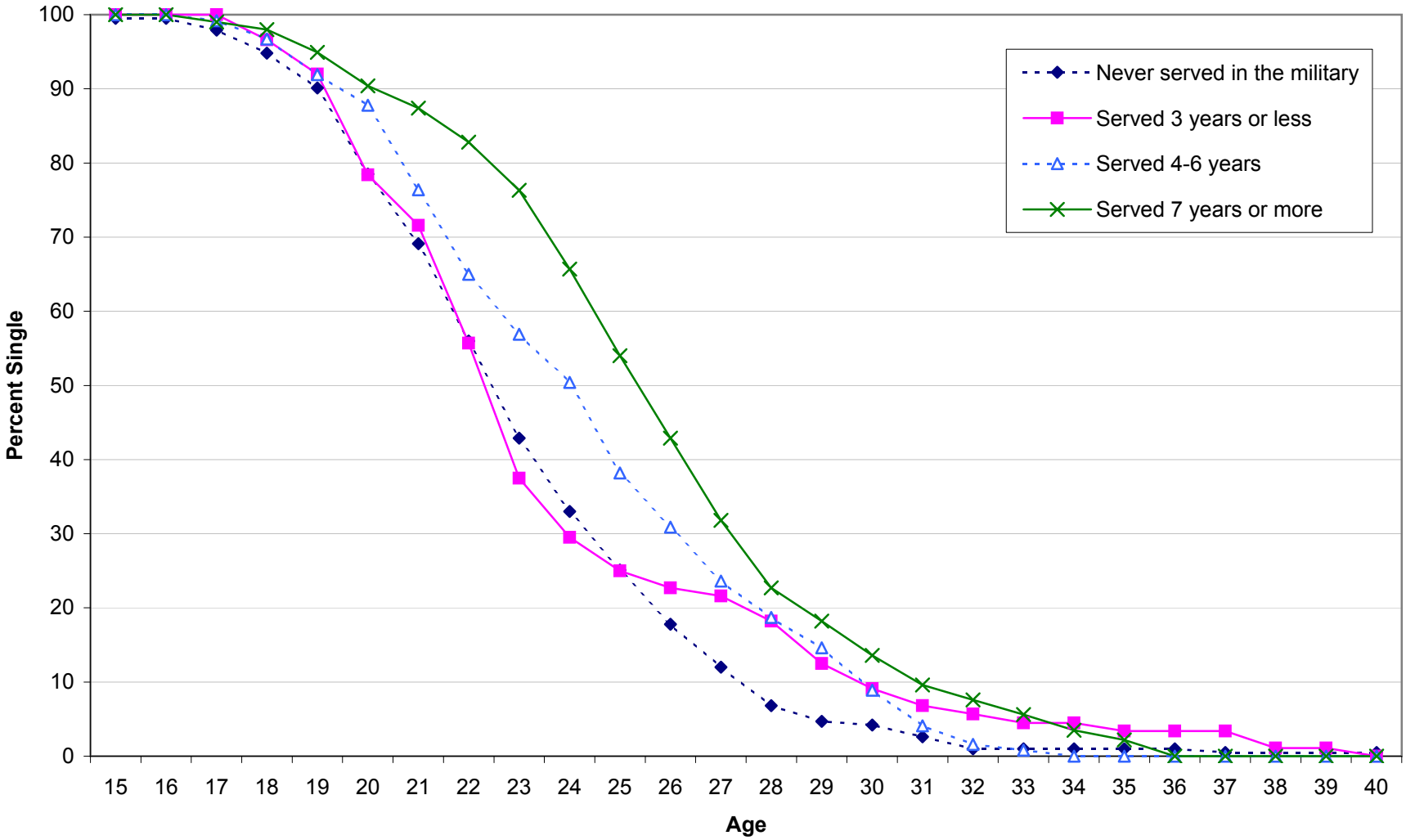

Table 2. Cohort Trends in Marriage-Military Sequencing, the Red River Delta Men Born 1930-1975 (N=1,851)

| Sequencing pattern | Year in which each birth cohort of men reached age 20: | | | |
|---|---|---|---|---|
| | < 1960 | 1960-1975 | 1976-1986 | 1987-1995 |
| | **Premobilization generation** | **American War generation** | **Reunification generation** | **Renovation generation** |
| | N = 199 | N=600 | N=688 | N=364 |
| Total | 100% | 100% | 100% | 100% |
| Never served | 57 | 32 | 34 | 73 |
| Veterans | | | | |
| Married at induction | 26 | 12 | 4 | 0 |
| Single at induction, married during the service | 6 | 28 | 11 | 1 |
| Single throughout, married after the service | 12 | 29 | 49 | 18 |
| Never married (by the time of survey) | 0 | 0 | 1 | 8 |

Source: Vietnam Longitudinal Survey, 1995

Table 3. Odds Ratios [exp(b)] of Ever Married by Age 20 for the Red River Delta Men, Ages 20-65.

| Independent variables | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | *Number* |
|---|---|---|---|---|---|---|
| **Birth cohort** | | | | | | |
| Pre-mobilization generation (omitted) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | *199* |
| American war generation | 0.284 *** | 0.283 *** | 0.263 *** | 0.322 *** | 0.369 *** | *600* |
| Reunification generation | 0.195 *** | 0.197 *** | 0.187 *** | 0.233 *** | 0.251 *** | *688* |
| Renovation generation | 0.147 *** | 0.149 *** | 0.150 *** | 0.188 *** | 0.162 *** | *364* |
| **R's Place growing up** | | | | | | |
| Urban | | 0.233 * | 0.305 * | 0.362 * | 0.359 * | *159* |
| Rural (omitted) | | 1.000 | 1.000 | 1.000 | 1.000 | *1692* |
| **Religion of family of origin** | | | | | | |
| Catholics | | 1.156 | 1.119 | 0.909 | 0.796 | *335* |
| Non-catholics (omitted) | | 1.000 | 1.000 | 1.000 | 1.000 | *1516* |
| **Father's education** | | | | | | |
| No schooling (omitted) | | | 1.000 | 1.000 | 1.000 | *438* |
| Primary schooling | | | 0.959 | 1.071 | 1.071 | *664* |
| Secondary schooling or higher | | | 0.812 | 0.978 | 0.997 | *415* |
| **Father's work affiliation** | | | | | | |
| Government (omitted) | | | 1.000 | 1.000 | 1.000 | *351* |
| Cooperative | | | 2.213 * | 1.890 * | 1.869 * | *861* |
| Self or family | | | 1.792 | 1.510 | 1.454 | *384* |
| Non-family | | | 1.721 | 1.363 | 1.374 | *170* |
| **R's Education attainment at age 18** | | | | | | |
| 0-5 years | | | | 1.457 * | 1.365 | *317* |
| 6-9 years (omitted) | | | | 1.000 | 1.000 | *1101* |
| 10+ years | | | | 0.320 ** | 0.302 ** | *433* |
| **R's military experience** | | | | | | |
| Non-veteran (omitted) | | | | | 1.000 | *804* |
| Veteran, short-term service | | | | | 0.530 * | *440* |
| Veteran, medium length of service | | | | | 0.615 ** | *319* |
| Veteran, long-term service | | | | | 0.438 *** | *288* |
| Degree of freedom | 3 | 5 | 12 | 14 | 17 | -- |
| -2 Loglikelihood | 950.729 | 940.359 | 932.781 | 914.921 | 920.829 | -- |
| Number of observations | 1851 | 1851 | 1851 | 1851 | 1851 | *1851* |

Source: Vietnam Longitudinal Survey, 1995

Note: *** Significant at p< .001, ** p < .01, * p < .1

DK are included in the models but the coefficients are not reported.

Table 4. Odds Ratios [exp(b)] of Ever Married by Age 25 for the Red River Delta Men, Ages 25-65.

| Independent variables | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | *Number* |
|---|---|---|---|---|---|---|
| **Birth cohort** | | | | | | |
| Pre-mobilization generation (omitted) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | *199* |
| American war generation | 0.423 *** | 0.401 *** | 0.403 *** | 0.451 *** | 0.569 ** | *600* |
| Reunification generation | 0.508 *** | 0.507 *** | 0.552 ** | 0.611 * | 0.580 * | *688* |
| Renovation generation | 0.851 | 0.857 | 0.991 | 1.125 | 0.864 | *161* |
| **R's Place growing up** | | | | | | |
| Urban | | 0.244 *** | 0.302 *** | 0.337 *** | 0.322 *** | *134* |
| Rural (omitted) | | 1.000 | 1.000 | 1.000 | 1.000 | *1514* |
| **Religion of family of origin** | | | | | | |
| Catholics | | 2.218 *** | 2.110 *** | 1.785 *** | 1.532 ** | *281* |
| Non-catholics (omitted) | | 1.000 | 1.000 | 1.000 | 1.000 | *1367* |
| **Father's education** | | | | | | |
| No schooling (omitted) | | | 1.000 | 1.000 | 1.000 | *423* |
| Primary schooling | | | 0.976 | 1.073 | 1.007 | *597* |
| Secondary schooling or higher | | | 0.782 | 0.918 | 0.884 | *301* |
| **Father's work affiliation** | | | | | | |
| Government (omitted) | | | 1.000 | 1.000 | 1.000 | *292* |
| Cooperative | | | 1.650 ** | 1.484 * | 1.383 * | *767* |
| Self or family | | | 1.599 * | 1.398 * | 1.371 | *339* |
| Non-family | | | 1.525 * | 1.339 | 1.287 | *169* |
| **R's Education attainment at age 18** | | | | | | |
| 0-5 years | | | | 1.109 | 0.999 | *307* |
| 6-9 years (omitted) | | | | 1.000 | 1.000 | *967* |
| 10+ years | | | | 0.457 *** | 0.428 *** | *374* |
| **R's military experience** | | | | | | |
| Non-veteran (omitted) | | | | | 1.000 | *639* |
| Veteran, short-term service | | | | | 1.040 | *405* |
| Veteran, medium length of service | | | | | 0.591 *** | *316* |
| Veteran, long-term service | | | | | 0.306 *** | *288* |
| Degree of freedom | 3 | 5 | 12 | 14 | 17 | -- |
| -2 Loglikelihood | 2197.285 | 2104.326 | 2084.904 | 2047.530 | 1982.827 | -- |
| Number of observations | 1648 | 1648 | 1648 | 1648 | 1648 | *1648* |

Source: Vietnam Longitudinal Survey, 1995

Note: *** Significant at p< .001, ** p < .01, * p < .1

DK are included in the models but the coefficients are not reported.

Table 5. Odds Ratios [exp(b)] of Being Married by Age 30 for the Red River Delta Men, Ages 30-65.

| Independent variables | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | *Number* |
|---|---|---|---|---|---|---|
| **Birth cohort** | | | | | | |
| Pre-mobilization generation (omitted) | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | *199* |
| American war generation | 0.839 | 0.828 | 0.955 | 1.259 | 1.473 | *600* |
| Reunification generation | 1.269 | 1.334 | 1.835 * | 2.471 ** | 2.615 ** | *635* |
| **R's Place growing up** | | | | | | |
| Urban | | 0.322 *** | 0.393 *** | 0.429 *** | 0.423 *** | *116* |
| Rural (omitted) | | 1.000 | 1.000 | 1.000 | 1.000 | *1318* |
| **Religion of family of origin** | | | | | | |
| Catholics | | 2.758 ** | 2.637 ** | 2.062 * | 1.867 * | *241* |
| Non-catholics (omitted) | | 1.000 | 1.000 | 1.000 | 1.000 | *1193* |
| **Father's education** | | | | | | |
| No schooling (omitted) | | | 1.000 | 1.000 | 1.000 | *403* |
| Primary schooling | | | 1.051 | 1.212 | 1.199 | *508* |
| Secondary schooling or higher | | | 0.617 * | 0.744 | 0.745 | *222* |
| **Father's work affiliation** | | | | | | |
| Government (omitted) | | | 1.000 | 1.000 | 1.000 | *237* |
| Cooperative | | | 1.376 | 1.276 | 1.223 | *653* |
| Self or family | | | 1.635 | 1.441 | 1.383 | *305* |
| Non-family | | | 1.871 | 1.533 | 1.460 | *165* |
| **R's Education attainment at age 18** | | | | | | |
| 0-5 years | | | | 2.333 ** | 2.212 * | *294* |
| 6-9 years (omitted) | | | | 1.000 | 1.000 | *829* |
| 10+ years | | | | 0.646 * | 0.609 * | *311* |
| **R's military experience** | | | | | | |
| Non-veteran (omitted) | | | | | 1.000 | *526* |
| Veteran, short-term service | | | | | 0.610 * | *321* |
| Veteran, medium length of service | | | | | 0.577 * | *299* |
| Veteran, long-term service | | | | | 0.501 ** | *288* |
| Degree of freedom | 2 | 4 | 11 | 13 | 16 | -- |
| -2 Loglikelihood | 951.821 | 916.847 | 903.855 | 889.178 | 880.434 | -- |
| Number of observations | 1434 | 1434 | 1434 | 1434 | 1434 | *1434* |

Source: Vietnam Longitudinal Survey, 1995

Note: *** Significant at p< .001, ** p < .01, * p < .1

DK are included in the models but the coefficients are not reported.