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*Oral Contraception
and the
Likelihood of First Marriage
in the United States*

† Raúl D. Portillo

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† El Paso, Texas

Abstract

This paper analyzes the effects of oral contraception on the probability that an individual woman will marry given her age group, geographic region and other controls. The analysis is based on a model that uses a 1 percent sample of the 1970 and 1980 Census of the Population, and it extends the literature on the age of first marriage of women. The study is based on the diffusion of easily accessible oral contraceptives in the 1970's having a full impact on behavior by 1980. Evidence indicates that for almost all age groups (except women 40-45 years old), the percentage of women married in the 1970's is larger than the percentage in the 1980's. The percentage difference between women married in each year starts out small in the young age categories, swells for women in their mid twenties, and then converges again for the older age categories. This convergence in the later age groups shows that for this data set, some women put off being married, but the number of women ever married at least once is the same.

Introduction

“It is almost impossible to overstate the impact of the pill on American culture. It gave women the freedom to have sex when and where they wished and made contraception palatable to the prudest of he prude. It put birth control on the covers of family magazines and symbolically represented scientific support for the sexual revolution. The pill promised a return to the rationalism and optimism of the Ages of Enlightenment.”

- David Allyn

A striking feature of recent U.S. society is that women are getting married later than even a few decades ago. While sociologists and economists have pointed to a number of factors that may have contributed to this striking change, there is a growing body of evidence that suggests the development and proliferation of the female oral contraceptive (“the pill”) has contributed to this development. This paper will extend this literature, discerning the impact of the pill on the probability of getting married.

The female age at first marriage fell gradually in the United States between 1890 and 1950. During the post World War II “marriage boom”, the age at first marriage began to ascend quickly.¹ This pattern of ascending age at first marriage flattened out but nevertheless continued a gradual increase in the years after the marriage boom. This trend has continued since then.

Demographers have noticed this and conducted extensive research to document this social phenomena. Rodgers and Thornton (1985) used data from the United States Census and Current Population Survey to construct age specific first marriage tables for individual years from the early 1900s through 1983. Their study was descriptive in nature, but the findings from

1. Rodgers, William. Thornton, Arland. 1985. “Changing Patterns of First Marriage in the United States.” *Demography*. Vol. 22, No. 2. p 265.

it (and other demographics studies similar to it) spurred new research topics for economist and other social scientists.

Economists took the next step and attempted to model and explain changing patterns in age at first marriage. There have been many studies in the economics literature that attempt to do to this. Some of the possible theories include: rising female labor force participation (Becker, 1973), decline in the number of eligible men to marry (Wilson, 1987), and the rise in federal support for female mothers (Murray, 1984). While it is the case that these papers provided statistically significant findings that support their theories, this paper argues that it is the increased availability of contraception that is responsible for some of the visible change in the age at first marriage. Far fewer papers in the literature point to this as a potential reason to explain the climb in the age at first marriage.

While this study will not specifically look at the rise in the age at first marriage over time, it will look at the likelihood of women getting married before and after the availability of the pill.

Recent Contraceptive Practice in the United States

Trends of contraceptive practice in the United States have remained dynamic. In 1973 70.5% of white married females were contraceptives users while only 60.0% of black women were. By 1976, the percentage of white married females practicing contraception dropped to 68.8% and the percentage for black women dropped as well to 58.6%. Finally by 1982, the

percentage for white women remained stable at 68.8%, while black women increased their 1973 levels to 60.8%.²

In the early 1970s, never married white women favored the pill. After being married, many white women substituted female sterilization for the pill. Black married women were not as willing as white women to shift away from the pill and in favor of sterilization.

Protestants on average were more likely to use contraception than Catholics. Women with higher income and educational levels were also more likely than lower-income and non-educated women to use all forms of contraception.³

Data of contraception use in the literature comes from surveys of women usually conducted in clinics or other research settings. There is no population level data set that contains all contraceptives practices of women.

History of Contraception

Humans have been using contraception for centuries to plan families and control populations. Contraception dates back as far as ancient Egypt and Greece. The first reports of contraception involve humans using anything from crocodile dung to honey. Egyptians were by far the most advanced people of the ancient world. They developed tampon-like object that contained lactic acid anhydride. This is a chief ingredient in modern contraceptive jellies. Jews

² Bachrach, Christine. "Contraceptive Practices Among American Women, 1973-1982". 1984. *Family Planning Perspective*. Vol. 16, No. 6. p. 253

³ *ibid.* p. 258

in Palestine, one or two centuries before Christ, had developed and documented methods to sterilize women.⁴

Christianity did not have a definite view on contraception until the fifth century after Christ. St Augustine was the first to come out and say that contraception was immoral and not tolerable in the eyes of God. Sex was to be used for the sole purpose of procreation.⁵

Contraception remained primitive for several centuries following the proclamations of St Augustine. It was not until the Middle Ages in Europe that some Protestant leaders began to give their official blessing to coitus interruptus. After some time when population rates began to decline, religious leaders became more concerned with the sexual behavior of married couples.

A rapidly increasing population came up again as a topic of concern during the Enlightenment. Men like Robert Dale Owen and Charles Knowlton composed pamphlets detailing coitus interruptus and douching and began to distribute them to married couples.⁶

The next breakthrough in contraception came in 1843 with the invention of vulcanized rubber. This rubber was used to make the first effective condom. Condoms proved to be the first reliable form of contraception available that could be mass produced. It was only ten years after this invention, however, that the Holy Office of Inquisition of the Catholic Church declared condoms to be an unacceptable form of contraception.⁷ The Church's declaration brought the issue of contraception to the public's attention. Soon scholars and advocates on both sides of the issue were rallying support for their sides. There were international conferences on contraception held in Paris, Liege, the Hague, Dresden, London, and New York.⁸ Groups

⁴ Himes, Norman E. 1963. *Medical History of Contraception*. New York: Gamut Press, Inc.

⁵ Soble, Alan. 2003. "Correcting Some Misconceptions about St. Augustine's Sex Life" *Journal of the History of Sexuality*. Vol. 11. No 4.

⁶ Scrimshaw, Susan. 1981. "Women and the Pill: From Panacea to Catalyst." *Family Planning Perspective*. Vol 13. No. 6. p. 254

⁷ Allyn, David. 2001. *The Pill: A prescription for Equality*. New York : Taylor & Francis, Inc.

⁸ Potts, Malcolm. Campbell, Martha. 2002. "History of Contraception." *Gynecology and Obstetrics*. Vol. 6, Ch. 8.

against contraception successfully lobbied the United States Congress to pass legislation that made it illegal to import contraceptive devices from other countries. In Great Britain advocates of contraceptives formed the Malthus Leagues. The purpose of the league was to educate physicians and other health care professionals about the advantages of contraception and population control.⁹

By the mid Twentieth Century in the United States, the laws had changed and physicians in the United States were now allowed to obtain contraceptives through the mail system. The United States government, during World War II, spent millions of dollars supplying its troops with condoms. It was also during this time in the United States that one by one Protestant denominations declared contraception to be a private matter between man and wife.

Of all the people fighting for the proliferation of contraception, the most outspoken of these champions in the United States was Margaret Sanger. In 1910 she went door to door in poor parts of the country to educate women about diaphragms and condoms. She was at the helm of the Birth Control Federation of America in 1942, when it changed its name to Planned Parenthood.¹⁰ Under her direction, it grew to support more than one thousand clinics coast to coast despite many states having laws against contraception. The popularity of the clinics continued to grow in the 1940s and 1950s despite two further declarations from the Catholic Church opposing it.

The federal government used tax revenue generated in the post World War II economic boom to significantly increase funding for biomedical research. The abundant new funds, however, were not used for contraception. The issue was still a sensitive one and could therefore

⁹ Accampo, Elinor. 2003. "The Gendered Nature of Contraception in France: Neo-Malthusianism. 1900-1920." *Journal of Interdisciplinary History*. p. 235.

¹⁰ Allyn, David. 2001. *The Pill: A prescription for Equality*. New York : Taylor & Francis, Inc.

not receive federal fund without causing uproar.¹¹ Margaret Sanger had dreamed since 1916 of a day when contraception for women could be available in pill form. However, she could not come up with the necessary funds for the research for years. In 1951, Sanger sought out the help of Katherine McCormick. McCormick was very wealthy and a staunch feminist who helped provide enough funding to finally accomplish her dream.

They started out by contacting Gregory Pincus. Dr Pincus worked at the Worcester Foundation for Experimental Biology in Shrewsbury, Massachusetts. He had a few years of experience working with test tube fertilization. In 1952, Pincus enlisted the aid of Dr. John Rock, a Harvard gynecologist who specialized in studying progesterone. They worked together to manufacture a synthetic steroid tablet which was first tested on Puerto Rican women. After a series of successful clinical trials in Puerto Rico, the Searle pharmaceutical company agreed in 1960 to market the first oral contraception product in the United States. The brand name for the pill was Enovid.¹²

Oral contraceptives, now known simply as “the pill”, ran into some problems their first years on the market. An increasing number of females on the pill were experiences a variety of adverse side effects. These side effects included, but were not limited to breakthrough bleeds, nausea, weight gain, breast tenderness, dark spots on the face, and increased coagulability. In 1966 and 1969 the FDA Advisory Committee on Obstetrics and Gynecology issued reports documenting these adverse health effects resulting from oral contraceptives.

Regardless of the side effects, the pill continued to enjoy popularity in the years after its release. The main deterrent for American women obtaining the pill in the 1960s was the set of state laws that still prohibited obtaining it. One man, William R Baird, made it his personal

¹¹ Scrimshaw, Susan. 1981. “Women and the Pill: From Panacea to Catalyst.” *Family Planning Perspective*. Vol 13. No. 6 p. 255.

¹² *ibid.* p 256.

crusade to abolish laws prohibiting birth control and abortion. Baird's convictions were molded by his unique personal experiences. He was raised in a large family in Brooklyn, New York and was taught from an early age not to have sex before marriage. As a result Baird, entered into a marriage where he and his wife had no prior sexual experience. In the early 1960s, Baird took a job with a pharmaceutical company that manufactured contraceptive foam. In 1963, he took a position as a clinical director in Harlem. There he witnessed the graphic images of self induced abortions performed by low income women. Women used coat hangers, douching with Lysol and other crude methods in attempts to self-induce abortion. These experiences had a profound effect on Baird. He learned shortly thereafter that contraception was still illegal in New York. At that point Baird took matters into his own hands. He bought an old UPS truck, painted it white, set up a fake living room inside of it and created a mobile contraception information and distribution center. He traveled in his van throughout the poor sections of New York, educating people and distributing contraceptives. Baird was arrested eight different times for charges stemming from this practice.¹³

Advocates for the proliferation of contraceptives appreciated the work Baird was doing, but also realized that he was too bold a figure to appeal to mainstream America. The issue of contraception was becoming hot in the court of public opinion and contraception needed a better face. Enter Estelle Griswold. She was a tall, graceful Roman Catholic woman who was a perfect example of a well educated, modern New England woman. She had never even seen any contraception device when she was approached by Planned Parenthood for this role, but she was willing to undertake the challenge.¹⁴

¹³ Allyn, David. 2001. *The Pill: A prescription for Equality*. New York : Taylor & Francis, Inc. p. 82

¹⁴ *ibid.* p. 84

On November 1, 1961 Griswold opened a contraceptive clinic in New Haven, Connecticut. Local authorities arrested her four days later. The lower courts of the country ruled against Griswold during the course of four years until 1965, when her case was heard before the Supreme Court. The question before the court was : does the Constitution protect the right of marital privacy against state restrictions on a couple's ability to be counseled in the use of contraceptives? The court concluded that the Bill of Rights, specifically the First, Fourth and Fourteenth amendment, created the right to privacy in marital relations. The Connecticut statute conflicted with the exercise of this right and was therefore declared null and void.

This was a huge victory for advocates of the pill; however, unmarried women still could not legally obtain contraception. This changed in 1971 when William Baird was arrested after he gave out a free sample of contraceptive foam to an unmarried female following a lecture at Boston University. The question before the court was: did the Massachusetts law violate the right to privacy acknowledged in *Griswold v. Connecticut* and failed to protect women from state intrusion? The court struck down the Massachusetts law in a 6-to-1 decision. The Court held that the law's distinction between single and married individuals failed to satisfy the "rational basis test" of the Fourteenth Amendment's Equal Protection Clause. In his comments for the majority Justice William J. Brennan, Jr. wrote, "If the right of privacy means anything, it is the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision to whether to bear or beget a child." Married and unmarried women now could obtain contraceptives under the protection of the law.¹⁵

These new laws were still of no use to minors who were unmarried, but by 1971 California, Georgia, Mississippi, Arkansas, Colorado, the District of Columbia, Illinois,

¹⁵ *Griswold v. Connecticut* 381 U.S. 479 (1965)

Michigan, New Hampshire, New York, Oregon, and Tennessee had laws allowing minors access to birth control without parental consent.¹⁶ The other states in the union followed suit in the following years.

Literature Review

A broad section of the literature can be considered relevant to this study. Becker (1973) studies why individuals decide to marry in the first place. He states that marriage is a voluntary activity and therefore the individuals will only choose to marry if they will both be better off than they were as unmarried individuals. The gain from marriage has to be balanced with the costs. These costs include time searching for a mate, legal fees, cost of a wedding and others miscellaneous costs. In addition, men and women compete in a marriage market for potential mates. They are restricted in their search for mates given the amount of education, income, human capital and other non-market goods they possess. The compatibility of the marriage depends on how well one individual's traits, such as ability, education, race, income and height, complement the other and vice versa. This study shows that positive association, meaning mating of like traits, usually turns out to be the optimal situation of a match. There are exceptions, such as the wage rate. Men with a higher wage rate could find an optimal match with a woman of a lower wage rate because of the specialization of labor within a household. In a marriage there are two types of work that need to be done to maintain the household. First there is the domestic work (i.e. cooking, cleaning, and taking care of children) and there is work

¹⁶ Goldin, Claudia. Katz, Lawrence. 2002. "The Power of the Pill: Oral Contraceptives and Women's Career and Marriage Decisions." *Journal of Political Economy*. Vol. 110. No. 4

outside the house that includes earning a wage. Both types of work are necessary for a successful household. If a man marries a woman with a lower (or even no) wage, she could specialize in the domestic work and the outcome is efficient. If both the man and the woman have a high wage rate then they can pay for assistance with the domestic work (i.e. laundry services, hiring a maid, daycare, etc...) This outcome is also efficient for the household if the gain in the female wage is higher than the money spent on domestic services. Bergstrom and Bagnoli (1993) bring up the same point regarding wage difference in marriage. See also Boulier and Rosenzweig (1984), and Bergstrom and Lam (1989) for further discussion on marital selection. In Becker (1974), he continues the analysis of his previous paper to try and incorporate the idea of “love” into the decision to get married. Love is defined as a non-market household commodity. An individual’s utility from consumption is not only dependent on what he/she consumes, but it also depends on what his/her partner consumes. Love leads to obtaining some given level of household utility and being indifferent as to which member of the household consumes goods to reach that level of utility. It is sacrificing personal consumption for increased utility of a partner or the household unit as a whole.

The decision when couples choose to marry is just as relevant as why they marry. Coale (1971) shows evidence of a common age pattern in marriage that was discovered as a by product of population research in Europe. Graphs of women being married begin flat in the early years of possible marriage, shoot up rapidly as the cohort gets older and begin to flatten out as women reach an older age. These curves were almost identical for each group studied across different countries and time frames. The curves differed only in origin, horizontal scale and vertical scale, but all had the same functional form. Hernes (1972) uses United States Census data and a model

similar to the one used by Coale (1971) to estimate patterns of first marriage in the United States.

Rodgers and Thornton (1985) take a close look at changing marriage pattern in the United States. Over the last century marriage rates were lowest during the Great Depression. After World War II the United States experienced a “marriage boom”. During the 1970s marriage rates fell close to pre-War levels. The decrease in marriage rates in the 1970s was seen for all races; however, differences were seen in the age groups. For instance, during the marriage boom in the years following World War II, younger women were responsible for most of the increase in marriage rates. Similarly, the declining marriage rates of the 1970s were mostly because the younger women were not getting married. Blau, Kahn and Waldfogel (2000) find similar patterns in marriage rates but point to labor and marriage market conditions to explain the differences.

Coale (1992) discovers a negative correlation between age at first marriage and the adoption of voluntary birth control. He found the geographic areas in which traditional age of entry into marriage was late were the areas in which marital fertility was reduced first. This is known as the “fertility transition” and every developed nation has seen it. This transition refers to economic development accompanied by increase use in contraception by married couples. This paper uses data from Europe and discovers that within relatively late-marrying West Europeans, the countries with the latest ages of entry into marriage generally were the earliest where the population initiated the voluntary reduction in marital fertility by contraception.

Goldin and Katz (2002) looks at the sexual revolution and greater access to birth control as a determinant of age at first marriage for females. This paper presents descriptive time series and formal econometric evidence to show the impact that cross-state and cross cohort variation

in the availability to oral contraceptives have had on the age of first marriage. The paper concludes that states with more lenient regulations for use of oral contraceptives by minors had greater pill use by young unmarried women. In addition for 15-19 year old women, pill use was 33-35 percent greater than in less restrictive states; for 17-19 year old women, pill use was 36-40 percent greater. The increase use of the pill did have a statistically significant effect on the marriage market. If young unmarried women had access to the pill before the age of 17, the results suggest a substantial negative effect on the likelihood of being married before the age of 23. It is worth pointing out that Goldin points directly to the pill as the reason for delayed marriage. Other papers have looked at female labor force participation, male income and other determinants. Goldin (2004) continues her analysis of the pill in order to describe the increase in female college graduation rates and increase in female labor force participation. Graphs used by Goldin show spikes in female attendance to medical, law, and business programs during the early 1970s. There is also a graph to document the fall of women in traditional “women’s careers” in the 1970. Those careers include nursing, teaching and library services. The Pill lowered costs to young, unmarried women of pursuing careers, particularly those involving a large investment of time. The pill could be controlled completely by the female. A woman was no longer dependent on a man for cooperation to practice contraception. The pill therefore lowered the risk and lowered the cost of having sex.

Martin (2004) studies trends in marriage taking into account three intersecting social dimensions. The first is acknowledging cultural and ideological changes that have altered family and marriage patterns. The second is the rise in female labor force participation and the potential conflicts that arise from women having to split time between the office and the home. The third involves rising social and economic inequality. This study shows how these three forces have

decreased marriage rates in young cohorts but have increased marriage rates in older cohorts.

This distinguishes between delayed marriage and foregone marriage: more women are delaying marriage, but little evidence is found to suggest more women are foregoing marriage.

The increasing use of voluntary contraception and delaying entry into marriage is naturally associated with a delay in childbearing. Many cultures and certain religious bodies such as the Catholic Church have long believed that the sole purpose of marriage is to procreate. Hence we would expect to see an increase in delay of childbearing to go hand in hand with a delay of entry into marriage. Bloom and Trussell (1984) show that during the 1970s the birth rate for American women dropped to as low as rates during the Great Depression.

Theory

Taking into account the relevant literature, we can begin to apply and formulate a theory that predicts the behavior of women that choose to take oral contraceptives.

This study will assume that we can separate the population of women into three different groups. The first group of women, Group A, are women who, with or without access to the pill, would choose to marry at a young age and most likely begin to have children. The second group of women, Group B, before the pill would have elected to marry young as well; however, after the introduction of the pill the group puts off marriage and the women continue advancing their education or furthering their career and obtain a higher income. Finally the third group of women, Group C, chooses not to marry or bear children with or without the availability of the pill.

The likelihood of Group A and Group C marrying at any given age should be the same before and after the introduction of the pill. It is on the response of Group B that this study will focus its attention. Women in Group B make a conscious decision to take the pill and can now easily separate having sexual relations from marriage. This concept of separating sex from marriage is popular in the feminist literature. See Scrimshaw (1981), Allyn (1995), Presley 1993. The term “voluntary motherhood” was coined in this literature, which argues that many women were now choosing putting off marriage and motherhood to further their careers or simply prolonging time in courtship.

The theory advanced by this study concerning the women in Group B is that they will put off getting married. However, it is important to note that they are merely putting off getting married, not rejecting being married altogether. This implies that before the pill the women in Group B would have had the same probability of being married as any women in Group A, but after the pill they will have a lower probability of being married up to a certain age. After a certain age, all women in Group B eventually desire to be married, and their probability of being married will once again mirror that of women in Group A. Based on the information presented by Goldin (2002), this study expects that deviation in likelihood of being married begin after women reach their 22nd birthday. It is at this age when most women are finishing college and can either choose to marry or continue to further their education and/or establish their careers. Furthermore, given cultural differences within the country, it is predicted that a higher percentage of women within Group B will live in the New England, Mid Atlantic, Great Lakes, and the District of Columbia regions. Therefore, the greatest effects will be seen in these regions.

Methods

This study uses economic indicators and geographical regions of the United States to estimate the likelihood of women getting married. This paper uses a 1 percent sample of the 1970 and 1980 *Census of Population* from the Integrated Public Use of Microdata Series (IPUMS). The state of residence, poverty status, level of education, and income from wages were all pulled out as a part of the data extract.

The focus of the analysis is the maximum likelihood of female marriage; therefore, males are eliminated from the raw data set. Next, females younger than 18 and older than 45 are omitted. Finally for each Census year women are divided into fifteen different age groups. The age groups are the following:

Age Groups

18
19
20
21
22
23
24
25
26
27
28
29
30, 31, 32, 33, 34
35, 36, 37, 38, 39
40, 41, 42, 43, 44, 45

Years eighteen through twenty-nine are treated as individual groups to try to isolate and observe decisions about marriage and higher educational attainment. It is hypothesized that there would likely be little difference between a forty-two and forty-three year old persons in

terms of education, marriage and other factors; however, this is not the case between a twenty-two and twenty-three year old persons.

For each age group fifteen geographic dummy variables were created by the individual state codes. These dummies are labeled as regions. The regions and the states they encompass are listed here.

REGION	STATES
Alaska	Alaska
Hawaii	Hawaii
West Coast	Washington, Oregon, California
Mountains	Nevada, Arizona, Colorado, New Mexico
Utah	Utah
Prairie	Idaho, Montana, Wyoming, North Dakota, South Dakota
Great Lakes	Minnesota, Wisconsin, Michigan, Illinois, Indiana
Midwest	Iowa, Missouri, Kansas, Nebraska
Texas	Texas
South	Oklahoma, Arkansas, Louisiana, Mississippi, Alabama
Southeast	Florida, Georgia, South Carolina, North Carolina
Appalachia	Ohio, Kentucky, Tennessee, West Virginia
Mid-Atlantic	Virginia, Maryland, Pennsylvania, New York, New Jersey, Delaware.
New England	Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Maine
District of Columbia	District of Columbia.

Alaska and Hawaii are often grouped together because of geography; however there is little evidence that would justify including Alaska and Hawaii as a region or as a part of the West Coast states. Therefore, this study decided to make each state its own region because of its unique demographic makeup. A similar thought process was used to isolate Utah from the Mountain state region. The very high percentage of Mormons in Utah could skew the results of a region in which Utah was included. Texas was also left as an independent region, because it was sufficiently different demographically from the South and the Mountain regions. Its large population makes this decision easier and enriches the potential for discovery.

The analysis begins with a probit regression that uses the following equation:

$$M_{ia}^t = \alpha_{0a}^t + \alpha_{1a}^t POV_{ia}^t + \alpha_{2a}^t EDU_{ia}^t + \alpha_{3a}^t INCWAGE_{ia}^t + \alpha_{4a}^t GEOG_{ia}^t + \varepsilon_{ia}^t \quad (1)$$

Where M is the dependent variable, for an individual i , in a geographical region a , and time period t , that indicated whether or not a woman is married. (1 = Yes, 0 = No) The first coefficient (α_0) is a constant for region a and time t . The independent regressors include poverty status (*POVERTY*), educational attainment (*EDU*), and income from wages (*INC WAGE*). The coefficient $\alpha_{4a}^t GEOG_{ia}^t$ stands for fifteen geographic dummy variables. The dummy variable for the *PRAIRIE* region is left out in order avoid the problem of perfect multicollinearity. The effect of the *PRAIRIE* variables will be visible as a part of the constant of the equation. There will be one regression for each of the fifteen age groups for each of the two years. A total of thirty probit regressions will be used.

The marginal effects of each variable are found by using the following equation:

$$dp / dx_k = \Phi (\alpha_{0a}^t + \alpha_{1a}^t POV_{ia}^t + \alpha_{2a}^t EDU_{ia}^t + \alpha_{3a}^t INCWAGE_{ia}^t + \alpha_{4a}^t GEOG_{ia}^t + \varepsilon_{ia}^t) * \alpha_k \quad (2).$$

The mean value for every variable is used to evaluate Equation 2 to produce the marginal coefficient of the variable.

Results

The percentage of women married for each age group in each year, expressed as the mean dependent variable for each one of the regressions, is shown in Chart 1. In general for every age

group reported, except for the 40-45 range, the percentage of women married in 1970 is larger than the percentage for 1980. The percentage difference between the mean dependent variables follow a trend where the gap starts out small at the young age categories, swells for 22 year olds, and then converges again for the older age categories. For instance, the mean for 18 year old women married in 1970 is 17.85% compared to 12.36% for 1980, for a difference of 5.48%. This gap widens for 19 year olds as 29.61% were married in 1970 and only 21.01% in 1980, a slightly larger variation of 8.6%. There is a noticeable swell in the women married for 1970 in the 22 year old age group, 68.02% of the women were listed as married. Only 50.01% of 22 year olds in 1980 were married. This percentage point difference of 18.01% is a curious occurrence that will be discussed further in the conclusions. For the remaining age categories the gap begins to converge. The percentage gap for 23 year olds is 16.35%, 14.45% for 24 years olds, 12.34% for 25 year olds and down to 7.73% for 29 year olds. The gap between the 30-34 year olds is only 2.86%, this shrinks to 0.74% for 35-39 year olds. The 40-45 age group is the only group to have a higher percentage of women married in 1980 than in 1970. The difference however is only 0.22%.

Table 1 and Table 2 show the coefficients from the probit regressions run for 1970 and 1980 respectively. Table 3 and Table 4 show the ranking of the coefficients from 1970 and 1980 respectively. Tables 3 and 4 show the geographical regions and rank the regions as least likely to be married. For example, 18 year olds in New England were the least likely to be married in 1970, followed by Hawaii, Mid-Atlantic and the District of Columbia. In 1980 women in the District of Columbia were the least likely to be married, followed by New England, Mid-Atlantic and Alaska. In 1970 the women of the District of Columbia were least likely to be married for ten of the fifteen age groups. Furthermore, it was in the top three spots for fourteen out of fifteen

times. Other regions that were consistently display low probabilities of being married in 1970 were the New England and Mid-Atlantic regions. On the bottom of the table Alaska was the most likely to be married for ten of the fifteen age groups and was in the bottom three twelve out of fifteen times. The women of the South, Southeast and Mountain regions were also usually found at the bottom of the table with high probability of being married.

In 1980 the women of the District of Columbia were the least likely to be married for every age category and the women of Utah were most likely seven times. The combination of New England and the Mid-Atlantic regions represented the second and third spots thirteen out of the fifteen times.

Table 5 uses the data from Table 3 and Table 4 to show the average of all ranks of each state in each year. The West Coast region went from an average rank of 8.00 in 1970 to 5.67 in 1980. The Mountain region also moved significantly from 10.87 to 8.93. Some regions that moved in the opposite direction include: Utah 9.27 in 1970 down to 12.47 in 1980, the South from 9.87 falling to 11.33 and the Midwest which descended from 9.00 to 10.20.

The income coefficient begins as a positive significant value for 18 year olds in 1970 and 1980, remains positive but not significant for 19 year olds and then becomes a negative significant value for 20 year olds. The poverty coefficient is a negative significant value for 18 year olds in both 1970 and 1980 and become a positive significant value for the remaining age categories. The education coefficient has a significant negative value for all years and categories.

Table 6 and Table 7 show the marginal coefficients for the variables in 1970 and 1980 respectively. The marginal coefficient for education in 1970 was positive for women in the 18 year old category, positive for 19 – 25 categories, and negative again from 26 – 45 year old

category. In 1980 education was positive again for women in the 18 year old category and remained positive through the 22 year old group. The coefficient became negative for 23 – 26 year olds, positive for 27 – 29 year olds, and negative from 30 – 45 year old women.

In 1970 the marginal coefficients for income from wages had a positive marginal coefficient for women in the 18 – 21 year old age category. The coefficient changed signs once to be a negative coefficient for women 22- 45 years old. In 1980 there was more fluctuation as the sign of the value changed five times across the age groups.

In 1970 poverty status had a positive marginal coefficient for every age group of women. In 1980 the sign of the coefficient changed values six times.

The marginal coefficients for the New England, Mid Atlantic and Great Lakes region all had the same signs for each age categories in each year. In 1970 18 year old women had a positive marginal coefficient and the remaining age groups had a negative value. In 1980 the coefficient switched values five times.

New England, Mid Atlantic, Great Lakes, Utah, Hawaii and the District of Columbia had positive marginal coefficients for 18 year old women. Thirteen of the fourteen regions in 1970 exhibited negative marginal coefficients for women 21 – 24 years old, twelve regions also showed negative marginal coefficients for women 27 – 29 years old. The two regions that did not have negative values for these age groups were Utah and the Mountains states.

By 1980 ten regions had positive marginal coefficients for 18 year old women. Nine regions had negative marginal coefficients for ages 23 – 26. Unlike 1970, in 1980 ten regions had positive marginal coefficients for women 27 – 29 years old.

Conclusions

The first finding from these results is that the percentage of women ever married is actually slightly higher in 1980 than it is for 1970. This suggests that women have put off being married but the percentage of women ever married, according to this data, does not change. The two largest differences in the percentage of women married are at age 22 and 23 respectively. This finding points to the possibility of more women delaying marriage and childbearing to complete a college degree. Once this age of obtaining degrees has passed, the percentage gap between years begins to decline steadily.

The most evident findings from Tables 3 and Table 4 was that the District of Columbia was the region with the least likelihood of marriage for both years. The ranking for D.C. changed little from year to year. Washington D.C.'s outlier status, in 1980, is not easily explainable. Pilot programs for the federal government are usually run in the Washington D.C. area. This makes its citizens among the most informed in the country. The citizens of D.C. are very aware of government assistance available to them, like where to get an abortion, and this makes them different from any other group of citizens. In the case of D.C., the presence of a higher percentage of college educated women, higher earning women, and more knowledgeable citizens that are aware of federal programs, seems to outweigh the effects of having a population with a large percentage of blacks and a below average percentage of high school diplomas.

Utah was the most volatile region from 1970 to 1980. Utah's very high percentage of Mormons is the easiest and most practical explanation for this. This problem was foreseen before the study and it is why Utah was left as a region by itself.

In general we can conclude from the result that regions of the country with a more education, a higher income and to a less extent a higher the percentage of white women, such as

New England, Mid Atlantic, and the Great Lakes, were the regions where more women would take the pill. Thus, women in these regions would most likely put off marriage. These states usually tend to be more liberal politically as well. Logically, regions with a lower educational attainment, a lower income, and a smaller percentage of white women, would have fewer women that would take the pill, so more women would not put off marriage. Regions that were consistently more likely to have women married in each age group were Alaska, Southeast, South, Appalachia, and Texas.

The Mid Atlantic and the Great Lakes regions do have large metropolitan areas with many minority and non-educated residents, but so do almost all of the other regions in the study and thus the effect the presence of a city like Detroit in the Great Lakes region is almost the same as having a city like Houston in the Texas region.

The positive income coefficients in Tables 1 and Table 2 suggests that if an 18 year old woman has a high income, it is most likely because she is no longer in school; she also has a higher probability of being married. The income coefficient become negative for 20 year olds, showing that once more education has been obtained the resulting rising income could mean a delayed marriage and established career. Similarly the education coefficient is negative throughout each year and category, meaning that women who chose to continue their education usually chose to put off marriage. The positive coefficient for poverty reinforces the conclusion that women with lower income and educational attainment are not likely to put off marriage.

The marginal effect of each variable is seen in Table 6 and Table 7. For women 19 – 25 years old in 1970 one additional level of educational attainment resulted in an increase in the likelihood of being married. In 1980 one additional level of educational attainment for women 23 – 26 years old resulted in a decrease in the likelihood of being married.

One additional dollar of income for women 22 – 45 in 1970 meant a decreased likelihood of being married. This was not the case in 1980. Women 18 – 24 years old were more likely to be married with each additional dollar of income from wages. As mentioned above, this is most likely because the women in this age group earning extra income are most likely women that did not continue investing in education. Therefore they have income and are married while other women their age do not have income because they are still in school and not married.

The marginal coefficients for poverty have negative values for each age group of women in 1970. In 1980 the sign of the coefficient changes six times in fifteen age groups. Women who did not attend or complete college in the 23 – 26 year old groups are more likely to be married with each additional increase in their poverty status.

In general we can conclude that the introduction of oral contraceptive to unmarried women did have a significant impact on an individual's decision to enter into first marriage. Further research could extend Coale (1971) work to see if the marriage curves in this study can be compared to his study.

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Chart 1: Mean Dependent Variable

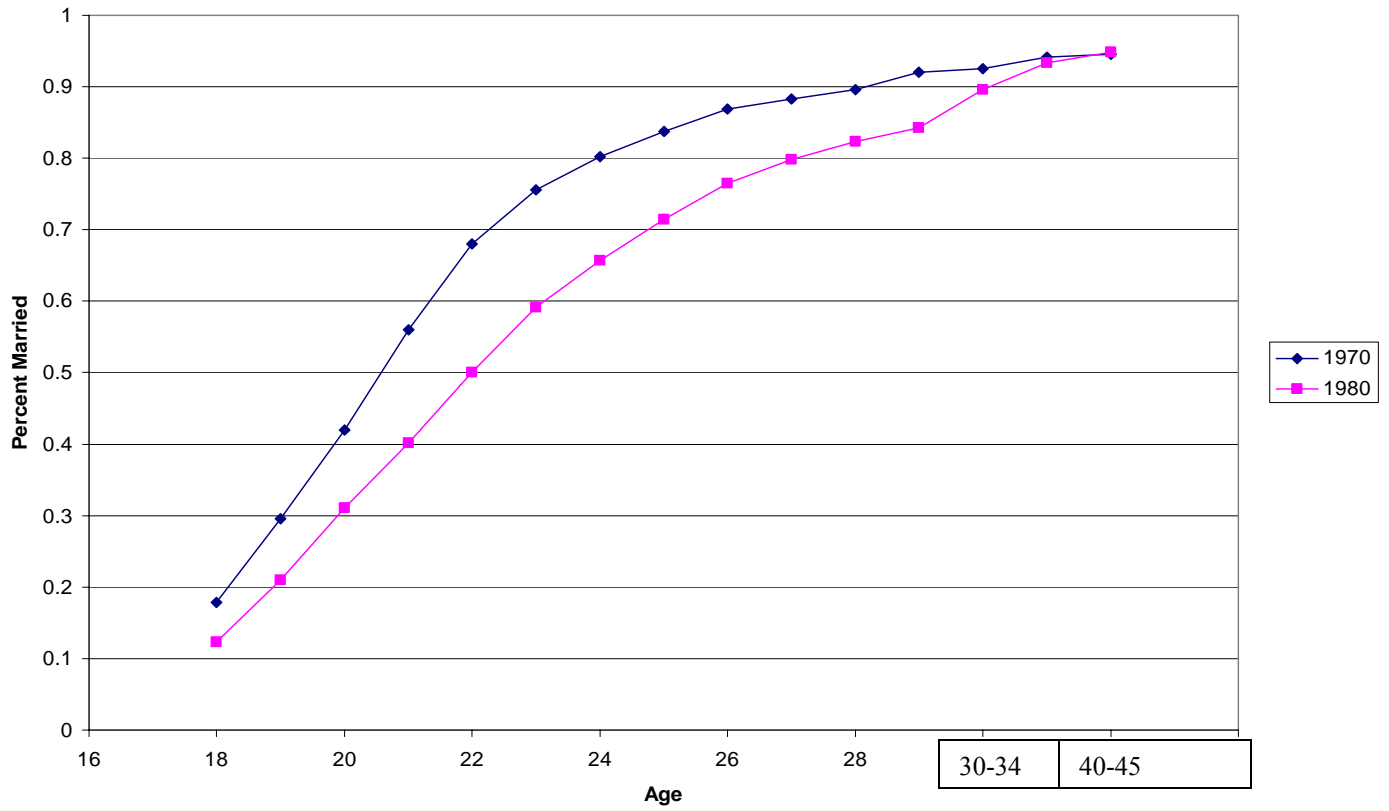


Table 1: 1970

<i>Variable</i>	<i>18</i>	<i>19</i>	<i>20</i>	<i>21</i>	<i>22</i>	<i>23</i>	<i>24</i>	<i>25</i>	<i>26</i>	<i>27</i>	<i>28</i>	<i>29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-45</i>
<i>Constant</i>	0.256495	1.062959	1.057018	1.0806	1.639569	1.637679	1.457847	1.015478	0.965272	1.205489	1.403427	1.4325	1.234182	1.111586	1.462997
<i>Poverty</i>	-0.000352	0.00797	0.000435	0.000435	0.0017	0.001968	0.002335	0.002248	0.002253	0.001716	0.001626	0.000238	0.001202	0.0011	0.002358
<i>Education</i>	-0.190957	-0.24462	-0.092662	-0.119266	-0.157887	-0.093935	-0.035732	-0.017648	0.024844	0.035539	0.03192	0.0357	0.058002	0.030108	0.018546
<i>Income Wage</i>	-0.000834	7.2E-06	-0.000124	0.000636	-0.000102	-0.00015	-0.00018	-0.000181	-0.000199	-0.000177	-0.000184	-0.000184	-0.000154	-0.000127	-0.000133
<i>Alaksa</i>	0.370812	0.486666	0.160834	0.1528	0.222038	0.165807	-0.709316	0.37152	0.401852	0.475172	-0.099664	-0.5684	0.27557	-0.159211	0.234476
<i>Appalachia</i>	0.126571	-0.073522	-0.050557	-0.061198	-0.2525	-0.352177	-0.504022	-0.041327	-0.077075	-0.212469	-0.58408	-0.018358	-0.097865	-0.323698	-0.266035
<i>DC</i>	-0.18661	-0.342087	-0.237998	-0.2684	-0.725241	-0.957411	-1.076809	-0.343048	-0.734335	-0.232399	-0.921772	-0.022374	-0.434808	-0.951154	-0.505752
<i>South</i>	0.235515	0.051293	0.042128	-0.01489	-0.073235	-0.248309	-0.357732	0.017986	-0.019113	-0.185775	-0.612372	-0.00498	0.00352	-0.228329	-0.154536
<i>Great Lakes</i>	-0.054063	-0.254406	-0.091315	-0.1137	-0.317335	-0.442245	-0.53671	-0.026859	-0.076522	-0.255004	-0.656403	-0.027557	-0.050614	-0.313461	-0.22393
<i>Hawaii</i>	-0.230961	-0.396568	-0.169584	-0.4687	-0.4687	-0.78296	-0.508055	-0.1366	-0.29658	-0.175997	-0.768124	-0.03056	0.056571	-0.149234	-0.347469
<i>Mid Atlantic</i>	-0.214829	-0.385078	-0.176027	-0.1857	-0.493463	-0.614428	-0.696759	-0.201116	-0.265658	-0.434941	-0.776765	-0.049434	-0.234268	-0.472514	-0.418066
<i>Midwest</i>	0.008651	-0.56725	-0.039369	-0.04117	-0.061488	-0.24968	-0.371731	0.159752	0.068161	-0.177259	-0.379275	-0.011429	-0.005913	-0.1959	-0.18505
<i>Mountain</i>	0.19944	0.026716	0.016716	-0.0235	-0.13428	-0.217532	-0.322932	0.047184	0.042424	0.022106	-0.627967	-0.00663	0.126034	-0.17489	0.021225
<i>New England</i>	-0.382393	-0.470107	-0.164889	-0.185882	-0.516993	-0.698531	-0.678504	-0.125112	-0.178534	-0.415071	-0.762415	-0.064101	-0.311463	-0.497528	-0.426527
<i>Southeast</i>	0.186063	0.0813	0.001358	-0.05497	-0.085087	-0.346647	-0.356825	0.01487	0.140373	-0.14746	-0.559199	-0.000712	-0.008917	-0.231383	-0.121666
<i>Texas</i>	0.180518	-0.00594	0.007277	-0.01282	-0.053102	-0.266315	-0.426764	0.115606	0.004224	-0.08274	-0.546513	-0.014988	0.075625	-0.131338	-0.047426
<i>Utah</i>	-0.018149	0.038387	-0.025923	-0.05432	-0.05432	-0.206256	-0.59051	0.146164	0.006208	-0.351835	0.324385	-0.57553	0.258724	-0.029347	-0.357622
<i>West Coast</i>	0.056986	-0.0627	-0.044287	-0.06088	-0.250782	-0.411154	-0.492339	0.018169	-0.055212	-0.144088	-0.59688	-0.012898	0.011938	-0.237502	-0.129091

Table 2: 1980

<i>Variable</i>	<i>18</i>	<i>19</i>	<i>20</i>	<i>21</i>	<i>22</i>	<i>23</i>	<i>24</i>	<i>25</i>	<i>26</i>	<i>27</i>	<i>28</i>	<i>29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-45</i>
<i>Constant</i>	0.4909	1.8850	1.6037	1.1790	1.6105	1.8715	1.5356	1.4564	1.5832	1.4054	1.2189	1.4032	1.4100	1.4516	1.4172
<i>Poverty</i>	-0.0007	0.0005	0.0011	0.0015	0.0018	0.0022	0.0026	0.0030	0.0027	0.0028	0.0027	0.0025	0.0021	0.0019	0.0025
<i>Education</i>	-0.2355	-0.3011	-0.3111	-0.2821	-0.2461	-0.2210	-0.1711	-0.1242	-0.1171	-0.0813	-0.0540	-0.0585	-0.0240	0.0116	0.0132
<i>Income Wage</i>	0.0000	0.0000	0.0000	-0.0002	-0.0004	-0.0001	-0.0001	-0.0001	-0.0001	-0.0002	-0.0001	-0.0006	-0.0001	-0.0005	-0.0005
<i>Alaksa</i>	-0.2597	-0.1851	0.3037	0.6462	0.2535	-0.3118	0.0134	0.4331	-0.3616	0.0586	0.1806	0.0168	0.4645	0.8789	0.0191
<i>Appalachia</i>	0.0032	0.0039	-0.0899	-0.0601	-0.0214	-0.2397	-0.1092	-0.3016	-0.1307	-0.1106	-0.0435	-0.1026	-0.0866	-0.1554	-0.2382
<i>DC</i>	-0.6184	-0.7650	-1.1300	-0.7354	-0.5927	-1.2368	-1.1170	-1.2347	-1.2443	-0.4951	-0.4733	-0.4517	-0.6574	-0.8189	-0.7175
<i>South</i>	0.0127	0.2013	0.1248	0.0892	0.1498	-0.1023	0.0253	-0.0967	-0.0818	-0.1250	0.1107	-0.0639	-0.0176	-0.1299	-0.1736
<i>Great Lakes</i>	-0.2465	-0.2267	-0.2384	-0.2725	-0.2078	-0.3949	-0.2212	-0.3785	-0.3530	-0.3405	-0.1916	-0.2553	-0.1724	-0.2318	-0.2825
<i>Hawaii</i>	-0.2438	-0.0406	-0.3773	-0.1026	-0.0884	-0.6837	-0.4392	-0.5548	-0.4060	-0.2957	-0.2127	-0.3726	-0.2286	-0.2633	-0.2883
<i>Mid Atlantic</i>	-0.3422	-0.4332	-0.5362	-0.5179	-0.4613	-0.6235	-0.4625	-0.5363	-0.5299	-0.4427	-0.3793	-0.4457	-0.3219	-0.3903	-0.4731
<i>Midwest</i>	-0.0111	0.0380	-0.0287	-0.0040	0.1195	-0.1317	0.0885	-0.1455	-0.1787	-0.1228	-0.0962	-0.1076	-0.0133	-0.0805	-0.0764
<i>Mountain</i>	-0.0453	0.0342	-0.0671	-0.0688	0.0489	-0.1996	-0.0810	-0.2499	-0.2485	-0.1896	-0.0131	-0.1581	-0.0628	-0.0800	-0.0687
<i>New England</i>	-0.5244	-0.5318	-0.5638	-0.5806	-0.4313	-0.6338	-0.4930	-0.6746	-0.5460	-0.4813	-0.4234	-0.3852	-0.2748	-0.3428	-0.4077
<i>Southeast</i>	-0.0239	0.0049	-0.0168	-0.0655	-0.0305	-0.2113	-0.1139	-0.2069	-0.2315	-0.1472	-0.0941	-0.1671	-0.1231	-0.1250	-0.1442
<i>Texas</i>	0.1916	0.1112	0.0863	0.1250	0.1307	-0.1207	0.0016	-0.1150	-0.0839	-0.0330	0.0249	-0.0116	0.0929	0.0141	-0.0699
<i>Utah</i>	0.1563	0.4011	0.3130	0.3746	0.4131	0.1253	0.0918	-0.1605	-0.0710	0.2175	-0.1951	-0.1077	0.0181	0.1517	-0.0122
<i>West Coast</i>	-0.0871	-0.2407	-0.2526	-0.2516	-0.2007	-0.0387	-0.2690	-0.4087	-0.3767	-0.3781	-0.2408	-0.3117	-0.1942	-0.2013	-0.1836

Table 3: 1970							
18	19	20	21	22	23	24	25
New England	Midwest	DC	DC	DC	DC	DC	DC
Hawaii	New England	Mid Atlantic	New England	New England	Hawaii	Alaska	Mid Atlantic
Mid Atlantic	Hawaii	Hawaii	Mid Atlantic	Mid Atlantic	New England	Mid Atlantic	Hawaii
DC	Mid Atlantic	New England	Great Lakes	Hawaii	Mid Atlantic	New England	New England
Great Lakes	DC	Great Lakes	Appalachia	Great Lakes	Great Lakes	Utah	Appa
Utah	Great Lakes	Appa	West Coast	Appa	West Coast	Great Lakes	Great Lakes
Midwest	Appa	West Coast	Southeast	West Coast	Appa	Hawaii	Southeast
West Coast	West Coast	Midwest	Midwest	Mountain	Southeast	Appa	South
Appa	Texas	Utah	Mountain	Southeast	Texas	West Coast	West Coast
Texas	Mountain	Southeast	South	South	Midwest	Texas	Mountain
Southeast	Utah	Texas	Texas	Midwest	South	Midwest	Texas
Mountain	South	Mountain	Utah	Utah	Mountain	South	Utah
South	Southeast	South	Hawaii	Texas	Utah	Southeast	Midwest
Alaksa	Alaska	Alaska	Alaksa	Alaska	Alaska	Mountain	Alaska

Table 3 (cont) : 1970						
26	27	28	29	30-34	35-39	40-45
DC	Mid Atlantic	DC	Utah	DC	DC	DC
Hawaii	New England	Mid Atlantic	New England	New England	New England	New England
Mid Atlantic	Utah	Hawaii	Mid Atlantic	Mid Atlantic	Mid Atlantic	Mid Atlantic
New England	Great Lakes	New England	Hawaii	Appa	Appa	Utah
Appa	DC	Great Lakes	Great Lakes	Great Lakes	Great Lakes	Hawaii
Great Lakes	Appa	Mountain	DC	Southeast	West Coast	Appa
West Coast	South	South	Appa	Midwest	Southeast	Great Lakes
South	Midwest	West Coast	Texas	South	South	Midwest
Texas	Hawaii	Appa	West Coast	West Coast	Midwest	South
Utah	Southeast	Southeast	Midwest	Hawaii	Mountain	West Coast
Mountain	West Coast	Texas	Mountain	Texas	Alaska	Southeast
Midwest	Texas	Midwest	South	Mountain	Hawaii	Texas
Southeast	Mountain	Alaska	Southeast	Utah	Texas	Mountain
Alaska	Alaska	Utah	Alaksa	Alaska	Utah	Alaska

Table 4 : 1980							
18	19	20	21	22	23	24	25
DC	DC	DC	DC	DC	DC	DC	DC
New England	New England	New England	New England	Mid Atlantic	Hawaii	New England	New England
Mid Atlantic	Mid Atlantic	Mid Atlantic	Mid Atlantic	New England	New England	Mid Atlantic	Hawaii
Alaska	West Coast	Hawaii	Great Lakes	Great Lakes	Mid Atlantic	Hawaii	Mid Atlantic
Great Lakes	Great Lakes	West Coast	West Coast	West Coast	Great Lakes	West Coast	West Coast
Hawaii	Alaska	Great Lakes	Hawaii	Hawaii	Alaska	Great Lakes	Great Lakes
West Coast	Hawaii	Appa	Mountain	Southeast	Appa	Southeast	Appa
Mountain	Appa	Mountain	Southeast	Appa	Southeast	Appa	Mountain
Southeast	Southeast	Midwest	Appa	Mountain	Mountain	Mountain	Southeast
Midwest	Mountain	Southeast	Midwest	Midwest	Midwest	Texas	Utah
Appa	Midwest	Texas	South	Texas	Texas	Alaska	Midwest
South	Texas	South	Texas	South	South	South	Texas
Utah	South	Alaska	Utah	Alaska	West Coast	Midwest	South
Texas	Utah	Utah	Alaska	Utah	Utah	Utah	Alaska

Table 4 (cont) : 1980						
26	27	28	29	30-34	35-39	40-45
DC	DC	DC	DC	DC	DC	DC
New England	New England	New England	Mid Atlantic	Mid Atlantic	Mid Atlantic	Mid Atlantic
Mid Atlantic	Mid Atlantic	Mid Atlantic	New England	New England	New England	New England
Hawaii	West Coast	West Coast	Hawaii	Hawaii	Hawaii	Hawaii
West Coast	Great Lakes	Hawaii	West Coast	West Coast	Great Lakes	Great Lakes
Alaska	Hawaii	Utah	Great Lakes	Great Lakes	West Coast	Appa
Great Lakes	Mountain	Great Lakes	Southeast	Southeast	Appa	West Coast
Mountain	Southeast	Midwest	Mountain	Appa	South	South
Southeast	South	Southeast	Utah	Mountain	Southeast	Southeast
Midwest	Midwest	Appa	Midwest	South	Midwest	Midwest
Appa	Appa	Mountain	Appa	Midwest	Mountain	Texas
Texas	Texas	Texas	South	Utah	Texas	Mountain
South	Alaska	South	Texas	Texas	Utah	Utah
Utah	Utah	Alaska	Alaska	Alaska	Alaska	Alaska

<i>Table 5:</i>		<i>Average Ranking</i>
<i>Alaksa</i>	<i>1970</i>	<i>13.00</i>
	<i>1980</i>	<i>11.33</i>
<i>Appalachia</i>	<i>1970</i>	<i>6.27</i>
	<i>1980</i>	<i>8.60</i>
<i>DC</i>	<i>1970</i>	<i>2.07</i>
	<i>1980</i>	<i>1.00</i>
<i>South</i>	<i>1970</i>	<i>9.87</i>
	<i>1980</i>	<i>11.33</i>
<i>Great Lakes</i>	<i>1970</i>	<i>5.27</i>
	<i>1980</i>	<i>5.47</i>
<i>Hawaii</i>	<i>1970</i>	<i>5.47</i>
	<i>1980</i>	<i>4.47</i>
<i>Mid Atlantic</i>	<i>1970</i>	<i>2.80</i>
	<i>1980</i>	<i>2.80</i>
<i>Midwest</i>	<i>1970</i>	<i>9.00</i>
	<i>1980</i>	<i>10.20</i>
<i>Mountain</i>	<i>1970</i>	<i>10.87</i>
	<i>1980</i>	<i>8.93</i>
<i>New England</i>	<i>1970</i>	<i>2.67</i>
	<i>1980</i>	<i>2.40</i>
<i>Southeast</i>	<i>1970</i>	<i>9.87</i>
	<i>1980</i>	<i>8.20</i>
<i>Texas</i>	<i>1970</i>	<i>10.73</i>
	<i>1980</i>	<i>11.80</i>
<i>Utah</i>	<i>1970</i>	<i>9.27</i>
	<i>1980</i>	<i>12.47</i>
<i>West Coast</i>	<i>1970</i>	<i>8.00</i>
	<i>1980</i>	<i>5.67</i>

<i>Marginal</i>	18	19	20	21	22	23	24	25	26	27	28	29	30-34	35-39	40-45
<i>Education</i>	0.3095	-0.2213	-0.0225	-0.1742	-0.0787	-0.0694	-0.0328	-0.0189	0.0314	0.0469	0.0344	0.0488	0.0910	0.0313	0.0329
<i>IncWage</i>	0.0014	0.0000	0.0000	0.0009	-0.0001	-0.0001	-0.0002	-0.0002	-0.0003	-0.0002	-0.0002	-0.0003	-0.0002	-0.0001	-0.0002
<i>Poverty</i>	0.0006	0.0072	0.0001	0.0006	0.0008	0.0015	0.0021	0.0024	0.0028	0.0023	0.0018	0.0003	0.0019	0.0011	0.0042
<i>NewEngland</i>	0.6198	-0.4253	-0.0400	-0.2715	-0.2577	-0.5160	-0.6228	-0.1338	-0.2253	-0.5482	-0.8219	-0.0877	-0.4888	-0.5164	-0.7560
<i>MidAtlan</i>	0.3482	-0.3483	-0.0427	-0.2712	-0.2460	-0.4538	-0.6396	-0.2151	-0.3352	-0.5744	-0.8374	-0.0676	-0.3676	-0.4904	-0.7410
<i>GreatL</i>	0.0876	-0.2301	-0.0222	-0.1661	-0.1582	-0.3267	-0.4927	-0.0287	-0.0966	-0.3368	-0.7076	-0.0377	-0.0794	-0.3254	-0.3969
<i>Appa</i>	-0.2052	-0.0665	-0.0123	-0.0894	-0.1259	-0.2601	-0.4626	-0.0442	-0.0973	-0.2806	-0.6297	-0.0251	-0.1536	-0.3360	-0.4716
<i>MidWest</i>	-0.0140	-0.5131	-0.0096	-0.0601	-0.0307	-0.1844	-0.3412	0.1708	0.0860	-0.2341	-0.4089	-0.0156	-0.0093	-0.2033	-0.3280
<i>South</i>	-0.3818	0.0464	0.0102	-0.0217	-0.0365	-0.1834	-0.3284	0.0192	-0.0241	-0.2453	-0.6602	-0.0068	0.0055	-0.2370	-0.2739
<i>Southeast</i>	-0.3016	0.0735	0.0003	-0.0803	-0.0424	-0.2560	-0.3275	0.0159	0.1771	-0.1947	-0.6028	-0.0010	-0.0140	-0.2402	-0.2157
<i>Texas</i>	-0.2926	-0.0054	0.0018	-0.0187	-0.0265	-0.1967	-0.3917	0.1236	0.0053	-0.1093	-0.5892	-0.0205	0.1187	-0.1363	-0.0841
<i>Mount</i>	-0.3233	0.0242	0.0041	-0.0343	-0.0669	-0.1607	-0.2964	0.0505	0.0535	0.0292	-0.6770	-0.0091	0.1978	-0.1815	0.0376
<i>Utah</i>	0.0294	0.0347	-0.0063	-0.0793	-0.0271	-0.1523	-0.5420	0.1563	0.0078	-0.4646	0.3497	-0.7872	0.4060	-0.0305	-0.6339
<i>WestCoast</i>	-0.0924	-0.0567	-0.0107	-0.0889	-0.1250	-0.3040	-0.4519	0.0194	-0.0697	-0.1903	-0.6435	-0.0176	0.0187	-0.2465	-0.2288
<i>Alaska</i>	-0.6011	0.4402	0.0390	0.2232	0.1107	0.1225	-0.6511	0.3973	0.5071	0.6275	-0.1074	-0.7774	0.4324	-0.1653	0.4156
<i>Hawaii</i>	0.3744	-0.3587	-0.0411	-0.6846	-0.2336	-0.5783	-0.4663	-0.1461	-0.3743	-0.2324	-0.8281	-0.0418	0.0888	-0.1549	-0.6159
<i>DC</i>	0.3025	-0.3095	-0.0577	-0.3920	-0.3615	-0.7072	-0.9884	-0.3668	-0.9267	-0.3069	-0.9937	-0.0306	-0.6823	-0.9873	-0.8965

<i>Marginal</i>	18	19	20	21	22	23	24	25	26	27	28	29	30-34	35-39	40-45
<i>Education</i>	0.2904	0.0580	0.1701	0.3660	0.4080	-0.0684	-0.0759	-0.0787	-0.0927	0.0021	-0.0361	0.1289	-0.0326	-0.0105	-0.0118
<i>IncWage</i>	0.0000	0.0000	0.0000	0.0002	0.0007	0.0000	0.0000	-0.0001	-0.0001	0.0000	-0.0001	0.0014	-0.0001	0.0005	0.0005
<i>Poverty</i>	0.0009	-0.0001	-0.0006	-0.0019	-0.0030	0.0007	0.0012	0.0019	0.0022	-0.0001	0.0018	-0.0055	0.0028	-0.0017	-0.0023
<i>NewEngland</i>	0.6467	0.1024	0.3083	0.7533	0.7151	-0.1962	-0.2186	-0.4277	-0.4321	0.0124	-0.2834	0.8481	-0.3735	0.3094	0.3628
<i>MidAtlan</i>	0.4220	0.0834	0.2932	0.6720	0.7649	-0.1930	-0.2050	-0.3400	-0.4193	0.0115	-0.2539	0.9814	-0.4376	0.3524	0.4210
<i>GreatL</i>	0.3040	0.0437	0.1304	0.3536	0.3446	-0.1222	-0.0981	-0.2399	-0.2794	0.0088	-0.1282	0.5621	-0.2344	0.2092	0.2514
<i>Appa</i>	-0.0039	-0.0008	0.0492	0.0780	0.0355	-0.0742	-0.0484	-0.1912	-0.1035	0.0029	-0.0291	0.2259	-0.1178	0.1403	0.2120
<i>MidWest</i>	0.0137	-0.0073	0.0157	0.0051	-0.1981	-0.0408	0.0392	-0.0922	-0.1414	0.0032	-0.0644	0.2369	-0.0180	0.0726	0.0680
<i>South</i>	-0.0157	-0.0388	-0.0682	-0.1157	-0.2485	-0.0317	0.0112	-0.0613	-0.0648	0.0032	0.0741	0.1406	-0.0239	0.1172	0.1545
<i>Southeast</i>	0.0295	-0.0009	0.0092	0.0850	0.0506	-0.0654	-0.0505	-0.1311	-0.1832	0.0038	-0.0630	0.3680	-0.1673	0.1128	0.1284
<i>Texas</i>	-0.2363	-0.0214	-0.0472	-0.1622	-0.2167	-0.0373	0.0007	-0.0729	-0.0664	0.0009	0.0167	0.0256	0.1262	-0.0127	0.0622
<i>Mount</i>	0.0559	-0.0066	0.0367	0.0893	-0.0812	-0.0618	-0.0359	-0.1584	-0.1967	0.0049	-0.0088	0.3482	-0.0853	0.0722	0.0611
<i>Utah</i>	-0.1927	-0.0773	-0.1711	-0.4860	-0.6849	0.0388	0.0407	-0.1018	-0.0562	-0.0056	-0.1306	0.2372	0.0245	-0.1369	0.0109
<i>WestCoast</i>	0.1074	0.0464	0.1381	0.3265	0.3328	-0.0120	-0.1192	-0.2591	-0.2981	0.0098	-0.1612	0.6863	-0.2640	0.1818	0.1634
<i>Alaska</i>	0.3203	0.0357	-0.1661	-0.8384	-0.4203	-0.0965	0.0059	0.2746	-0.2862	-0.0015	0.1209	-0.0370	0.6314	-0.7934	-0.0170
<i>Hawaii</i>	0.3006	0.0078	0.2063	0.1331	0.1466	-0.2116	-0.1947	-0.3517	-0.3213	0.0076	-0.1424	0.8205	-0.3108	0.2377	0.2566
<i>DC</i>	0.7626	0.1474	0.6179	0.9541	0.9828	-0.3828	-0.4952	-0.7827	-0.9847	0.0128	-0.3168	0.9946	-0.8937	0.7392	0.6386