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Why Do Married Men Earn More? An Evaluation of the Marriage Premium

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ABSTRACT

Married men receive higher wages than single men do. Many have tested whether or not this is due to selection and find that the so called marriage premium persists. Few, however, have explored the mechanisms. If the premium is related to the instrumental and emotional support provided by marriage, one might expect that the gains to marriage are weaker in unhappy relationships. This paper will focus on whether the premium is conditioned by marriage "quality". We will estimate fixed and random effects natural log wage models for a sample of males from the National Survey of Families and Households. Husbands in marriages not characterized as happy have a lower predicted wage than those in happy and somewhat happy marriages. General happiness appears to account for only some of this difference. Very happily married men receive higher wages than never married and previously married men do but lower wages than other husbands do.

INTRODUCTION

A great deal of attention has focused on assortative mating as a stratification process; however, marriage is an institution that perpetuates inequality through other means as well. While there is a vast literature on the impact of single parenthood and divorce on the economic well-being of women, the role of marriage for men has received much less attention among sociologists until recently. It is an empirical observation that married men earn more and receive higher wages than single men. This so called marriage premium on wages has been found to persist even when a large number of personal characteristics and human capital variables have been taken into account.

Empirical research on the marriage premium has focused on determining the extent to which the selection of higher earning men into marriage is responsible for the observed wage differential (Chun and Lee, 2001; see Reed and Harford, 1989 or Korenman and Neumark, 1991 for review of early studies); although, it has been hypothesized that married men may also select themselves into higher paying jobs at the expense of other job qualities and benefits. A wide range of direct and indirect techniques that are meant to account for selection into marriage have been applied to the question of whether there is a premium. Estimates of the proportion of the marriage premium explained by selection vary wildly but, for the most part, studies consistently find a residual differential. Hypotheses have been advanced to explain this observed wage differential. One is that marriage makes men more productive, and another is that employers discriminate in favor of married men. Hardly any studies have tested these or other hypotheses directly. Despite the abundance of published research testing whether there is a marriage premium, surprisingly little is known about the mechanisms through which marriage may

enhance productivity and how differences between married men and single men might lead to differences in wages.

In this paper, we will explore whether the premium is conditioned by the quality of the marriage. If discrimination is the key reason for the premium we would not expect the premium to vary across characteristics of the marriage. In contrast, factors that contribute to marital quality such as instrumental and emotional support presumably increase men's productivity at work. If instrumental and emotional support in marriage affects productivity, then we would expect a smaller premium in lower quality marriages. Do unhappily married men earn lower wages than other married men? Does the premium increase with each higher level of relationship quality? We will address these questions and explore the possibility that union quality, and in this preliminary draft, ratings of union happiness, operates indirectly through general happiness.

Our data, drawn from the National Survey of Families and Households (NSFH), provide no direct measures of marital status discrimination or experiences of discrimination more generally; however, we will explore whether the marital status differentials in wages are mediated by reports of feeling unappreciated at work. We will also determine whether the differentials among salaried workers and those who earn an hourly wage are comparable. If hourly wages are more elastic with respect to marginal changes in productivity than are salaries, greater marriage premiums among the class of workers paid by the hour would be consistent with the hypothesis that married men are more "productive". We note, however, that measurement error is also expected to be greater for salaried workers, whose wages are constructed from earnings and reports of hours worked.

We will estimate fixed and random effects natural log wage models to determine whether there is a relationship between various indicators of marriage quality and the marriage premium.

We plan to conduct factor analyses to construct composite measures of quality that address conflict, time spent with spouse, and self-assessments of the relationship.

Preliminary analyses are presented here that are based on white males only and a measure of marital happiness. We find a relationship between marital happiness and the wage premium; however, the relationship is not monotonic. The married men in our preliminary sample who characterize their marriage as not happy have a predicted wage that is less than the men who characterize theirs as happy and somewhat happy. General happiness only appears to account for some of the diminished wages of those in not happy marriages. Men in very happy relationships have higher wages than never married men and previously married men; however, surprisingly they have the lowest wages among the married men.

DATA AND METHODS

Data

Data are drawn from the National Survey of Families and Households (NSFH), a probability sample of 13,017 respondents that was first conducted in 1987 and 1988 (Sweet *et. al* 1988). The sample consists of 9,643 households and a double sampling of blacks, Mexican-Americans, Puerto Ricans, single-parent families and families with stepchildren, cohabiting couples, and recently married couples. One individual was randomly selected to be the main respondent from all of the adults residing in the household at the time of the interview. Between 1992 and 1994, the NSFH reinterviewed main respondents as well as spouses and partners who were interviewed at the first wave and the main respondent's current spouse or partner (Sweet and Bumpass 1996). During the second wave, 10,005 main respondents were interviewed. These data contain extensive information about marital quality and happiness, and also include

education, information on work histories, which provides work hours, and other human capital variables.

In the cross sectional model, we use all observations that fulfill the selection criteria in the wave of the observation (i.e., male, employed, not in the military or enrolled in school, and working 35 hours per week or more). Because the analysis is cross sectional, respondents did not have to respond to an interview in both waves, therefore some respondents provided one observation, while others provided two. In the proposed fixed effects model, the sample is restricted to individuals who fulfill the selection criteria in both waves. Our sample is further restricted to men between the ages of 25 and 55 at each wave. The preliminary analyses reported in this paper contain only white men. Missing data for wages in one or both waves reduced the sample size even further. These restrictions provided a sample of 3,554 observations (1625 at NSFH1 and 1799 at NSFH2) on 2,051 men in our cross-sectional analysis**.**

Analytic Strategy

We will use the data both as a cross section and as a panel, and compare the results from random effects and fixed effects models. Our cross sectional model uses the repeated observations to estimate the following model:

$$Y_i = \mathbf{X_i}\boldsymbol{\beta} + b_i + \varepsilon_i \qquad i = 1, 2, \ldots, n$$

where Y_i is the hourly wage for individual i; $\mathbf{X_i}$ is the vector of independent variables associated with individual i; $\boldsymbol{\beta}$ is the vector of fixed effect parameter estimates of the effects of the independent variables; b_i is a random shift in the intercept associated with individual i; and ε_i is the normally distributed random error term associated with individual i. The fixed effect parameter estimates, $\boldsymbol{\beta}$, have the same interpretation that they would otherwise have in an OLS

regression. The random effect, b_i, is an estimate of the portion of the sample variance that can be attributed to variation within each individual rather than unexplained variation between individuals. This allows for more precise estimates of the between-individual variance associated with the population parameters. The model, however, does not address selection.

The selection explanation for the wage differential argues that married men may earn more because men with greater earning potential are more likely to be married. Factors such as having grown up in a two-parent household may increase both wages and the likelihood that an individual will marry and stay married. We address this systematic correlation with fixed effects models, which account for some of the unmeasured characteristics. With two waves of data, this model becomes a difference model in which the change in wages between waves is a function of the change in each of the explanatory variables between waves. This model subtracts the effects of both observed and unobserved personal and human capital characteristics that do not change between waves. We plan to compare the results obtained using a fixed effects model with those obtained using a cross sectional model that does not take into account the unmeasured characteristics. Fixed effects models account for some but not all of the endogeneity between marriage and wages and inferences about the effect of marriage may not apply to those who do not marry.

Measures

The dependent variable used in the models is the natural log of the respondent's average hourly wage. This variable was constructed on the basis of the respondent's report about how he was paid. For workers who are paid on an hourly basis, the variable is based on the respondent's report of his hourly wage. Average hourly wage is constructed for salaried workers based on

their salary report. If the report is based on full-time year-round work, average hourly wage is based on working 40 hours per week, 52 weeks per year. If the report is based on part-time or part-year work, hourly wage is based on the respondent's report of when he works. Those paid on some other basis are asked to report their average monthly earnings, which are used in conjunction with the respondent's report of his average number of weekly work hours to construct an average hourly wage. Given the range in years, all dollar values are standardized by the consumer price index to 1990 dollars.

We construct variables for marital happiness and general happiness from responses to the questions: "Taking things all together, how would you describe your marriage?" and "Taking things all together, how would you say things are these days?" respectively. These questions were coded similarly on a seven-point scale from one through seven anchored at "1-Very unhappy" and "7-Very happy." There were too few cases to code separately those who fell in each of the bottom four categories, so we recoded the bottom four categories into a single category that we label "not happy". For discussion purposes, we refer to the top three categories as "somewhat happy," "happy," and "very happy".

In future drafts of this paper, we plan to examine other measures of union quality. One set will focus on conflict, another on time spent together, and a third on self-assessments of union stability. We intend to construct a conflict measure similar to that used by Hanson et al (1996). Additional key variables will be the respondent's perception of how much he is appreciated in his current job and whether the job is paid by an hourly wage or salary.

In our analyses of these variables, our models will take into account a number of human capital and personal characteristics. Variables will be included for highest level of education completed (less than high school, some college, associate/technical degree, Bachelor's degree,

Masters degree, and doctorate/professional degree, with high school diploma/GED omitted), whether respondent has a disability that affects his ability to work, metropolitan status (non-metropolitan – adjacent to metro area and non-metropolitan – non-adjacent to metro area, with metropolitan area omitted), whether respondent lives in the South, age of the respondent, age-squared, years of work experience, work experience squared, tenure with current employer, tenure squared, number of respondent's own children (biological or adopted) under age 18 currently living in his household, and indicators for the presence of at least one child in the following age groups: 0-2, 3-5, 6-11, and 12-17[1].

PRELIMINARY RESULTS

In Table 1 we present the parameter estimates for the marital status and happiness variables from the preliminary cross-sectional, random effects models. The estimates for education, disability, metropolitan status, region, age, experience, tenure and children in models 2-5 will be made available upon request. These variables are not included in Model 1. Exponentiating the coefficients in this simple model, married men are estimated to earn 25% more than never married men and 10% more than previously married men, whereas previously married men are estimated to earn 14% more than never married men. When education, disability, living in the South, metropolitan status, age, work experience, tenure, and children are included in the model, the size of the marriage premium is reduced substantially, such that married men earn 11% more than never married men, while previously married men earn 4% more (Model 2).

[1] Early models also included several measures of work hours, including average weekly work hours and indicators for whether the respondent worked fewer than 35 hours per week or greater than 60 hours per week. None of these variables reached significance at the traditional levels and have therefore been left out of the models reported in this paper.

Although Model 2 shows the marriage premium when all these variables are included in the model, we introduced these variables sequentially to see the degree to which each accounts for a portion of the marriage differential (sequential results are not shown). When we introduced age to the regression and age-squared (because of the faster growth in earnings in the early stages of the career cycle) more than half of the marriage premium and almost three-quarters of the premium for previously married men, disappear since never married men are on average younger than ever married men. Married men are estimated to earn 12% more than never married men, while previously married men are estimated to earn only 5% more. The introduction of the number of the respondent's own children under age 18 living in the respondent's household further reduces the premium for both married and previously married men, such that married men and previously married men earn 9% and 3% more than never married men, respectively. Children increase income needs and appear to explain an additional 23% of the premium observed for married men and an additional 26% of the premium observed for previously married men.

Model 3 introduces marital happiness to the full model. Regardless of how happy men are in their marriage, wage differences between never married and married men are statistically significant. Among husbands, however, we find a nonlinear relationship between marital happiness and hourly wages. Wages increase as we move from marriages that are not happy to those that are somewhat happy and decline thereafter (Table 1). Men with somewhat happy marriages exhibit the greatest premium.

Figure 2 depicts the hourly wage predicted by Models 3 and 4 by marital happiness. The predictions are based on the sample averages for the continuous variables and the median value for education (i.e., a 38.14 year old man with some college, 17.875 years of work experience,

and 9.54 years of tenure with his employer). Among married men, only the difference between somewhat happily married men and very happily married men is significant at the 0.05 level. This suggests perhaps that very happily married men trade greater success in the workplace (in the form of higher wages) for success in their family lives, or may be more willing to compensate pecuniary rewards for insurance benefits, conventional work hours, and other job characteristics. They may also be more invested in family life and spend more time with their families, at the expense of work (e.g., they may be more willing to miss a meeting for a school play). Our preliminary finding that somewhat happily married men are observed and estimated to have a larger marriage premium than more happily married men is consistent with Arlie Hochschild's argument in *The Time Bind* that (2001) "the friction laden environments people found at home could be losing out to the sense of purpose, accomplishment, and camaraderie offered by the well-oiled social machinery of the workplace." While somewhat less happily married men may receive support from spouses, they may also identify more with work, invest in firm specific social relations, and spend more time there. In contrast, those in poorer quality marriages may be less likely to receive support and may lose productivity because of negativity in their family life and resulting psychic costs, even if they look to work as an escape. How much of the disadvantage of unhappily married men relative to somewhat happy men is mediated by the impact of general levels of happiness on success at work?

Individuals who are happier may be less distracted and more productive. They may be more pleasant to work with, which presumably would affect their likelihood of promotion and retention as well as their pay rates. Figure 2 shows that previously married men are the most likely to not be happy followed by never married men. Married men are the most likely to be very happy, and the most likely to be happy or very happy. Can these differences in the

distribution of general happiness help explain the differences in wages across marital status? How does this distribution and the relationship with wages affect the marriage premium difference across levels of marital happiness?

Our findings are consistent with a wage penalty for not being happy in model 4 (table 1). This category is significantly different from each of the other general happiness categories at the 0.01 level but none of the others are significantly different from each other. With general happiness included, the marriage premium for men who are in very happy marriages relative to never married men is somewhat reduced as is the premium for those in happy marriages. As expected, the inclusion of general happiness works to *increase* the marriage premium that we observe for men in not happy marriages, while leaving the premium for somewhat happy marriages virtually unchanged. It appears that at least some of the negative implications of being in a not happy marriage may be due to the effect of these marriages on the husband's general happiness. Similarly, it appears that the lower levels of general happiness observed for previously married men help to explain their lower premium relative to never married men; when general happiness is controlled, the coefficient estimate for previously married men increases somewhat, though this estimate remains insignificant at standard statistical levels.

Figure 3 presents model 5's predicted wages for men who reported a general level of happiness, the median value for married men. Only differences between very happily married men and the other groups were significant at traditional levels. The standard errors for the coefficient estimates of the difference between each level of marital happiness and the very happily married are included with the estimate. Significant differences are marked consistently with those marked in Table 1. The biggest changes between Models 3 and 5 occur for the not happily married group.

Future drafts of this paper will include other measures of marital quality, as well as feeling appreciated at work, and mode of payment. Fixed-effects models will be estimated as well to deal with constant heterogeneity. We will model wages for other ethnic groups as well as whites.

DISCUSSION

To the extent that labor markets reward men for being married and marriage causes men to receive higher wages, men of lower socioeconomic status (SES), and African Americans, are further disadvantaged by their lower rates and durations of marriage. These populations are less likely to marry and their cohabitations are less likely to turn into marriages (Smock and Manning 1997). In addition, they are more likely to separate and/or divorce (Martin and Bumpass 1989; Ross and Sawhill 1975). This means that men of low socioeconomic status will on average spend a smaller proportion of their lives within marriage and therefore will receive fewer of the benefits that marriage offers, including greater wage increases over their working life. The relationship between union status and wages may have generated even more inequality in the U.S. following changes in family structure and the prevalence of marriage during the past forty years. The negative impact of intergenerational transmissions of divorce and non-marital childbearing on mobility is further exacerbated by the persistence of a marriage premium

Social policies aimed at reducing inequality by encouraging marriage may have many unintended consequences. This study draws attention to the role that relationship quality might play in the degree to which men's wages might be enhanced by marriage. This preliminary analysis provides some evidence that not all marriages are alike with respect to their effect on wages. The analysis suggests that the nature of the relationship plays a role. In the marriage

premium literature, the residual explanation for the differential after selection procedures are applied is attributed to "productivity", primarily due to the division of labor in the marriage household. However, the division of labor is only one mechanism. The quality of the relationship may influence the choices men make, the level of support they receive and their emotional state.

Models 3 and 5 provide evidence that those who report that their marriages are not happy report lower wages than those in somewhat happy and happy marriages. We offer several possible explanations for this finding. It is possible that these marriages are not happy because of inadequate wages, which can cause tension within the marriage. However, on average these individuals earn somewhat more than those in very happy marriages earn, and see a significant premium over never married men. The level of support and conflict may be linked to marital happiness, and affect productivity and career choices. Moreover, these factors point to the emotional component of marriage. Unhappily married men are more likely to be less happy overall and we found that general happiness accounts for some of the relative disadvantage of men in unhappy unions. Sample size restricted us from dividing the group of not happily married men into more extreme levels of unhappiness; however, it is possible that there is a point at which unhappiness in marriage diminishes wages.

If there is employer discrimination against men who are not married then the source of the inequality seems even more unjust but perhaps more amenable to policy. However, if discrimination were the driving force, we would not expect that characteristics of the marriage such as levels of happiness with the marriage would produce much deviation, except to the extent that these characteristics are correlated with other factors that affect wages. Of course, married men may simply be more willing to sacrifice valued job qualities in favor of higher paying jobs for the benefit of their families. If this were the case, however, we would have

expected the premium to increase monotonically with marital happiness, in contrast to our finding that the happiest marriages do not have the largest gains to marriage.

Our finding that those in very happy marriages earn less than those in less happy marriages, holding numerous factors constant, is more consistent with other kinds of tradeoffs. Very happily, married men may be more motivated to sacrifice salary for health benefits or more flexible time schedules, consistent with Presser's (2000) finding that nonstandard work schedules are associated with greater marital instability. These men may be more devoted to family life than work.

Additional marriage quality variables that will be included in the next draft, such as time spent together, level of conflict, and perceived stability, may provide insights into some of these postulated explanations. Subsequent drafts of this paper will incorporate additional measures of union quality, such as conflict and stability. Some of these measures, like time spent together, may provide additional insight into the competition between time spent with family and work. Perceived risks of divorce may affect the way that men invest in work and the degree to which they are more devoted to one sphere than the other. We intend to construct composite measures of quality.

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Table 1. The Implications of Marital Status, Marriage Happiness and General Happiness for Ln Wages: Parameter Estimates from Random Effects Models

	Model 1			Model 2†			Model 3†			Model 4†			Model 5†		
	Coeff		**sd**	**Coeff**		**Sd**	**Coeff**		**sd**	**Coeff**		**sd**	**Coeff**		**sd**
Marital Status (omit Never Married)															
Married	0.23	***	0.03	0.11	***	0.03									
Very Happy							0.08	**	0.03				0.07	*	0.03
Happy							0.11	***	0.03				0.11	***	0.03
Somewhat Happy							0.14	***	0.03				0.14	***	0.03
Not Happy							0.1	**	0.04				0.11	**	0.04
Previously Married	0.13	***	0.03	0.04		0.03	0.04		0.03				0.05		0.03
General Happiness (omit Not Happy)															
Very Happy										0.07	**	0.03	0.08	**	0.03
Happy										0.07	***	0.02	0.07	***	0.02
Somewhat Happy										0.06	**	0.02	0.06	**	0.02
AIC	5,171.07			4,017.76			4,019.39			4,029.94			4,012.35		
BIC	5,201.76			4,201.92			4,228.10			4,226.38			4,245.61		
log-Likelihood	-2,580.54			-1,978.88			-1,975.69			-1,982.97			-1,968.17		

† Model includes controls for education, disability, metropolitan status, location in the South, age, age2, tenure, tenure2, work experience, work experience2, the presence of children in the following age groups: 02, 3-5, 6-11, 12-17, and the number of own children

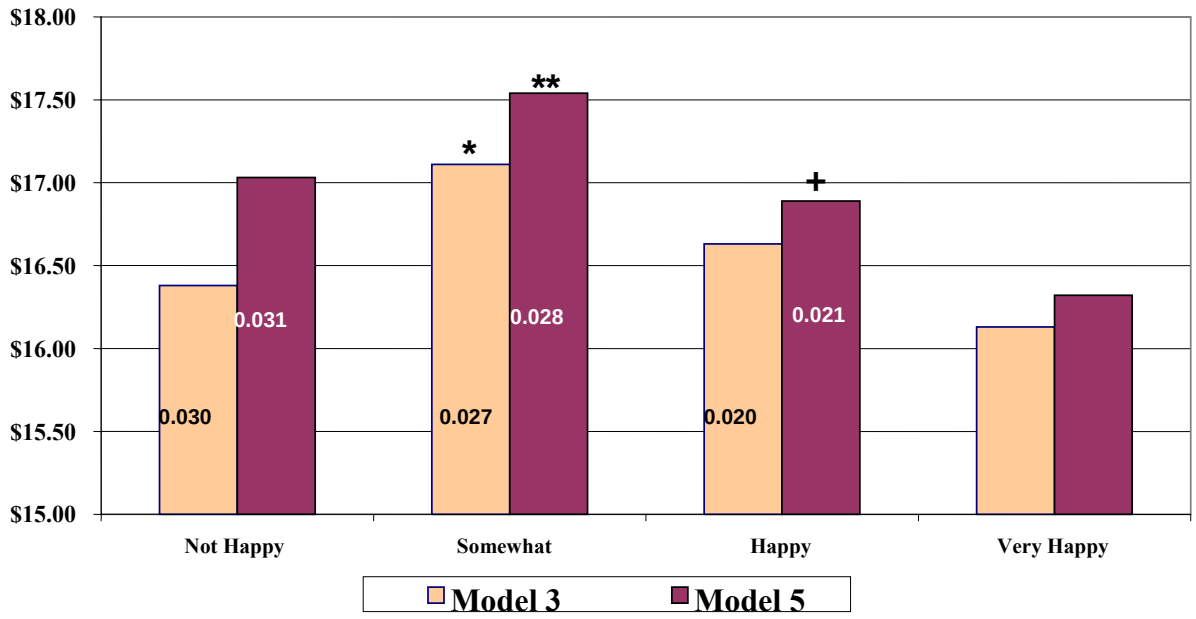
\+ $p < 0.10$

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Figure 1. Predicted Hourly Wage by Marital Happiness[1]



Numbers on bars represent standard deviations for model where Very Happy is omitted

+ Significantly different from Very Happily Married at 0.10 level.
* Significantly different from Very Happily Married at 0.05 level.
** Significantly different from Very Happily Married at 0.01 level.

Note 1. Calculations are based on a 38.14 year old man with some college and 17.875 years of work experience and 9.54 years of tenure with his employer.

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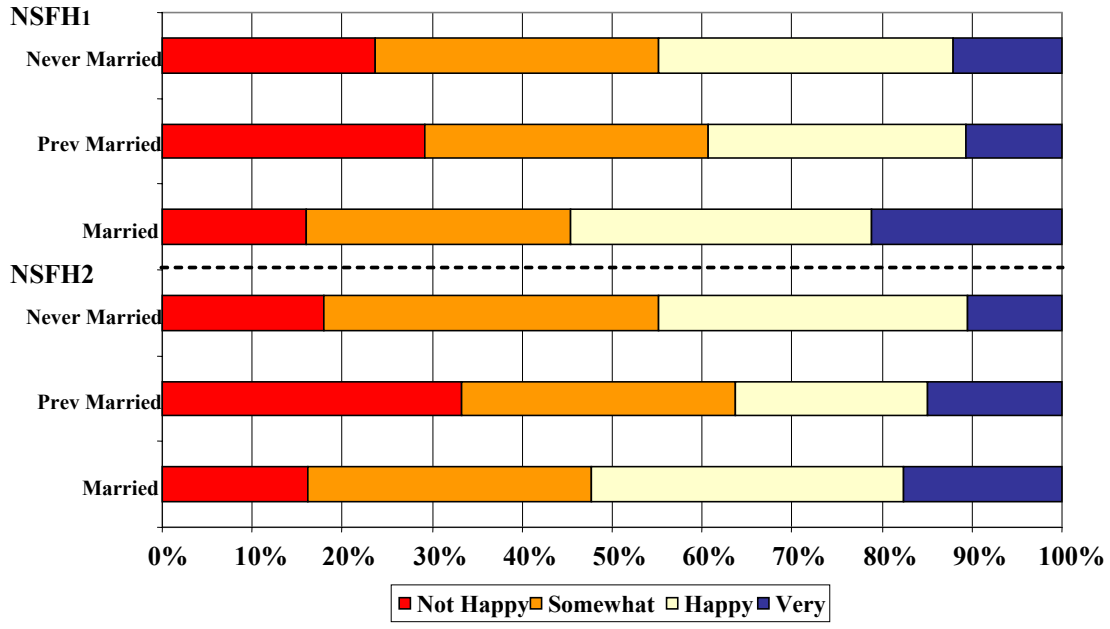
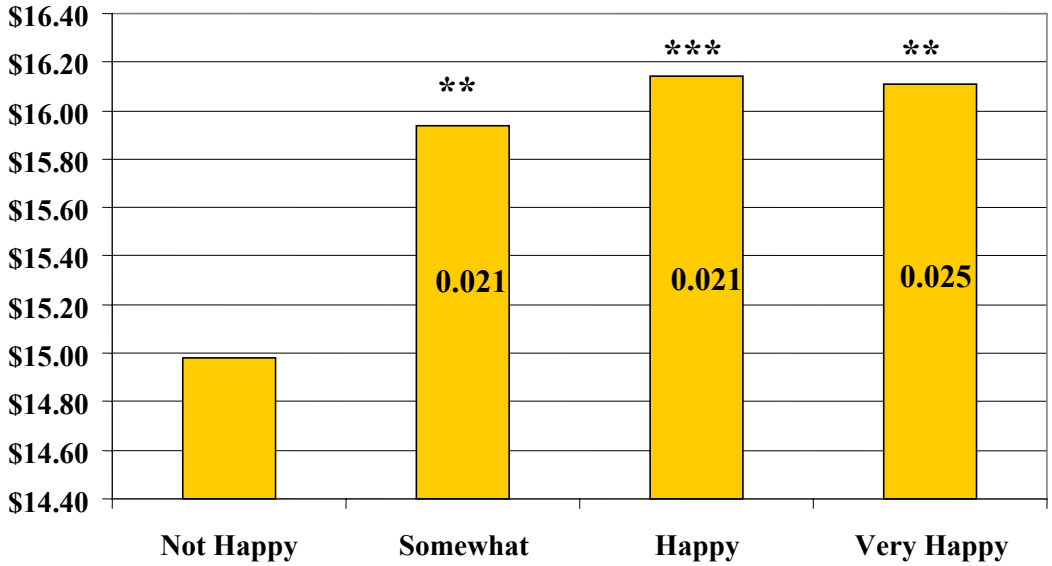
Figure 2. Distribution of General Happiness by Marital Status



. **Figure 3. Predicted Hourly Wage by General Happiness** [1]



Numbers on bars represent standard deviations for model where Not Happy is omitted.

** Significantly different from Not Happy at 0.01 level.
*** Significantly different from Not Happy at 0.001 level.

Note 1. Calculations are based on a 38.14 year old man with some college and 17.875 years of work experience and 9.54 years of tenure with his employer.