Economic Well-being of Poor and Non-Poor Women in Kentucky: Correcting for Selection into Marriage

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Abstract [3]

In 1996, Congress passed the Personal Responsibility and Work Responsibility Act (PRWORA) as the latest attempt at welfare reform. As a part of the PRWORA, Temporary Assistance for Needy Families (TANF) replaced Aid to Families with Dependent Children (AFDC). As part of the shift to TANF was a shift in program orientation away from entitlement to a 5 year life-time limit on receipt of TANF benefits with implementation of the TANF program in each state. Likewise, the new TANF program objectives focused on personal responsibility and work: to end dependency on welfare through job preparation, work, and marriage, to encourage formation of two-parent families, and to reduce out-of-wedlock births. The Bush Administration, specifically through the US Department of Health and Human Services, is poised to spend billions of dollars in support of policies and programs encouraging marriage (Horn, 2002). Therefore, it is essential to understand the factors that influence the economic well-being of poor compared to non-poor women while controlling for self-selection into marriage.

No previous studies take into account the question of the economic well-being of women, the poor and the non-poor, while correcting for effects of self-selection into marriage and modeling the effects of domestic violence, substance abuse, and mental health. This is especially important as marriage becomes a federally supported solution to poverty.

The model developed and tested here includes 1] retrospective demographic and economic data about the family of origin; 2] attitudes about marriage, divorce, cohabitation, and singleness; 3] mate selection criteria; 4] reasons for relationship failure; 5] current demographic and economic data regarding age, education, family composition, and employment; 6] specific questions measuring domestic violence, conflict, and substance abuse in the family of origin and domestic violence, substance abuse, and mental heath in the current household; 7] marital status, used to estimate the probability of marriage for women; and 8] three alternative measures of economic well-being including a) total income reported for the household; b) count of number of government programs—Food Stamps, Medicaid, and Disability payments currently utilized, and c) count of number of government programs—Food Stamps, Medicaid, and Disability payments utilized at some time during the most recent five year period.

Most scholarly publications investigate various facets of the overall question of the effects of marriage on the economic well-being of women. Some scholarly publications recognize and correct for selection bias, but many do not. Specifically, this paper extends the contextual boundaries of an existing statistical method of model specification to use Heckman's (1979) maximum likelihood model to estimate and correct for statistical bias resulting from self-selection into marriage. Stage one of the simultaneous solution estimates the probability of being married to test for bias and to generate the correction factor for use in stage two where an OLS equation estimates well-being as a function of economic, demographic, and psychological characteristics of women. The STATA Statistical Program is used for this two-stage estimation procedure.

The primary aim of this study was to identify, measure, and model indicators of the economic well-being of poor and non-poor women in Kentucky—while correcting for self-selection into marriage. The aim of identification of relevant effects on well-being is met by the extensive literature review which provides the necessary theoretical framework and identification of relevant effects and measures of identified influences. The data used here were gather with the intent to be able to accomplish this aim.

The sample allowed for statewide generalizability across the two-part sample stratified by conventional definitions of poor and non-poor households. The sample selection method employed the standard random-digit dialing technique for telephone interviews. to gathered data from a sample of Kentucky women 18 – 62 years of age where 50 percent of the sample was below 200 percent of the Federal Poverty Level and the remaining 50 percent were at or above 200 percent of the Federal Poverty Level. Kentucky is an ideal southern state to explore the causal relationship between marriage and economic well-being for poor and non-poor women with implications for other southern states. Data were primarily gathered during June and July 2004.

The second component of the measurement aim focuses on gathering data designed for construction of indices and constructs comprised of measurable indicators of relevant effects. The opportunity to gather data designed to address as many effects as are identified for this complex extensive model requires a multitude of variables combined into resulting composite measures of complex influences. Many of the variables of interest are constructs not easily or directly measured by one direct question. What can be measured are alternative dimensions of the larger construct. Then the dimension measures are combined or constructed into composite measures representing the multi-dimensional construct.

The third aim of the study focuses on model specification. The extensive model identified in this study was tested using the Heckman maximum likelihood procedure to detect and correct for selection bias. In these analyses, selection bias is due to whether the respondent had, by her life choices, self-selected into being currently married vs. being currently not married

This research is designed to look exclusively at the economic well-being of women in Kentucky while taking into account the effect of being married. This research study measures key attitudes and behaviors relevant to marriage in Kentucky—specifically as both relate to poverty in the South. The knowledge gained will be used to inform prevention and intervention programs currently being implemented through Healthy Marriage Initiatives.

The Differential Influence of Marriage on Poor and Non-Poor Women

The description of the total sample compares the poor and non-poor sub-samples to provide insight into just how different the two sub-samples of respondents are. Understanding those differences is very important. A goal of this study is to provide an understanding, even evidence, that not only are poor and non-poor women different, but even more importantly for the contribution to knowledge that this research provides, is that given the known differences, the effects of being married or not married on poor and non-poor women are even more dramatically different. T-test analysis of differences in mean values of variables of interest comparing whether the woman is married or not married were executed separately for each sub-sample—poor and non-poor women. The results provide evidence of the importance of moving beyond differences between poor and non-poor women to examine differences between married and not married women within the poor and non-poor sub-samples.

Results show that variables in the poor sub-sample are generally statistically significant different between married and not married women; while variables are not generally statistically significant between married and not married non-poor women. Regarding statistically significant differences, family of origin violence and abuse (moderate and severe), and sever abuse as an adult have higher statistically significant mean values for not marred poor than for married poor women; some of the substance abuse items; some of the mental health items, a few of the mate selection criteria, and many of the indicators of well-being reflect this same pattern.

The Empirical Model

Three alternative dependent variables are developed as measures of economic well-being. Household income is the dependent variable for Model I. Income is an ordinal measure that results from respondents' responses to alternative income categories. Number of types of public assistance currently received by the respondent is the dependent variable for Model II. Number of types of public assistance received by the respondent at least once during the past five years is the dependent variable for Model III.

For each basic model (Model I, Model II, and Model III), sub-samples of poor and non-poor women were used to test each model. For each of these sub-samples the specification of each model was the same across both samples. Results indicate that the model tested here is clearly a better fit for identifying and testing the effects of marriage on economic well-being for women in poor households than for women in non-poor households. The correction factor—lambda—is not statistically significant for the non-poor sample for models I, II, or III. Lambda is also not statistically significant for Model III (public assistance used during the least five years) for poor or non-poor women.

Comparisons of the Heckman two-stage equations with the OLS models without correcting for selection bias, clearly indicate that statistical significance is altered and comparison of the size differences of coefficients illustrates an over-estimation of effect in the absence of the correction for selection bias for Model I and an under-estimation of effect for Model II, both for poor women only.

Stage One of Model using Heckman Procedure

The first step of the Heckman maximum likelihood procedure, stage one, estimates the probability of currently being married. The causally prior factors that influence the probability of marriage do not vary by model, i.e., are not a function of the dependent variable; however, they vary for poor and non-poor women. For poor

women the statistically significant variables influencing the probability of currently being married include: being Caucasian is positively related, religiousness of family of origin is negatively related, high level of use/abuse of drugs and alcohol is negatively related, moderate violence or abuse as an adult is negatively related, and a Stoic attitude toward marriage is positively related to currently being married. For non-poor women the statistically significant variables influencing the probability of currently being married include a family of origin family structure in which the respondent lived primarily with only her father is negatively related, a Stoic attitude toward marriage is positively related, and the construct for male character criteria indicating that it would be important to know about a man's history regarding violence, substance abuse, whether he had other children, and how good a caregiver he would be for the women's own child(ren) are positively related to currently being married.

Lambda, the correction factor for selection bias resulting from selection into marriage, is statistically significant for Model I (total household income) and Model II (count of types of current public assistance currently received) for poor women.

Stage Two of Model using the Heckman Procedure

Stage two, OLS estimates of economic well-being provide statistically significant indicators which vary across models, within each sample, and across samples. Here traditional human capital variables including education, age of the respondent, and employment status; household characteristics including number of adults and number of children in the household; a measure of how religious the respondent perceives herself to be; and a mental health index are used to estimate economic well-being.

Model I compared for poor and non-poor women indicates that for poor women number of adults in the household is positively related to household income, but not for non-poor women. Number of children in the household is positively related to income for poor and non-poor households. Not being employed is negatively related to income for non-poor women. Age of respondent is positively related to income for non-poor women. Education is positively related to income for poor and non-poor women. The Mills ratio (Lambda) for Model I is statistically significant and measures -.084 for poor women—it is not statistically significant for non-poor women.

Model II compared for poor and non-poor women indicates that the number of adults in the household is positively related to number of public assistance programs currently using. Whether or not the respondent is employed is positively related to number of types of public assistance currently used by poor and non-poor women. Education is negatively related to number of types of public assistance currently used for non-poor women. Higher levels of the mental health index are positively related to current use of public assistance for poor women. The Mills ratio for Model II is statistically significant and measures 0.314 for poor women and is not statistically significant for non-poor women.

Model III compared for poor and non-poor women indicates that not being employed is positively related to number of types of public assistance used in past five years for poor and non-poor women. Education is negatively related to use of public assistance in past five years for non-poor women. Higher levels of the incidence of mental health problems are positively related to use of public assistance at some time during past five years for poor women. Mills ratio for Model III is not statistically significant for poor or non-poor women.

Implications

Implications of this study for poverty policy are two-fold: 1] as a source of research-based knowledge on which effective application and operationalization of existing policies that promote and encourage marriage as a solution on which TANF and other government-provided assistance can be based; and 2] as research-based knowledge on which future policy decisions regarding effective implementation of Healthy Marriage Initiatives can be made.

References

Horn, W. (2002). Welfare reform reauthorization: Promoting self-sufficiency, protecting children, and strengthening marriage. *Poverty Research News*, *6*, 3-5.