

Senior Project
Department of Economics



**“Examining the Effects of Financial Aid
Types on College Graduation”**

Jessica Collins
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Advisors: *Francesco Renna*

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Introduction:

Thomas Jefferson once wrote that, "if the condition of man is to be progressively ameliorated, as we fondly hope and believe, education is to be the chief instrument in effecting it." Education has been an integral part of American growth and success since the founding, because it creates a more able and informed society. The sizable, positive effects of education have encouraged the proliferation of public schools, the opening of universities and the generosity of taxpayers and private organizations for the funding of both. It is therefore important that students become productive and knowledgeable individuals, so as not to waste the money of Americans.

"More than \$100 billion in federal education loans and \$10 billion in private student loans are originated each year¹." With tax dollars, donations and other sponsorship money at stake, it is important to know if these loans are worth the \$110 billion dollar expense. Loans, along with many other forms of financial aid are provided to subsidize education because higher levels of education foster a workforce that is higher-skilled and ultimately more productive. In the workplace, a college degree is specifically used as a sorting mechanism to discern who has the necessary skill sets. The proposed study focuses on financial aid types to determine which is most effective in increasing human capital by increasing the probability of graduation with a bachelor's degree.

Aid money is especially important to students, serving to lighten their financial burden of higher education. "For scholarships and money from private organizations, an estimated total of \$1.217 billion was awarded to 735,487 students, with an average award of \$1,655.72. Of this

¹ Kantrowitz, Mark. Student Loans. Accessed 5 April 2011. <http://www.finaid.org/loans/>

total, \$920 million was awarded to 638,974 undergraduate students²." These numbers only represent a small portion of the total financial aid funding. When loans, grants, subsidies and scholarship aid from the university itself are added in, students are relieved of much more of the cost of schooling. As financial aid decreases tuition cost, the existence of such funding and the type of funding available could change an individual's choices regarding education completion.

Financial aid has been found to encourage students to take that first step into higher education through enrollment. DesJardins, Ahlburg and McCall (2001) explain that universities use different financial aid packages to attract students, in hopes of increasing their annual rankings in the U.S. News and World Report. Because of this, financial aid's effect on college enrollment has been examined in great detail. Dynarski (2003) used the Social Security Student Benefit Program to examine a grant program's effect on enrollment. Using a difference-in-difference method, she determines that given the option of financial support for college, the recipient was more likely to enroll in higher education. When such support was lessened or eliminated, students were less likely to enroll, while those already in school were more likely to quit. Bound and Turner (2002) also examine enrollment. They hone in on the G.I. Bill, concluding that the institution of the G.I. Bill resulted in higher educational attainment of World War II veterans. This is only a small sampling of the studies that have found different forms of financial aid to encourage enrollment.

In addition to being a catalyst of enrollment, financial aid is also integral to a students' educational persistence. Past the first year, the unique effects of different forms of financial aid become apparent. DesJardins, Ahlburg and McCall (2001) analyzed student departure from college resulting from financial aid. Three thousand nine hundred seventy five (3,975) new high

² Kantrowitz, Mark. Facts about Private Sector Financial Aid. Accessed 5 April 2011.
<http://www.finaid.org/scholarships/factsheet.phtml>.

school students entering the University of Minnesota in 1986 were used to conduct the study. Using simulation, the authors determine the time until stop-outs (periods of no enrollment) of the students. They concluded that the type of aid is a key factor in student persistence. Grants and "free money" should encourage a student to remain in college longer, even fostering a sort of commitment to the university. DesJardins, Ahlburg and McCall (2001) explain their findings to be a result of the psychological value of financial aid (student commitment to education) in addition to its monetary value. While scholarships, work-study, on-campus employment and loans were found to decrease stop-out rates and encourage persistence by creating a bond between the student and the institution, grant aid was not significantly found to have this effect.

In other studies, grants have had a positive effect on educational persistence. Arendt (2008) uses a Danish grant system to determine what effect an increase in grant subsidies had on drop-out rates and graduation rates. He determined that an increase in grant aid decreases the student drop-out rate significantly but has little effect on graduation rates. He states that while his results are robust for drop-out rates, graduation rates may need to be examined more closely to find the effects of financial aid. Bettinger (2004) also looks into the effects of grants, using discontinuity to determine that Pell Grants do in fact encourage persistence in education. Both of these studies have found results divergent from those of DesJardins, Ahlburg and McCall. Both have been unable to conclude anything about graduation.

The proposed study will be modeled off of the study by DesJardins, Ahlburg and McCall. The sample in their study is very specific, making the results hard to apply to a broader group. This problem may be the reason why other studies found different results regarding grant aid in particular. The proposed study will use data from a random sample to produce results that could be applied to a larger population. Two populations will be considered :

- 1) All individuals 18 years old in the first year of each cohort
- 2) All 18 year olds who enrolled in higher education anytime between age 18 and 24

Also, very few studies have focused on financial aid's impact on graduation rates. DesJardins, Ahlburg and McCall focus on stop-outs, others targeting enrollment or persistence. The proposed study will provide insight into the college completion, building upon the idea that financial aid types affect educational outcomes differently.

Theoretical Framework

Although the basic theory and methodology of DesJardins, Ahlburg and McCall (2001) will be used for the proposed study, the theoretical model set up by Dynarski (2002) better fits this research. Dynarski (2002) states that schooling is a function of financial aid (either private or federal) and individual covariates. She then goes on to use a difference-in-difference estimator; however, her theoretical equation can also be manipulated to fit a probit estimation (as will be used in the proposed study).

The demand function will be defined as:

$$S_i = \alpha + \beta AID_i + \gamma X_i + \epsilon_i$$

In Dynarski's estimation, S_i represented the number of completed academic years. For this study, S_i represents probability of undergraduate degree completion (measured at age 24). In the study done by DesJardins, Ahlburg and McCall (2001), five measures of funding are used: Grants, Scholarships, Loans, Work-Study Aid and On-Campus Employment. However, some students get aid from their employers, even if they are only part-time employees (bankers, for example). A variable for employer aid will therefore be added. The variable for on-campus employment was found to increase the time to stop-outs; however, this variable is unsupported by the data for the proposed study. On-campus involvement will be measured by work-study aid

and other income will be controlled for by the income variables. βAID_i will therefore account for four major groups of financial aid: grants and scholarships, loans, work study aid and employer assistance³. Individual covariates will also be used to control for other characteristics that affect an individual's probability of graduating.

Previous studies have used the net price approach, subtracting aid amounts from the tuition numbers. DesJardins, Ahlburg and McCall argue against this approach, asserting that it dilutes the non-cash impacts of different types of aid. Instead of using the number values of aid and tuition, dummy variables describing aid and a dependent dummy variable describing graduation will be used. This will allow for determination of the total effects (cash and non-cash) of each type of aid.

Methodology

For both populations, data from the National Longitudinal Survey of Youth (NLSY) 1997, available online from the Bureau of Labor Statistics, was used to determine whether financial aid positively affects graduation probability. The data set provides the types of financial aid a person received and their resulting degree, if any, as well as other exogenous variables. It is important to note that many NLSY variables are preceded by "check" questions, resulting in some individuals not being observed for all variables. These observations are recoded as "Valid Missing" as that variable may not apply to them.

One individual covariate, age, was critical to the organization of data in the proposed study. In the first round of the survey, 1997, respondents were aged 13 to 19. In the most current round, 2009, individuals were aged 25-31. Because of the age ranges of respondents, data is available to create five groupings of individuals aged 18 to 24. The first group is 18 in

³ Those who do not receive aid will be explained by the intercept parameter estimate.

1998 (because of incomplete 1997 data) and turns 24 in 2004. The last group is 18 in 2002 and turns 24 in 2008 (due to incomplete 2009 data for financial aid). Age was used as a qualifier. Only if an individual was 18 in the beginning year for a given cohort were the other variables defined. In the population of enrolled students, the individual had to be both 18 and enrolled at any point between the ages of 18 to 24. Individual covariates are taken from the year the student is 18 as certain characteristics that affect graduation change over time (such as household income as the individual becomes independent from their parents). The highest degree achieved, denoting graduation from a bachelor's degree, is taken from the year in which the group is 24 to see if they did graduate a undergraduate degree by age 24.

Financial aid is grouped according to type of aid, modeled after DesJardins, Ahlburg and McCall's research. Each type of aid is expected to affect graduation to a different extent as was the case in their study.

The first category includes grants, scholarships and fellowships. These types of aid are monies that do not need to be paid back after the student joins the workforce. They are grouped together as the data does not provide separate data for each form of "free money". The student may therefore have more incentive to continue using the funding as they are not accruing debt to be repaid. DesJardins, Ahlburg and McCall found grants to not encourage persistence, but found scholarships to do the opposite. Bettinger argued that grants did increase persistence. Because grants and scholarships have been found to increase persistence, it would be expected that the variable would positively affect graduation probability.

The second grouping is government sponsored or private loans. This type of aid may do more for encouraging graduation because that individual will most likely need the degree to have

an income adequate to pay back loans and live. It is expected to increase graduation probability to the largest extent in the proposed model.

The third grouping is work-study. This type of aid is markedly different from other types of aid because the individual is working now for current returns. However, it could be argued that the individual may want to finish to make their extra efforts worth it. DesJardins, Ahlburg and McCall also argue that on-campus work encourages a psychological connection of the student to their school. Their study showed this work to encourage persistence. In the proposed study, work-study is expected to have a positive effect on graduation. Because working during school distracts the student from their studies, work-study is expected to have a smaller effect than would the first and second groups of aid.

The last grouping is employer aid. This form of aid is expected to increase graduation probability less as the individual already has a job. However, it will still increase probability because employers may give incentives such as higher pay for degree completion.

If a student was asked if they had received aid in one term, that student was not asked about aid again in that same year. To create academic year variables for aid, the by-term dummy variables were coded so that if a student answered yes to receiving grants in any term they would be coded with a value of 1 for receiving grants in that year. To then determine if that student received aid at any point during their undergraduate career, the years in which the student group was aged 18 through 24 were coded into one grant variable for that group. The same was done for loans, work study aid, employer aid and the covariate military status.

Most individual covariate variables will be used from the study done by DesJardins, Ahlburg and McCall. Their variables include: four race controls (Asian, Black, White and Hispanic), sex, disability, ACT score, high school rank, metropolitan area, out-of-state student,

age, general college, college of liberal arts, GPA, athlete and transfer credits. Some of these variables will be carried over, while others will be left out due to low numbers of observations and unavailable data. Dynarski (2002) included some covariates that are also applicable to the proposed study. These include family income, race, father's and mother's educational level, family size, gender and age. Because so few students responded to the question regarding their mother's or father's degree achievement, the variable was not used. The individual covariates that will be used in the proposed study are a mix of those in the two aforementioned studies. They are as follows: sex, race (Black or Hispanic), dependency status, household size, independent or parental income, military status and AFQT score⁴.

Many of the individual covariates were coded as dummies to control for a certain quality. Male was defined as 1 for those who were male and 0 for females. It is expected that being male would decrease one's probability of graduation because the data set is for recent years when women have been outnumbering men in higher education. Black was defined as those who answered the race question as black or biracial (with one race being black). Hispanic was coded in the same way denoting those who considered themselves Hispanic in the survey. Being either Black or Hispanic is expected to decrease the individual's chance of graduation. Both are controlling for characteristics that are not already accounted for in the model. Independent was defined as 1 for legally independent individuals and 0 for dependent students. Being an independent student is expected to decrease one's probability of graduation as there is more financial stress on the individual and need for current financial support. Military status was coded as 1 if the individual was in the military which controlled for military specific aid forms

⁴ Note: All expected signs and coding for variables apply to both the model describing all 18 year olds and the model describing 18 year olds who enroll in higher education.

such as ROTC or the Yellow Ribbon Program that would increase an individual's chance of graduation.

AFQT score was used instead of ACT score for two reasons. First, the data reported ACT score as a qualitative variable where the interviewee's score was broken into ranges. Second, ACT is only a measure of those who at least intended to go to college. As one of the hypotheses targets the graduation probability of all 18 year olds, a measure of ability that applies to a larger population was necessary. The AFQT score is created by the NLSY using their data collected for ASVAB tests. Typically, the AFQT is calculated by the Department of Defense for military purposes and is a regarded measure of ability. Individuals who participated in the survey were paid to take these tests to ensure a large sample size. This variable therefore accounts for the abilities of those who did not intend to go to college in addition to those who did. It is important to mention that those with higher ability may be more likely to receive financial aid which may introduce multicollinearity. Higher AFQT score is expected to increase graduation probability.

Income was a particularly important variable because its inclusion eliminates potential bias. Those who do not receive aid could very possibly not need aid because of their parents income or their own income. If income was not included, those who did not receive financial aid may be seen to have a similar or higher graduation rate because of earnings. To control for this phenomenon, income is taken for the year the individual is 18. This will control for parental and personal income in both the group that does not receive financial aid and the group that does. Higher income for either group is expected to increase graduation probability.

The dependent variable, degree status, was a qualitative variable. To convert this to a quantitative value, individuals were coded as 1 if they had achieved a bachelor's degree or higher

and 0 if they had not completed a bachelor's degree. Household size, an independent variable was also qualitative. Being a part of a larger household is expected to decrease one's chance of graduating.

Descriptive Statistics are available for each variable in Appendix A. Table 1 denotes all 18 year olds while table 2 describes all 18 year olds that have enrolled in college.

Results

The first set of regressions were run on all individuals who were 18 in the first year of each cohort while the second set was narrowed to individuals who were 18 in the first year of each cohort and also had enrolled in higher education between the ages of 18 and 24. Two probit models were estimated per set of regressions. One model accounted for independent students, while the other accounted for dependent students. The two forms of income were regressed separately because independent students have different income allocation than dependent students (who receive at least 50% of their support from their parents). Linear probability models were also estimated to check robustness of the marginal effects and are also available in the result tables.

In both the dependent and independent models, all four forms of financial aid decreased the probability of graduation for all 18 year olds. Results for this model are available in Appendix B.

Grants decreased the probability of graduating by 1.5% in the dependent model and 1.4% in the independent model. In DesJardins, Ahlburg and McCall's study they conclude that grants are used to lure students to schools, playing an instrumental role in enrollment. However, after enrollment, grants do little to keep the student involved in their academic experience. Grants are also "free money" from an institution that the student has no personal responsibility to

or involvement with. Therefore, grants may not foster the attachment between a student and university that is necessary to finish a degree. Grants may in fact discourage graduation as they are not intended to encourage persistence. However, the variable may need to be re-examined as the parameter estimate was not significant at the 10% level in either model.

Loans also decreased the probability of graduating (6.5% and 6.7%). This parameter estimate was significant at the 5% level in both models. Although loans did not have the expected effect on graduation probability, the coefficient makes sense. Loans, especially at high interest rates, can add up over time. The accrual of loans could discourage a person from completing a degree because their discount rate could change with higher debt. The result could be an outcome of just private loans. However, because the loan variable includes both private and government loans, the effect is hard to piece out. In the future, studies should look at private loans separately from government sponsored loans.

Work-Study was not significant in either model and decreased the chance of graduating by 5.3% in the dependent model and 2.9% in the independent model. These results may be insignificant because of a low number of observations. In the future, studies which seek to look into work-study aid should use a data set with a larger population of students receiving this form of aid.

Employer aid decreased the probability of graduating by 55.6% and 55.2% . It was significant at the 1% level in both models. The decrease in probability is rational for two reasons. First, those who are getting employer aid are most likely working full-time for that employer (i.e. personal bankers, retail associates etc). Therefore, the individual is already working a full-time job and schooling may hold less incentive for him/her. Also, working

demands attention and time. The commitment to work takes time and effort away from schoolwork which can decrease graduation probability.

Individual Covariates did not all yield the expected results. Being Black or Hispanic actually increased the individual's graduation probability. This could be due to the fact that when ability and other individual factors are accounted for, those who are Black or Hispanic have little difference from those who are not Black or Hispanic. In both models the increase in graduation probability was small (4.1% and .07% respectively for Blacks and .3% and 1.3% for Hispanics). A larger household size actually increased the probability of graduation. In the dependent model, for every additional person in the family, the individual was 2.6% and 2.4% more likely to graduate. These results may be due to different familial and environmental factors. To further understand these results, future studies should look into parental inputs into their children's education and how that input changes with more kids.

When the population was changed to individuals who had enrolled in higher education, the results were very similar. These results are available in Appendix C. All four forms of financial aid were negative, with the marginal effects being within 2% of the regressions done on all 18 year olds. This may be due to the nature of the data collected. Those who receive the forms of financial aid used would be those who intend to or do enroll in school. Therefore, the more specific population only lost 20 observations.

Conclusions

Different forms of financial aid affect graduation probability. However, it is hard to determine that the effects are markedly different between aid forms given the study's results. It is also difficult to determine which form of aid is most effective as none were found to have a positive effect on graduation. The results support the assertions regarding the effects of grants

and "free money" made by DesJardins, Ahlburg and McCall. The negative results regarding the other forms of aid should be looked into further as they are unique and counter-intuitive.

Financial aid may be meant to encourage enrollment and the first couple years of schooling (as grants are said to do). If this is the case, some forms of financial aid should be offered that aim at encouraging graduation from a bachelor's degree to increase human capital. The results should therefore be further examined to determine if financial aid does in fact decrease an individual's probability of graduation. If all financial aid types are not found to decrease the probability of graduating in future studies, then funding may need to be reallocated or restructured to be used in the program which increases probability the most.

The financial aid variables left much room for future improvement. Many of the groupings should be broken into separate categories (such as loans and grants and scholarships). Doing this may provide more information regarding the types of financial aid. Future studies should build upon this research by also including a variable that accounts for the amount of each type of aid received. The amount would give more explanation to the model in addition to the dummy variables for aid. For example, a person who received enough aid to have tuition completely covered for four years would have a better chance of graduating than someone who received a portion of their tuition for one semester. Also, it would be prudent to take tuition cost into account. A \$5,000.00 scholarship means a lot more to a student who's tuition is only \$6,000.00 than it would to a student who's tuition is over \$30,000.00. This would put financial aid amounts would be put into perspective. To do this, a different data set would have to be used because of limited tuition data.

The results for some of the individual covariates were insignificant. These results could point to omitted variable bias or imperfections in the data set. Other measures were used in

previous studies such as high school rank and geographic information that could make the models more complete. Future studies should focus on including more variables or refining the current covariates to avoid omitted variable bias.

Appendix A - Descriptive Statistics

Table 1: Descriptive Statistics (all 18 year olds)

Variable Name	Variable Type	Number of Observations	Mean	Standard Deviation	Minimum Maximum
Degree	Binary	3541	.4807	.4997	Min = 0 Max=1
Grants	Binary	4491	.2721	.4451	Min = 0 Max=1
Loans	Binary	4491	.1345	.3412	Min = 0 Max=1
Work-Study	Binary	4491	.0174	.1307	Min = 0 Max=1
Employer Aid	Binary	4491	.0073	.0854	Min = 0 Max=1
Military	Binary	7536	.0015	.0382	Min = 0 Max=1
AFQT	Quantitative	7093	45317.19	29173.91	Min = 0 Max=100,000
Independent	Binary	7635	.5963	.4907	Min = 0 Max=1
Parent_income	Quantitative	5136	11371.44	25058.19	Min = 0 Max=237,822
Independent_income	Quantitative	5262	35860.49	54750.37	Min = 0 Max=425,586
Hispanic	Binary	8984	.2116	.4085	Min = 0 Max=1
Black	Binary	8984	.0092	.0957	Min = 0 Max=1
Household Size	Quantitative	7634	4.2063	1.6703	Min = 1 Max=15
Male	Binary	8984	.5119	.4999	Min = 0 Max=1

Note: all variables are retrieved from the NLSY page from the Bureau of Labor Statistics

[1] <http://www.bls.gov/nls/nlsy97.htm>

Table 2: Descriptive Statistics (18 year olds who enrolled in higher education)

Variable Name	Variable Type	Number of Observations	Mean	Standard Deviation	Minimum Maximum
Degree	Binary	2252	.7540	.4308	Min = 0 Max=1
Grants	Binary	4287	.2741	.4461	Min = 0 Max=1
Loans	Binary	4287	.1346	.3413	Min = 0 Max=1
Work-Study	Binary	4287	.0178	.1319	Min = 0 Max=1
Employer Aid	Binary	4287	.0058	.0762	Min = 0 Max=1
Military	Binary	4292	.0023	.0482	Min = 0 Max=1
AFQT	Quantitative	7093	45317.19	29173.91	Min = 0 Max=100,000
Independent	Binary	4320	.5641	.4959	Min = 0 Max=1
Parent_income	Quantitative	3049	14477.96	29958.63	Min = 0 Max=237,822
Independent_income	Quantitative	3072	43266.42	62493.24	Min = 0 Max=425,586
Hispanic	Binary	8984	.2116	.4085	Min = 0 Max=1
Black	Binary	8984	.0092	.0957	Min = 0 Max=1
Household Size	Quantitative	4320	4.1051	1.5056	Min = 1 Max=13
Male	Binary	8984	.5119	.4999	Min = 0 Max=1

Note: all variables are retrieved from the NLSY page from the Bureau of Labor Statistics

[1] <http://www.bls.gov/nls/nlsy97.htm>

Appendix B - Regression Results (all 18 year olds)*Table 3: Primary Variable Regression Results (all 18 year olds)*

Variable Name	Variable Type	OLS (dependent)	Probit (dependent)	OLS (independent)	Probit (independent)
Intercept		.476 (9.58***)	.726 (1.22)	.493 (10.25***)	.723 (1.40)
Grants	Binary	-.012 (0.49)	-.22 -.015 (0.51)	-.013 (.54)	-.261 -.014 (0.46)
Loans	Binary	-.056 (1.90**)	-.046 -.065 (1.87**)	-.055 (1.86**)	-.067 (1.89**)
Workstudy	Binary	-.020 (0.25)	-.195 -.053 (0.59)	-.045 (0.59)	-.199 -.029 (0.31)
Employeraid	Binary	-.548 (3.64***)	-.158 -.556 (2.71***)	-.549 (3.64***)	-.087 -.552 (2.71***)
Number of observations		1454	1454	1461	1461
f-value		8.57***	87.99***	8.12***	92.19***

*significant at .10 **significant at .05 ***significant at .01

Note: marginal effects are denoted on the top line of probit estimation results with t-values and parameter estimates being reported directly underneath.

Table 4: Individual Covariate Regression Results

Variable Name	Variable Type	OLS (dependent)	Probit (dependent)	OLS (independent)	Probit (independent)
military	Binary	.131 (0.47)	.160 (0.41)	.171 (0.75)	.104 (0.22)
AFQT	Quantitative	.00000354 (7.86***)	.481 .00000396 (1.43)	.309 .00000343 (7.62***)	.00000410 (1.46)
independent	Binary	.042 (1.43)	.033 (1.00)	.024 (0.91)	.047 (1.28)
income	Quantitative	.099 .000000028 (0.59)	.000000029 (0.64)	.140 -.000000012 (0.07)	.000000193 (0.22)
black	Binary	.000000088 -.002 (0.02)	.000000088 .041 (0.39)	.000000576 .031 (0.37)	.000000708 (.01)
Hispanic	Binary	.002 .016 (0.46)	.003 (0.07)	.005 (0.15)	.013 (0.33)
Household size	Quantitative	.041 .019 (2.33**)	.026 (2.64***)	.021 (2.59***)	.024 (2.43***)
male	Binary	.072 -.030 (1.43)	.078 -.033 (1.29)	-.030 (1.42)	-.033 (1.27)
			-.099		-.099

Appendix C- Regression Results (18 year olds enrolled)*Table 5: Primary Variable Regression Results*

Variable Name	Variable Type	OLS (dependent)	Probit (dependent)	OLS (independent)	Probit (independent)
Intercept		.514 (10.27***)	.739 (0.85)	.527 (10.90***)	.743 (0.72)
Grants	Binary	-.017 (0.70)	-.164 -.020 (0.68)	-.017 (0.71)	-.134 -.020 (0.67)
Loans	Binary	-.053 (1.81*)	-.062 -.062 (1.79*)	-.050 (1.73*)	-.059 (1.72*)
Workstudy	Binary	-.025 (0.33)	-.190 -.035 (0.38)	-.050 (0.67)	-.182 -.060 (0.71)
Employeraid	Binary	-.509 (2.88***)	-.477 -.477 (2.22**)	-.511 (2.89***)	-.467 (2.17**)
Number of observations		1435	1435	1443	1443
f-value		6.67***	73.50***	6.45***	71.82***

*significant at .10 **significant at .05 ***significant at .01

Table 6: Individual Covariate Regression Results

Variable Name	Variable Type	OLS (dependent)	Probit (dependent)	OLS (independent)	Probit (independent)
military	Binary	.126 (0.47)	.108 (0.23)	.169 (0.75)	.154 (0.27)
AFQT	Quantitative	.00000315 (6.96***)	.033 .00000365 (1.34)	.00000302 (6.67***)	.841 .00000348 (1.46)
independent	Binary	.026 (0.89)	.030 (0.83)	.018 (0.70)	.026 (0.79)
income	Quantitative	.000000024 (0.05)	.092 -0.000000080 (0.73)	.000000023 (0.12)	.081 .0000000157 (0.67)
black	Binary	-.014 (0.17)	-.017 (0.17)	.021 (0.25)	.022 (0.21)
Hispanic	Binary	.000712 (0.02)	-.051 -0.0025 (0.06)	-.009 (0.25)	-.012 (0.29)
Household size	Quantitative	.021 (2.64**)	-.0078 .027 (2.72***)	.022 (2.74***)	-.036 .028 (2.78***)
male	Binary	-.027 (1.31)	.083 -0.030 (1.17)	-.030 (1.44)	-.033 (1.32)
			-.092		-.103

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