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The Fed's Flow of Funds (FOF) report shows that household sector net worth is approximately $60 trillion. This wealth in concentrated in households headed by people aged 50 or older. After all, for most people it takes time to build up wealth in the form of stocks, bonds, real estate and other tangible assets. The Flow of Funds does not provide data on another asset class, one that is far greater in value. That is human capital. Human capital can be thought of as the value today of future earnings. While there are no official measurements of human capital, it can be estimated by looking at current wages for workers in various age groups, and then making assumptions about real wage growth, retirement age and appropriate discount rates. Using age group wage data from the Survey of Consumer Finances and a real discount rate of 3%, I estimate the value of human capital for people currently working today to be approximately $200 trillion, more than three times the size of measured household net worth.

Naturally, human capital is greatest for younger people since they have more years of earnings ahead of them. If you add together human capital and FOF capital, the resulting measure of total net worth is much more evenly distributed across age groups. For example, the median FOF net worth for 25 year-olds is less than $50,000, but median human capital is approximately $400,000. Meanwhile, median FOF net worth for 65 year-olds is approximately $200,000 while median human capital is close to zero (I am not counting pensions or Social Security income as part of human capital).

Increases in FOF net worth arise through saving out of current income and returns on existing assets. Increases in human capital arise through training, education and development of experience and skills. For several decades, economists have been interested in measuring the return on schooling. While there are difficult measurement problems, the consensus opinion appears to be that the returns are high, on the order of 8 to 10%. That is, one year of additional education had resulted in an average increase of lifetime earnings by 8 to 10%. The research suggests that this number is trending higher over time. Naturally, these are aggregate estimates and would vary in a particular instance, depending on the quality of the school, nature of the program and characteristics of the student.

To translate this finding into a return on investment in dollars (ROI), you need to assess two things: the foregone income and the cost per year of the schooling. College tuition and fees are rising much more rapidly than the overall cost of living and the quantity of student loans has risen sharply in recent years. It is estimated that student loan balances now exceed $1 trillion. Many young people leave school with a large debt burden. If the degree or training does lead to a large improvement in employment prospects, as the research shows is true on average, then paying off the debt is entirely feasible. But for those graduates who do not find a great job, the debt burden can be a killer. Also, the prospect of large debt can detour students with great potential but limited financial resources.

Issues with Student Loans

Economists like to argue that consumers make rational investment decisions. In the case of student loans, rational behavior would have the student forecast future income with and without a particular education program and then enter into student loans only where the present value of the incremental wages is greater than the cost of the schooling, including foregone income. But this is not an easy calculation to make for a number of reasons. For one, even conditional on completing a particular degree, the variability of earnings across individuals is large and growing. Another factor is that the probability of completing a degree program depends on many factors, including talent, commitment and unforeseeable future circumstances. The probability of completing a degree appears to be much lower for for-profit private schools than it is for public or non-for-profit private schools. While individual students may have a good sense of their own talent and commitment, their ability to accurately predict future income is probably pretty low.

Another issue with student loans is that they are not extinguishable through personal bankruptcy. It seems to me that these factors can combine to detour promising students from pursuing their desired education programs.

Shared Income

The Lumni Corporation (http://www.lumni.net) has a partial solution to this problem. Lumni specializes in education finance, but they are not lenders in the traditional sense. Instead of a loan, students agree to pay a portion of their future income stream in return for assistance in financing the costs of education.

Lumni has taken the return on education research that the economists have done and have stepped it up a notch. Lumni researchers estimate equations that predict typical student income paths for different degree programs and career objectives. They issue securities that pool policies for many students. While the income path for a particular student cannot be predicted with any degree of certainty, the performance of large pool of student incomes is fairly predictable.

Naturally, Lumni is primarily interested in students and programs for which there is a high likelihood of solid income. Presently, they are focusing on engineering students because the distribution of income for trained engineers is attractive. The mean income is high and the variability about the mean is low. Presumably, the program would also work for other technical fields like computer programming, math or science. It would not work so well for fields that are less remunerative.