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Self-esteem and earnings

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ABSTRACT

Recent research in economics suggests a positive association between self-esteem and earnings. Using the National Longitudinal Survey of Youth (NLSY), which administered the Rosenberg Self-Esteem Scale during its 1980 and 1987 interviews, I provide further evidence for the existence of a self-esteem premium by exploiting variation in these measures between the 2 years. I show that self-esteem in 1980 has a sizeable impact on wages 8 years later, controlling for a wide set of individual characteristics and addressing problems of omitted variable bias and reverse causality. The instrumental variables estimate of the effect of self-esteem in 1987 on earnings is about two times greater than previous OLS estimates would imply. The main explanation for this discrepancy is that the previous OLS estimates are biased downward as a result of measurement error in the reported self-esteem measure.

1. Introduction

Recent research in economics provides evidence that non-cognitive skills are important determinants of earnings (Bowles, Gintis, & Osborne, 2001; Heckman, Stixrud, & Urzua, 2006; Lindqvist & Roine, 2011). A relevant non-cognitive skill is self-esteem, which is usually conceived of as the perception that individuals have about their own ability.[1] From the theoretical point of view, the basic mechanism by which self-esteem may increase earnings is very simple. Ability and effort are complements, so that, under the premise that individuals are uncertain about their own ability, higher self-esteem causes greater effort and earnings (Benabou & Tirole, 2002). The effect of self-esteem on earnings can be persistent. As recent theoretical works show, rational agents may find it convenient to hold incorrect beliefs about their own ability even in the long-run (Benabou & Tirole, 2002; Comte & Postlewaite, 2004; Santos Pinto & Sobel, 2005; see also Costa & McCrae, 1988 in the psychology literature.).

In this paper, using the National Longitudinal Survey of Youths (NLSY), I investigate the relationship between self-esteem and earnings. The NLSY administered the Rosenberg Self-Esteem Scale during its 1980 and 1987 interviews. This scale,

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[1] Although self-esteem is not properly a skill and is not entirely non-cognitive, as in the economic literature, I refer to self-esteem as a non-cognitive skill. The use of the term "skill" stands for the fact that it can be, at least in part, accumulated or manipulated as any other skill. This makes sensible the analysis of a causal effect of self-esteem on earnings. The use of the term non-cognitive stands for the fact that unlike other cognitive skills, self-esteem has an emotional component.

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designed for adolescents and adults, is composed of ten questions that capture a measure of approval or disapproval toward oneself. The scale has been extensively used in psychology and recently also in economics (Bowles et al., 2001; Heckman et al., 2006). Importantly, for most of the sample there is considerable variation between the two results for self-esteem in 1980 and 1987 (SE in 1987 and SE in 1980 hereafter).

I first discuss the extent to which ordinary least squared (OLS) estimates of the effect of SE in 1980 and 1987 on the log wage observations that come from 1988 can be interpreted as the causal effect of self-esteem on earnings. As I focus on wages in 1988, the second measure of SE in 1987 should be more correlated to "current" self-esteem, i.e. the self-esteem of an individual at the time in which he exerts his on-the-job effort.[2] In general, a positive OLS correlation between self-esteem and earnings is not surprising given that individual labour market outcomes (e.g. earnings, promotions) are likely to impact the self-image of a worker. Moreover, a positive correlation between self-esteem and earnings could reflect the fact that the former is systematically correlated to unobservable characteristics which determine earnings, such as unobserved ability. Both these effects cast doubt on the existence of a causal impact of self-esteem on earnings. Therefore, it is not clear if the existing empirical studies finding a positive effect of self-esteem in simple OLS wage regressions provide evidence of a causal relationship. In the literature there are several papers studying the connection between self-esteem and individual labor market outcomes. Most notably, Goldsmith, Veum, and Darity (1997) find a positive impact of psychological capital measured by "one's locus of control" on wages. Murnane, Willett, Braatz, and Duhaldeborde (2001) find that cognitive skills and self-esteem have different roles in explaining wage gaps between white, black and hispanic males. Graham, Eggers, and Sukhtankar (2004) find that happiness – determined by self-esteem and optimism – positively affects income, especially for those at lower levels of income. Baumeister et al. (2006) discuss the negative effects of boosting self-esteem on individual performance and point out that the positive correlation between earnings and self-esteem may reflect the fact that higher earnings cause a positive self-esteem. Waddell (2006) uses the National Longitudinal Study of the High School Class of 1972 and finds that individuals with poor attitude and self-esteem complete fewer years of post-secondary education and obtain lower earnings. Trzesniewski et al. (2006) report that low self-esteem during adolescence leads to poor mental and physical health and higher levels of criminal behaviour.

The question of whether the association between self-esteem and earnings is simply a correlation or a causal relationship is of practical and theoretical relevance. Investigation of whether and how strongly higher self-esteem translates into higher earnings can inform parents and teachers about the importance of focusing on the development of this behavioural trait in their children. If self-esteem is at least as important as verbal skills in contributing to earnings, then educational institutions should also be evaluated on the basis of their development of such non-cognitive skills. Understanding whether the relationship between self-esteem and earnings is causal is important because, if they are simply correlated and there is no causal effect, manipulating self-esteem does not translate into higher wages. Also, a significant impact of self-esteem on earnings might help to explain a part of the large residual wage inequality, i.e. wage dispersion among workers with the same education and experience.

In this paper, as a result of the strategies adopted in the empirical analysis, the problems of reverse causality and omitted variables are minimized. As for the effect of SE in 1980 on wages, SE is rendered largely exogenous. For example, I consider individuals born after 1961 for whom past labour market experience or schooling could not directly affect the measure of SE in 1980. As I shall explain, for these individuals SE in 1980 cannot be the consequence of past labour market experience or of schooling choices. Moreover, I include in the regressions many characteristics having an effect on wages (e.g. achievement test scores, age, and mother's and father's schooling) which might be correlated to self-esteem. To understand the channels through which self-esteem matters I also include several variables that are the result of individual choices in years subsequent to 1980 (e.g. type of industry and occupation in which individuals are employed and education). Results suggest that SE in 1980 has a sizeable impact on wages and approximately half of this effect is mediated occupational choices and educational attainment.

To further understand the sources of the self-esteem premium and to allow for contemporaneous effects of SE in 1980 and in 1987 on wages, I include both the self-esteem measures in the OLS wage regression. It appears that SE in 1980 and in 1987 both have a sizeable effect on wages in 1988. If both SE measures were exogenous, the coefficients on these two variables could be interpreted as causal effects. However, while SE in 1980 is plausibly exogenous in a regression on wages 8 years later, SE in 1987 is not. Hence, the leading explanation for the presence of a contemporaneous effect in measures of SE in both 1980 and 1987 is the following. After conditioning on all the observable characteristics, the coefficient on SE in 1987 is positive but biased because SE in 1987 has an effective impact on wages and is endogenous in the wage regression. The coefficient on SE in 1980 is still positive because SE in 1980 is correlated to SE in 1987 that impacts on wages. In this case, under the assumption that SE in 1980 is correlated to the exogenous part of SE in 1987, SE in 1980 can be used as an instrumental variable to extrapolate an exogenous variation for SE in 1987. Results suggest a large impact of SE in 1987. Taken together the results imply a large direct effect of self-esteem on earnings.

The paper is structured as follows. In the next section I discuss the empirical strategy. In Section 3 I describe the data and present the results. The last section concludes.

[2] I do not consider log wage observations that come from 1987 so as to avoid that SE in 1987 is influenced by wages.