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Self-esteem, education, and wages revisited

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ABSTRACT

Personality undoubtedly plays a role in determining educational attainment and labor market outcomes. We investigate the role of self-esteem in determining wages directly and indirectly via education. We use data from the 1979 wave of the National Longitudinal Study of Youth (NLSY79) to estimate a three equation simultaneous equation model that treats self-esteem, educational attainment, and real wages as endogenous. We find that, while self-esteem has a positive and significant impact on wages indirectly via education, it does not significantly affect wages directly once we control for locus of control. We find that the indirect effect of self-esteem comprises upwards of 80% of the total effect of self-esteem on wages after 1980. Additionally, we find that wages and education both affect self-esteem. We discuss gender differences in the relationships between wages, education, and self-esteem and conclude that females experience a higher rate of return on education than males, and self-esteem is a stronger determinant of educational attainment for males than females.

1. Introduction

Inequality among individuals has long been a topic of interest in economics. Economic theory suggests that wages are linked to productivity. More productive workers are more valuable to an employer and are compensated accordingly, while less productive employees earn less. Human capital variables such as education, experience, and tenure are well-established determinants of productivity and wages. However, a large portion of the variance in wages across individuals is left unexplained by these traditional human capital variables. As Bowles, Gintis, and Osborne (2001) write, "apparently similar individuals receive quite different earnings: a person's age, years of schooling, years of labor market experience, parents' level of schooling, occupation, and income tell us surprisingly little about the individuals' earnings. In standard earnings equations for individuals of the same race and sex in the United States, between two-thirds and four-fifths of the variance of the natural logarithm of hourly wages or of annual earnings is unexplained" (p. 1137). It is clear that factors other than traditional human capital variables play a role in determining wages.

Broadly speaking, one such factor could be personality. Bowles et al. (2001) suggest that motivation is endogenous and personality traits may determine how an employee responds with his or her level of effort to incentives provided by an employer. Operating within this framework, Nyhus and Pons (2004) found that a variety of personality traits influence labor

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market outcomes. Additionally, empirical research from Heckman, Stixrud, and Urzua (2006), Duckworth et al. (2007), Osborne-Groves (2005), and a host of others indicates that a range of other non-cognitive factors may predict earnings. Within the subset of personality variables, self-esteem has garnered attention as a variable that may help explain inequality across individuals.

Rosenberg et al. (1995) consider self-esteem to be a general attitude towards oneself, and Rosenberg (1965) characterizes individuals with high self-esteem as individuals that respect themselves, acknowledge their own limitations, and expect improvement and growth. According to Drago (2011), there is simple theoretical justification for expecting self-esteem to affect wages. The author writes, "Ability and effort are complements, so that, under the premise that individuals are uncertain about their own ability, higher self-esteem causes higher effort and earnings (Benabou & Tirole, 2002)". Additionally, various studies have found or noted positive relationships between self-esteem and variables that may be related to productivity. Sommer and Baumeister (2002) found that individuals with high self-esteem generally persist more on difficult tasks than individuals with low self-esteem, while individuals with low self-esteem possess fewer resources for dealing with rejection. Sandelands, Brockner, and Glynn (1988) found that individuals with high self-esteem adjusted their level of persistence more than individuals with low self-esteem when they learned that persistence was not an optimal strategy. Bedeian (1977) found that individuals with high self-esteem aspire to more prestigious careers than individuals with low self-esteem, and Ellis and Taylor (1983) found that individuals with high self-esteem received better interview evaluations and utilized more efficient job search methods than individuals with low self-esteem. Judge, Erez, and Bono (1998) and Judge and Bono (2001) both found a positive relationship between self-esteem and job performance, while Furr (2005) found that self-esteem is positively associated with independence and achievement-oriented traits. In a literature review, Baumeister et al. (2003) noted that self-esteem is positively related to taking initiative and happiness. Additionally, from a theoretical perspective, Tafarodi and Swann (2001) hypothesize that self-confidence is one of the two major components of self-esteem, and Rosenberg, Schooler, and Schoenbach (1989) suggest that individuals with low self-esteem may be limited by their low self-opinions (self-consistency theory).

All of the above findings suggest that self-esteem may determine important economic outcomes by enhancing productivity, and there is a body of empirical literature that supports this idea. Wang et al. (1999), Feinstein (2000), Murnane et al. (2001), Waddell (2006), and Drago (2011) all concluded that self-esteem is a significant predictor of later wages, and Wang et al. (1999) and Waddell (2006) found that self-esteem is a significant predictor of educational attainment. However, self-esteem may also be partially determined by the outcomes that some claim it predicts. Rosenberg et al. (1989) provide theoretical justification for this idea by explaining that self-esteem is a product of reflected appraisals (an individual's perception of what others think of that individual), social comparison (an individual's perception of how "good" that individual is in comparison to others), and self-attribution (an individual's perception of how successful their effort was and why). More concretely, Bachman and O'Malley (1977) noted that educational and occupational outcomes "represent important sources of direct feedback about the self, particularly for adolescents and young adults" (p. 366). Empirically, Bachman and O'Malley (1977) and Goldsmith, Veum, and William Darity (1996) found that occupational attainment impacts self-esteem, Goldsmith, Veum, and William Darity (1997) found that wages and self-esteem are jointly determined, and Rosenberg et al. (1989), Filozof et al. (1998), and Ross and Broh (2000) all concluded that academic variables impact self-esteem.

Another personality variable that may be related to self-esteem is locus of control. Locus of control measures "the causal relationship between one's own behavior and its consequences" Piatek and Pinger (2010, p. 5), where an individual with an internal locus of control believes that he or she has control of various outcomes, while an individual with an external locus of control believes that other factors, such as fate or luck, determine various outcomes. Like self-esteem, theory and empirical evidence both suggest that locus of control may impact wages and educational attainment (Coleman & DeLeire, 2003; Flossmann, Piatek, & Wichert, 2007; Judge & Hurst, 2007; Osborne-Groves, 2005; Ross & Broh, 2000; Wang et al., 1999).

The purpose of this paper is to combine the literature that examines the relationship between self-esteem and educational attainment with the literature that examines the relationship between self-esteem and wages. We accomplish this by investigating the role of self-esteem in determining wages, both directly and indirectly via education. Additionally, we allow wages, educational attainment, and self-esteem to simultaneously determine one another, which addresses the problem of simultaneity bias. Using data from the 1979 wave of the National Longitudinal Survey of Youth (NLSY79), we find that self-esteem has a positive and significant indirect effect on wages. Interestingly, we find that the direct effect of self-esteem is insignificant once we control for locus of control. This suggests that previous studies that have examined the relationship between self-esteem and wages have understated the full effect of self-esteem on wages by ignoring this substantial indirect effect. This may hold true for other studies that have investigated the returns to personality. Additionally, we analyze gender differences in the relationships between self-esteem, education, and wages. We find that self-esteem is a better direct predictor of educational attainment for males than females. We also find that, despite the fact that females obtain more education than males and receive a higher rate of return on education than males, labor market discrimination against females cannot be ruled out.

The structure of the paper is as follows. First, we introduce our empirical model. Second, we discuss the data and estimation techniques. Third, we present our results in three contexts (direct relationship, indirect relationship, gender differences). Fourth, we conclude and introduce ideas for further study.