

PERSONALITY, LIFETIME EARNINGS, AND RETIREMENT WEALTH

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Evidence from adolescence and young adulthood shows that schooling has effects on economic outcomes that go beyond its impact on IQ or other measures of cognitive abilities, and that these effects appear to be mediated by other measurable traits (Heckman, Stixrud, and Uzua, 2006). Do these traits and their effects have a durable impact on economic success over a lifetime? Given the wide observed variation in retirement wealth conditional on lifetime earnings (Venti and Wise, 1998), do similar non-cognitive traits influence wealth accumulation? Given the scarcity of true longitudinal data linking early life cognitive and non-cognitive traits to well-measured lifetime outcomes (though see Judge, et al., 1999), we explore these questions by looking for associations between lifetime outcomes and psychological measures taken later in life. Given the evidence on causal connections early in life, the presence of an association late in life would tend to support the view that personality has a durable impact on economic success and that human capital investments in non-cognitive skills have real value (Cunha and Heckman, 2007).

We focus on personality traits that are relatively stable patterns of thinking, feeling, and acting. In psychology, personality is generally considered to be comprised of five broad families of traits: extroversion, agreeableness, openness, conscientiousness, and neuroticism (or its converse, emotional stability). Of the five families of traits in the Big Five taxonomy of personality, conscientiousness is the best predictor of health outcomes (Friedman et al., 1993; Hampson, et al., 2007; Roberts et al., 2007), academic outcomes (Poropat, 2009), and divorce (Roberts et al., 2007). Conscientiousness refers to a family of personality traits including industriousness, dependability, and organization. Emotional stability has also been found to be related to better outcomes. Personality as measured by the Big Five is not immutable, but within-person correlations tend to be about as high over fairly long periods of observation as are cognitive abilities (Roberts and DelVecchio, 2000).

The Health and Retirement Study (HRS) presents an unparalleled opportunity to study the association of personality with lifetime economic success. The linkage of HRS survey data with administrative data from the Social Security Administration allows us to look at well-measured lifetime earnings rather than self-reported outcomes in a single year or short period. The wealth data in HRS allow us to look at retirement savings conditional on lifetime earnings. Together, these measures represent the most essential aspects of lifetime economic success. The HRS also measures cognitive abilities and educational attainment, allowing us to control for these and other determinants of economic success.

DATA AND METHODS

To be included in our sample, a respondent had to complete the self-administered questionnaire with personality measures in either 2006 or 2008, and to be included in the linked Social Security administrative records. Personality was measured using a 26-item questionnaire developed for the Midlife Development Inventory (Lachman & Bertrand, 2001). HRS participants used a 4-point rating scale to endorse 26 adjectives corresponding to Big Five personality traits of conscientiousness, emotional stability, agreeableness, extraversion, and openness to experience (Clarke, et al., 2008). A total of 14,500 respondents completed the questionnaires.

Lifetime earnings come from the linked Social Security records available for 20,777 respondents (10,731 of whom survived to 2006 and provided a personality questionnaire). To construct lifetime earnings we began with the average indexed monthly earnings (AIME) calculated for each individual in the linked records. AIME adjusts nominal earnings in past years to constant

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dollars in the year the individual turned 60 using SSA's wage index. We then further adjusted all AIME values to constant 2006 dollars using the Consumer Price Index and multiplied by (12x35=420) to get lifetime total earnings. Note that this is lifetime Social Security earnings, not total earnings. Earnings above the Social Security taxable maximum are not included, and only the 35 highest earning years are included. This truncates somewhat the highly skewed distribution of earnings.

Wealth in the HRS is measured at the level of the household, which means that for couples we cannot assign wealth to any one individual and the appropriate unit of analysis is the household. We, therefore, analyze couples separately from single-person households and are able to examine effects of both personalities in the couple.

In all regression analyses, we controlled for birth year, sex, ethnicity, HRS entry cohort, years of education, and four cognitive measures: episodic memory (sum of immediate and delayed word recall), mental status (backward counting task), numeracy, and vocabulary. We took the first observation in the panel on each of these cognitive measures to minimize the impact of age-related decline.

RESULTS

Lifetime Earnings. More conscientious and emotionally stable adults have higher lifetime earnings. A one standard deviation increase in conscientiousness is associated with a 9% increase in lifetime earnings. A one standard deviation increase in emotional stability is associated with a 5% increase in lifetime earnings. Both annual earnings and years of work show these effects, with the effect on annual earnings being the primary influence on lifetime earnings. These effects are similar in magnitude to the effects of measured cognitive abilities.

Interaction Effects. Conscientiousness and emotional stability do compensate for one another to some degree. A one standard deviation increase above the mean in emotional stability decreases the impact of conscientiousness on lifetime earnings from 9% to 6%, whereas, a one standard deviation decrease in emotional stability below the mean raises the impact of conscientiousness from 9% to 12%.

Retirement Savings. More conscientious adults accumulate wealth as a higher proportion of their earnings. The effects of husband's and wife's conscientiousness are comparable in size. A standard deviation increase in husband's conscientiousness is associated with a 12% increase in the ratio of wealth to lifetime earnings, with the same result for a one standard deviation increase in wife's conscientiousness.

DISCUSSION

Our findings are consistent with previous studies of younger people: the personality traits of conscientiousness and emotional stability are related to economic success independently of education and cognitive ability. We note a serious limitation of our analysis is the timing of personality assessment. Personality traits in the HRS were measured largely after the production of the measured economic outcomes. There is thus reason to worry about reverse causality. Individuals who observe that they have not earned, worked, or saved as much as others may be influenced by such observations to believe or report that they are less hard working and responsible, for instance, than they really are. However, the fact that similar associations have been found in prospective studies of children and young adults, and that personality measures appear to be persistent over a lifetime, suggests that at least some of the association may be real.

Should these findings be confirmed with prospective, longitudinal studies in the future, there are practical implications. Interventions to increase conscientiousness or at least behaviors, habits, and skills characteristic of conscientious individuals may be beneficial. Recognizing deficits in conscientiousness and emotional stability as risk factors for poor economic outcomes may help target other sorts of interventions.

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