

# A Theory of Education and Health:

## *Joint Investment in Skill and in Health*

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### Abstract:

The foundations for human-capital theory have been laid by the seminal works of Schultz (1961), Becker (1964), Ben-Porath (1967), and Mincer (1974). Distinctions identified by, e.g., Mushkin (1962) between health and other types of human capital have led to the development of the health-capital model by Grossman (1972). The human- and health-capital literatures have subsequently developed separately and no unifying theory exists. As a result, both theories fall short of explaining the strong association between education and health. This paper presents a unified theory of human capital with both health capital, and what we term skill capital, endogenously determined within the model. Investments in health capital consist of, e.g., medical expenditures and physical exercise, and investments in skill capital consist of, e.g., expenditures on education and training. We propose a dynamic model in which skill capital primarily determines the wage rate, while health capital primarily determines the period over which returns accrue (determining the amount of time spent working in a day, retirement and longevity). Investment in skill capital raises the return to investment in health capital, and vice versa, as lifetime earnings are strongly multiplicative in skill and health. Schooling and retirement represent distinct periods of life devoted to, respectively, skill and health investment. Health is distinct from skill: health is important to longevity, provides utility, is less productive (declining health is a dismal fact of life), and is valued later in life.

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