Financing a Black Box

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Abstract:

This paper studies the implication of persistent private information on a firm's optimal financing and investment policies. In a dynamic agency model, an investor supplies capital to an entrepreneur with an opaque production technology. The investor observes neither the true productivity of the technology nor the actual amount of the output produced. The entrepreneur can generate private benefit from misreporting productivity and diverting output, both of which bear a persistent negative effect on the long-term growth of the technology. Two special cases are considered: one in which the entrepreneur is risk-neutral with a liquidity constraint, and one in which the entrepreneur is risk-averse with CARA utility. For the investor, the model predicts both under- and overinvestment as well as non-monotonic financing policies under the optimal contract. The model also generates rich dynamics regarding the investment-q sensitivity and investment-cash-flow sensitivity consistent with empirical observations

Keywords: Dynamic Agency, Persistent Private Information, Investment, Financing Constraint, Q-Theory

JEL Codes: G32, D86, D25, L26