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R&D intensity for small firms is high and persistent over time. At the same time, small firms are often financially constrained. This paper proposes a theoretical model that explains the coexistence of these two stylized facts. It is shown that self-financed R&D investment can distort the effort allocated to different projects in a firm. In a dynamic environment, it is optimal for the firm to invest in R&D projects despite the borrowing constraints. In addition, this paper shows that beyond a certain threshold, effort substitution between R&D and production appears. When transfers from investor to entrepreneur are large enough, R&D intensity decreases with respect to financial resources. Conditional on survival, the more innovative and financially constrained firms are, faster they grow and exhibit higher volatility.

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