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Dynamic Game Theoretic Mode (abstract only)**

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# Does Empathy Matter in Entrepreneurial Financing? A Dynamic Game Theoretic Model

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## Abstract

This paper tries to reduce moral hazards in an entrepreneur-Angel financing relationship. This relationship is usually characterized by mutual empathy as opposed to it being absent in a VC relationship.

We seek to identify optimal payments to an entrepreneur under effort shirking in a contract where terms of payments are set at the beginning of the project. We use multi-period game theoretic approach and compare the results under VC and angel financing.

The study finds similar insights to VC financing where optimal contracts lies in back loading the payments to the entrepreneur. However, if mutual empathy exists, then the preference to back-load payments is lessened.

Another distinguishing feature under angel, as opposed to Vc financing, is that increased mutual empathy induces the entrepreneur to be less concerned about the back-loading of payments. This leads to the conclusion that, due to empathy, the entrepreneur becomes more patient in receiving compensations.

We also found that mutual empathy leads to higher effort exerted by the entrepreneur under angel financing than under Vc financing.

Another finding is that mutual empathy leads to the entrepreneur being less sensitive to changes in payments as compared to Vc financing.

The findings shed lights on the importance of investing in developing a mutual empathetic relationship in entrepreneurial financing. The fact that the entrepreneur is less sensitive to payments changes, under an empathetic relation, gives the financier an opportunity for cost savings. The fact that the entrepreneur is less sensitive to payments timing gives the financier the opportunity to even backload the payments and extend the exit stage.