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LIAISONS DANGEREUSES RELATIONSHIP LENDING AND VENTURE CAPITAL

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I study how relationship lending affects entrepreneurial innovation and venture capital activity. I develop a model in which an entrepreneur jointly chooses a project type (traditional or innovative) and a financier (bank lending or venture capital). Relationship lending allows banks to create continuation value when refinancing traditional projects, whereas venture capital creates value primarily for innovative projects but is costly to access. This difference in value creation shapes entrepreneurial choice. When the benefits of bank relationships are sufficiently large, entrepreneurs prefer traditional projects financed by banks over innovative projects financed by venture capital, even if the latter are more profitable absent financing frictions. The model predicts that stronger relationship lending can indirectly depress venture capital activity by reducing the number of entrepreneurs who choose innovative projects. This effect is amplified when venture capital is scarce or when its incremental contribution to firm value is limited. The paper thus identifies a new channel through which the structure of the banking sector can influence venture capital development.

Keywords: Venture capital; relationship lending; entrepreneurship.

JEL Classifications: G21, M13, L26.

1. Introduction

When deciding which project to undertake, entrepreneurs must consider funding sources available to them. For example, a founder's choice about whether to pursue a safer and more conventional business idea or a more innovative but harder-to-finance venture will depend on the costs and benefits associated with approaching different types of financiers. Potential financiers for start-ups, like banks and venture

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capitalists (VCs), differ not only in the contracts they use, but also in the type of value they create for firms. Banks can generate value through lending relationships that develop over time, whereas venture capitalists add value mainly through the governance, screening, and support they provide to innovative firms. These differences imply that the structure of financial intermediation can shape entrepreneurial project choice and, through it, the composition of economic activity.[a]

This paper studies how benefits of relationship lending in the banking sector affect venture capital activity indirectly, by altering entrepreneurs' incentives to choose between traditional and innovative projects. To this end, I develop a model in which an entrepreneur jointly chooses the type of project to undertake and the source of financing to use. Traditional projects can benefit from relationship lending, as the bank generates an additional continuation surplus if the entrepreneur is refinanced by the same bank after early success. Conversely, innovative projects do not benefit from this relationship surplus, but can receive value added from venture capitalists. At the same time, venture capital is costly for entrepreneurs to access. The central mechanism of the model is therefore a simple, yet novel, trade-off: relationship lending increases the entrepreneur's return from choosing a traditional project financed by a bank, while venture capital increases her return to choosing an innovative project, but only at the cost of accessing a different intermediary.

The model delivers three main results. First, when entrepreneurs choose traditional projects, bank financing dominates VC financing because bank relationships generate continuation value and entrepreneurs avoid the search cost of accessing venture capital. Second, when entrepreneurs seek venture capital, they optimally choose innovative projects because venture capitalists add value only in those projects. Third, and most importantly, the entrepreneur chooses innovation (i.e. the innovative project) and venture capital only if the incremental benefit of innovation exceeds its financing-related cost. In the baseline model, this condition arises from the comparison between the additional net present value (NPV) and VC value added generated by the innovative project, on the one hand, and the forgone relationship benefit and VC access cost, on the other. This result identifies a channel through which stronger relationship lending, higher VC access costs, or lower VC value added discourage innovation and reduce venture capital activity.

Next, I provide an extension of the model with a continuum of projects to strengthen this intuition. Rather than choosing between two discrete technologies, the entrepreneur chooses an optimal degree of innovation. Relationship lending then places an endogenous upper bound on the level of innovation that can be sustained under bank financing, because the relationship surplus declines with project innovativeness. Venture capital financing supports more innovative projects, but only if the value it creates is large enough relative to search and monitoring frictions. The extension therefore shows that the paper's mechanism is not limited to a binary

[a] Several papers document empirically how the presence of strong banking systems is associated with fewer incentives to innovate (Allen & Gale, 2000, Beck & Levine, 2002, Hsu *et al.*, 2014, Core, 2025, Segura & Suarez, 2026).

distinction between traditional and innovative ventures, but rather it applies more generally to environments in which financiers differ in how their value added varies with project type.

The main contribution of the paper is to isolate a specific mechanism through which the banking sector may affect the scope of venture capital: some entrepreneurs who would otherwise choose innovative projects switch to more traditional activities in order to capture the benefits of relationship lending. This represents a novel contribution to the literature in entrepreneurial finance, highlighting an indirect channel connecting banks and venture capitalists, even without direct competition for financing the same ventures. This effect of relationship lending on venture capital activity may help explain broader cross-country differences in venture capital development, which are simultaneously shaped by many institutional, legal, and market factors, as emphasized in the literature on venture capital development (Jeng & Wells, 2000, Bottazzi & Da Rin, 2002, Gompers & Lerner, 2001).

The paper contributes first to the literature on relationship lending. Most closely related, the paper provides theoretical foundation to the empirical findings of Berger & Schaeck (2011), who document that SMEs turn to providers of venture capital to avoid rent-extracting behavior by banks. Moreover, a large literature shows that relationship lending can ease financing constraints, improve monitoring, and generate informational rents for incumbent banks, both theoretically (Sharpe, 1990, Rajan, 1992, Petersen & Rajan, 1995, Boot & Thakor, 2000) and empirically (Bolton *et al.*, 2016, Banerjee *et al.*, 2021). In this literature, relationship lending is typically viewed as beneficial because it allows banks to finance firms that might otherwise be excluded from credit markets. My paper highlights a different implication: the same relationship benefits may distort entrepreneurial choices away from more innovative projects.

Second, the paper contributes to the literature on entrepreneurial finance comparing bank lending and venture capital. Existing theoretical papers study the entrepreneur's choice between banks and venture capitalists, focusing on screening, control, expropriation, and contract design (Trester, 1998, Casamatta, 2003, Landier, 2003, Ueda, 2004, Winton & Yerramilli, 2008). In these models, the type of project is typically taken as given, and the main focus is which intermediary is best suited to finance the venture. By contrast, in my paper the financing choice and the project choice are jointly determined.

Third, the paper relates to the literature on venture capital and innovation. Venture capitalists are often argued to play a distinctive role in supporting high-growth, high-uncertainty firms by providing more than capital, including monitoring, governance, and strategic advice (Gompers, 1995, Da Rin *et al.*, 2013). The paper complements this strand of literature by showing that the effectiveness of venture capital depends not only on their internal capabilities, but also on the outside option available to entrepreneurs through the banking system.

More broadly, the paper relates to the literature studying how financial structure affects entrepreneurial activity (Allen & Gale, 2000, Beck & Levine, 2002, Hsu *et al.*,

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2014, Core, 2025, Segura & Suarez, 2026). The model implies the cost of innovation is driven partly by the structure of intermediation rather than by technological fundamentals alone. Moreover, it clarifies why banks and venture capitalists may coexist while specializing in different types of firms, rationalizing a segmentation of entrepreneurial finance in which the organization of the financial system shapes the technological composition of entrepreneurship. The framework therefore suggests empirical predictions at the firm, bank, or regional level: entrepreneurs more exposed to relationship lending should be less likely to seek venture capital and less likely to undertake highly innovative projects, especially where venture capital is more difficult to access.

This paper is organized as follows. Section 2 presents the baseline model and derives the equilibrium condition under which entrepreneurs choose bank-financed traditional projects or VC-financed innovative projects. Section 3 extends the analysis to a continuum of projects that differ in their degree of innovativeness. Section 4 provides empirical predictions derived from the model, as well as directions for future research, while Sec. 5 concludes.

2. A Model of Entrepreneurial Choice

The economy consists of three periods, from time 0 to time 2. An entrepreneur can start a project at time 0 and refinance it at time 1, conditionally on being successful. Every period, a project succeeds with probability θ, and with probability $1-\theta$ it yields nothing and the entrepreneur is liquidated. A generic project requires funding F at time 0 and yields X with probability θ at time 1. At time 1, if the project is successful, the entrepreneur can invest an additional F and get X with probability θ at time 2. There is no discounting and all agents are assumed to be risk neutral.

The entrepreneur can choose between two projects: one innovative project, which is more profitable, and one traditional project. This modeling choice mirrors a situation in which the entrepreneur has to choose whether to enter transformational or subsistence entrepreneurship (Schoar, 2010). She can only start one project and she cannot switch projects at time 1. Total proceeds from the project are

$$\Pi_j = -F_j + \theta_j X_j + \theta_j(\theta_j X_j - F_j) = (1+\theta_j)(\theta_j X_j - F_j), \quad \text{where } j = (T,\ I).$$

The two projects differ in their profitability, NPVs and funds required. Regarding the characteristics of the two projects, I make the following assumption:

- **Assumption 1.** $0 < \theta X_T - F_T < \theta X_I - F_I$.

Both projects have the same probability of success ($\theta_T = \theta_I = \theta$) and both projects have positive NPVs. Assumption 1 implies that the innovative project has an NPV higher than the traditional one, and therefore an entrepreneur investing her own funds would always choose an innovative project over a traditional one, as $\Pi_T = (1+\theta)(\theta X_T - F_T) < (1+\theta)(\theta X_I - F_I) = \Pi_I$. To more closely resemble

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innovation's payoff, one could assume $\theta_T > \theta_I$, which combined with the assumption $\theta X_T - F_T < \theta X_I - F_I$ implies that the innovative project has a higher variance of payoffs. Since in my model all agents are risk neutral, assuming different probabilities of success for the two projects does not change the results.[b]

2.1. *Financing of the entrepreneur*

The entrepreneur is penniless and needs to seek funding from a financier at time 0 to start a project. There are two types of agents who can finance the entrepreneur, a bank and a venture capitalist. The difference between the two types of agents is the contract used: banks can finance the entrepreneur using one-period debt claims, whereas venture capitalists use equity claims and buy a portion α of the cash flows generated by the project in exchange for all the funds needed by the entrepreneur. The difference in contracts entails that, while an entrepreneur can seek re-financing from another bank at time 1, she is locked with the same VC in the second period. Long-term debt, equivalent to a multi-period debt claim, is ruled out by assumption. This is consistent with the empirical evidence showing that small firms in their early stages rarely have access to long-term bank financing (Whited, 1992).

At time 0, both types of financiers can pay a monitoring cost, m, to make the cash flow at time 1 verifiable. For a bank, the monitoring cost m can be interpreted as the cost of verifying the firm's cash flow and enforcing repayment. For a venture capitalist, m could instead be interpreted as screening cost and the cost of due diligence. This assumption is standard in models of financial intermediation where lenders must incur costly monitoring in order to mitigate moral hazard problems (De la Fuente & Marin, 1996, Carletti *et al.*, 2007). In the model, monitoring is required only at time 0, reflecting the idea that once a relationship has been established and the project is operating, the continuation cash flows become easier to verify. Thus, at time 2 the cash flow is always verifiable.

If the entrepreneur is not monitored at time 0, she never goes through with her project and she extracts a nonmonetary private benefit that dominates the continuation value of the project. Unless m is paid at time 0, the financier cannot seize anything from the entrepreneur. Regarding the monitoring cost, I make the following assumption:

- **Assumption 2.** $(1 + \theta)(\theta X_T - F_T) > m > \theta X_I - F_I$.

Assumption 2 implies that a financier cannot break even when financing the entrepreneur unless some other incentive is provided. No monitoring cost has to be paid at time 1 if the entrepreneur is successful, namely the second project's cash flow is always verifiable. On the other hand, Assumption 2 implies that if the first cash flow is not verifiable, then the entrepreneur always has an incentive to default

[b]Moreover, while it is common in the literature to assume that more innovative projects are riskier, in the model I abstain from risk considerations to better highlight its main mechanism of entrepreneurial project selection.

strategically and pocket the first cash flow in full. The idea behind this modeling choice is that early-stage ventures, irrespective of their innovativeness, are riskier than later-stage ones. Hence, there is a need to monitor the entrepreneur in the first stage to guarantee success. Upon success in the first stage, success acts as a screening device and hence makes it impossible for incumbent financiers that are not locked in with the entrepreneur (i.e. banks using short-term debt contracts) to "defend" the monitoring investment, as outsiders can free ride on the first stage monitoring by simply observing success.

Importantly, the monitoring cost m is assumed to be the same for both types of financiers and for both types of projects. In reality, VCs are likely to incur lower screening or due-diligence costs for innovative start-ups, given their specialization and routines, while banks may face higher costs when evaluating innovative firms. The choice of this simplifying assumption allows the model's focus to hinge on how different financiers would contribute differently to the development of the entrepreneurial project, rather than on cost-related advantages for one project or the other.

2.1.1. *Relationship banking and venture capital*

When a bank finances an entrepreneur for the second time, the second cash flow of the project is increased by an amount B. This relationship benefit reflects the fact that banks can add value when establishing long-term relationships with their clients, as empirically documented by DeYoung *et al.* (2008) and Dass & Massa (2011). Furthermore, B can only be earned if the project financed is of the traditional type, and no benefit can be earned if the entrepreneur switches financier at time 1. I assume that when indifferent between switching and not switching, the entrepreneur sticks with the same bank.

The parameter B captures the surplus generated by a lending relationship when the same bank refinances the entrepreneur. This surplus can arise from several mechanisms emphasized in the relationship lending literature. First, repeated interactions allow the bank to accumulate soft information about the borrower, reducing informational asymmetries and improving project selection (Sharpe, 1990, Rajan, 1992, Petersen & Rajan, 1995). Second, the bank may provide refinancing flexibility or liquidity insurance that allows otherwise viable firms to continue operating after temporary shocks (Rajan, 1992). Third, closer bank–firm relationships may improve operational efficiency through advisory support or better financial planning. In the model, these effects are captured in reduced form as an increase B in the continuation cash flow of the project when it is refinanced by the incumbent bank.

The model assumes that the relationship surplus B is generated only for traditional projects. This assumption reflects the idea that the benefits of relationship lending are strongest in activities where the bank's accumulated knowledge of the firm's operations and credit history can meaningfully improve financing conditions or

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operational efficiency. Innovative projects, by contrast, often involve new technologies, uncertain markets, or intangible assets that are difficult to evaluate using the type of information typically accumulated through lending relationships. In such environments, specialized investors such as venture capitalists may have a comparative advantage in providing support and expertise.

In fact, venture capital relationships are also widely viewed as relational in nature, involving repeated interactions, board participation, and active monitoring. In the model, I assume that venture capitalists can add value to the entrepreneur's project, denoted by V, but only if it is of the innovative type. This reflects the distinctive feature of venture capital, namely its ability to add value to innovative projects through specialized expertise, consistently with empirical results in Bernstein *et al.* (2016) and Colombo *et al.* (2017). Allowing for relational aspects of venture capital would likely reinforce the importance of long-term interactions in entrepreneurial finance, but would not alter the central mechanism highlighted in this paper. The value added by a VC is denoted by V and it is earned as an additional cash flow at time 2.

Lastly, an additional difference between bank funding and venture capital is that the entrepreneur has to look for VC. This translates into having to pay a search cost K at time 0. Importantly, this cost is nonmonetary and noncontractible, namely it is not taken into account by the VC when setting the portion α of the firm that she requires in order to finance the entrepreneur. Figure 1 shows the cash flows associated with financing a project with bank funding, whereas Fig. 2 shows the cash flows under VC funding.

2.2. *Financiers' strategies*

2.2.1. *Bank - traditional project*

Next, I assume that the entrepreneur proposes a traditional project to a bank, which can establish lasting relations with her. To find the equilibrium repayments that the

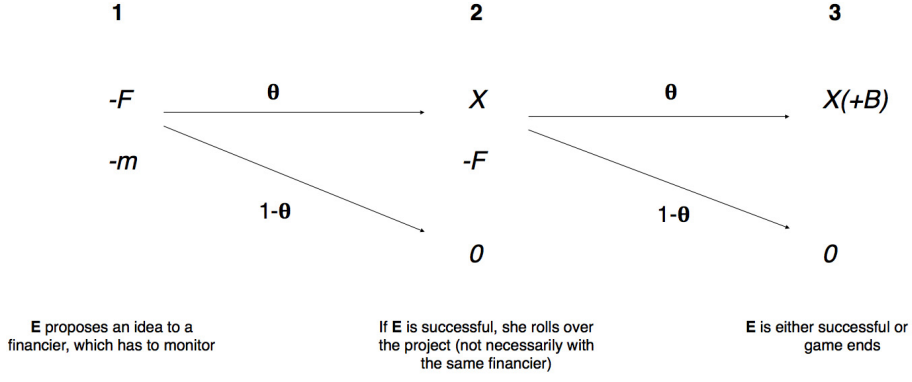

Fig. 1. Cashflow profile and probabilities of success of the entrepreneur for a generic project under bank financing.

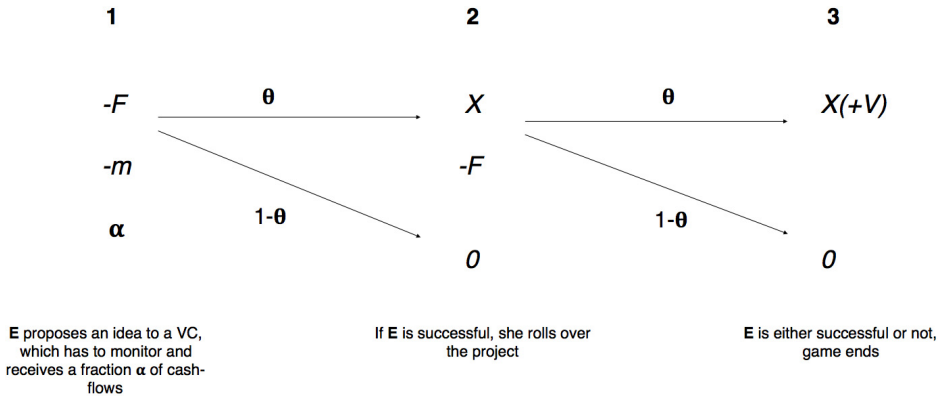

Fig. 2. Cashflow profile and probabilities of success of the entrepreneur for a generic project under VC financing.

bank offers to the entrepreneur, I work by backward induction, finding the time 2 repayment R'_T and the first period one, R_T.

At time 1, competing banks can attempt to refinance the entrepreneur. Because monitoring has already been performed by the incumbent bank at time 0, outside lenders can free ride on the information produced by this monitoring activity. Under perfect competition among lenders, outside banks therefore offer refinancing contracts that yield zero expected profits. Since the project's cash flows are verifiable at time 2, the break-even repayment offered by outsiders is $R''_T = \frac{F_T}{\theta}$.

Yet, the incumbent bank has the advantage of being able to generate an extra benefit B at time 2, conditionally on the entrepreneur not switching financier and succeeding with probability θ. This benefit is assumed to be verifiable and perfectly shareable between the entrepreneur and the bank. In order to prevent the entrepreneur from switching, the incumbent bank must offer a repayment that satisfies:

$$X_T - R'_T + B \geq X_T - \frac{F_T}{\theta} \Rightarrow R'_T \leq \frac{F_T}{\theta} + B.$$

The incumbent bank therefore rationally sets:

$$R'_T = \frac{F_T}{\theta} + B. \tag{1}$$

Even if the banking sector is competitive, the incumbent is able to generate a monopolistic rent on the second financing relationship due to the additional value it is able to generate for the entrepreneurial project, similarly to Rajan (1992).

After solving the second period, I can solve the first period's problem of the bank by finding R_T. At time 0 there is perfect competition among financiers and the expected profit for the bank must be equal to zero:

$$\theta R_T - m - F_T + \theta^2 R'_T - \theta F_T = 0.$$

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Plugging Eq. (1) into the expression above and rearranging yields:

$$R_T = \frac{m + F_T}{\theta} - \theta B. \tag{2}$$

The bank, by establishing relationships that allow it to extract a monopolistic surplus, is able to transfer income across periods. This allows the bank to bear the cost of monitoring at time 0, generating a loss at time 1, but breaking even thanks to a profit at time 2. If there were no relationship benefits ($B = 0$), a bank would never finance a traditional project at time 0. In other words, in the model the incumbent bank relies on inter-temporal cross-subsidization, which allows it to reduce early repayments R_T despite monitoring costs. This explains why the first repayment is decreasing in B, while the second one is increasing in B.

2.2.2. *Bank-innovative project*

If the entrepreneur proposes an innovative project to a bank, there is no relationship benefit to be generated by the incumbent at time 2. Like before, at time 1 outsiders compete with the incumbent bank, offering a repayment $R_I'' = \frac{F_I}{\theta}$. But now the entrepreneur is indifferent between switching and staying, since the incumbent can only offer the same repayment as outsiders and $R_I' = R_I'' = \frac{F_I}{\theta}$. As per the previous section, I assume that the entrepreneur does not switch when indifferent.

Since at time 0 there is perfect competition among financiers, expected profit for the bank must be equal to zero:

$$\theta R_I - m - F_I + \theta^2 R_I' - \theta F_I = 0.$$

Plugging R_I' in the expression above and rearranging yields:

$$R_I = \frac{m + F_I}{\theta} > X_I. \tag{3}$$

Now the bank is no longer able to subsidize losses in the first credit relationship with rents in the second. Therefore, the repayment that it has to ask of the entrepreneur is too high, following from Assumption 2. In equilibrium, the entrepreneur cannot start an innovative project with bank funding.

The inability of banks to finance innovative projects reflects the interaction between monitoring costs and the absence of relationship benefits. When the project is innovative, the incumbent bank cannot generate the continuation surplus B, and therefore cannot recover the monitoring cost m incurred at time 0 through future rents. As a result, the repayment required to break even exceeds the project's cash flow. This result captures the idea that bank lending is better suited for projects with predictable cash flows and collateralizable assets, whereas highly innovative projects are more naturally financed through equity-based intermediaries such as venture capitalists. The assumption that banks do not finance innovative projects is a simplifying one that allows the model to generate clear predictions about the interaction between relationship lending and venture capital. In practice, banks may

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occasionally finance innovative firms, particularly when projects become more mature or when firms can pledge collateral. Allowing banks to partially finance innovative projects would not eliminate the mechanism of the model but would instead weaken the comparative advantage of relationship lending for traditional activities.

2.2.3. *Venture capital-traditional project*

Another possibility for the entrepreneur is to look for venture capital to then start a traditional project. When the entrepreneur decides to look for VC financing, she has to pay the search cost K. Importantly, this cost is not internalized by the venture capitalist. The VC still has to pay the monitoring cost m, and since the project is of traditional type there is no value added V in the last period.

At time 0, VC makes the entrepreneur an offer to buy a certain percentage α_T of her firm. In exchange for α_T, VC provides the entrepreneur with F_T at time 0 and, conditionally on her surviving, F_T again at time 1. The VC's break-even condition is as follows:

$$\theta\alpha_T X_T - F_T - m + \theta^2\alpha_T X_T - \theta F_T = 0 \Rightarrow \alpha_T^* = \frac{(1+\theta)F_T + m}{\theta(1+\theta)X_T}. \tag{4}$$

For VC financing to be feasible α_T^* must be smaller than 1. Rearranging and expressing everything in terms of the project's NPV this condition becomes:

$$(1+\theta)(\theta X_T - F_T) > m.$$

This condition is always satisfied under Assumption 2. Even without generating any additional benefit, the VC is able to finance a traditional project, something a bank would not do if it were not able to generate B. The intuition is that an equity contract locks the financier inside the firm, while a debt contract can do that only for longer maturities. Therefore, this framework shows that equity allows the financing of firms in the presence of monitoring costs. In the absence of long-term debt, short-term bank financing could be used only if banks can generate relationship surpluses.

2.2.4. *Venture capital-innovative project*

Lastly, an entrepreneur could look for a VC to propose an innovative project. As in the previous case, the entrepreneur has to invest a search cost K, that is not considered by the VC in the terms of financing. Differently from before, now the VC can add value to the project at time 2, increasing the last cash flow by V.

Denote α_I the fraction of the firm that the VC buys from the entrepreneur in exchange of the stream of investments F_I. The VC sets α_I so as to break even in expectation:

$$\theta\alpha_I X_I - F_I - m + \theta^2\alpha_I(X_I + V) - \theta F_I = 0 \Rightarrow \alpha_I^* = \frac{(1+\theta)F_I + m}{\theta(1+\theta)X_I + \theta^2 V}. \tag{5}$$

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Feasibility of VC financing requires α_I^* to be smaller than one. This condition can be re-arranged as

$$(1+\theta)(\theta X_I - F_I) + \theta^2 V > m.$$

The inequality is always satisfied under Assumption 2. Venture capital financing is always available to the entrepreneur who wants to pursue an innovative project.

2.3. *The entrepreneur's choice*

The entrepreneur at time 0 must choose which project to pursue and which financier to approach. Therefore the strategy of the entrepreneur can be expressed as a menu of actions (*Project*; *Financier*), where *Project* is either *Traditional* or *Innovative* and *Financier* is either *Bank* or *VC*.

Whenever the entrepreneur proposes to a financier a project that the financier is not willing to fund, the entrepreneur gets a payoff of 0. Furthermore, if the entrepreneur chose *Bank* at time 0 and she is successful at time 1, she has to decide whether to switch bank or not. Importantly, both the bank and the VC always pay the monitoring cost, m, at time 0 otherwise the entrepreneur never repays. Figure 3 describes the tree of the game.

The game is solved for sub-game perfect equilibria, using backward induction. I solve separately the two sub-games obtained from the first choice of the entrepreneur, whether to search for VC funding or approach a bank. I start by analyzing the decision of the entrepreneur about whether to switch bank at time 1, conditionally on her having been successful.

First, I assume that the entrepreneur chooses (*Traditional*; *Bank*). Conditionally on being successful at time 1, the entrepreneur has to decide whether to switch bank or not. Since the entrepreneur started a traditional project, keeping the same bank generates an extra benefit B and entails a repayment $R'_T = \frac{F_T}{\theta} + B$. The payoff

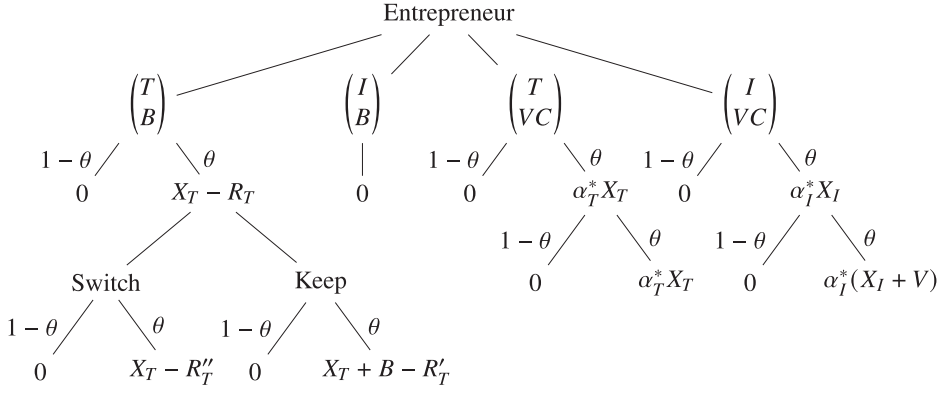

Fig. 3. Full tree of the model as a game. The tree represents the choices and payoffs available to the entrepreneur, conditional on financiers' best responses.

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of the successful entrepreneur at time 2 is

$$\Pi_T^{NS} = X_T + B - \frac{F_T}{\theta} - B.$$

If the entrepreneur switches, she loses the benefit B and pays $R_T'' = \frac{F_T}{\theta}$:

$$\Pi_T^{S} = X_T - \frac{F_T}{\theta} = \Pi_T^{NS}.$$

Since the entrepreneur is indifferent between switching or not, I assume she does not switch. This can be easily rationalized if the incumbent bank were to share a small part δ of B with the entrepreneur. Not to over-complicate the model, I simply assume that when indifferent the entrepreneur does not switch.

The second case is the one where the entrepreneur chooses an innovative project. As per the previous section, a bank would never finance an entrepreneur with an innovative project at time 0, since she would have to repay more than what she generates at time 1. Therefore there is no possibility for the entrepreneur to switch bank at time 1, as she is never funded.

As a result, conditionally on choosing bank funding, the entrepreneur never switches. Importantly, this result does not depend on the bank paying the monitoring cost, as the payoff of the entrepreneur at time 2 does not depend on m.

2.3.1. *Bank funding-project choice*

Conditionally on approaching a bank for funding, the choice of the entrepreneur regarding which project to start is trivial. In fact, a bank would never agree to finance an innovative project, therefore the only project available to the entrepreneur under bank financing is the traditional one.

When the entrepreneur proposes a traditional project to the bank, the bank offers a menu of repayments that must be incentive compatible to avoid switching at time 1, and that takes into account the fact that the bank has to pay m upfront. The menu of repayments is as follows:

$$\begin{cases} R_T = \dfrac{m + F_T}{\theta} - \theta B, \\ R_T' = \dfrac{F_T}{\theta} + B. \end{cases} \tag{6}$$

Under this repayment menu, the total payoff of the entrepreneur at time 0 becomes:

$$\begin{aligned} \Pi_T^B &= \theta(X_T - R_T) + \theta^2(X_T + B - R_T') \\ &= \theta X_T - m - F_T - \theta^2 B + \theta^2(X_T + B) - \theta F_T + \theta^2 B \\ &= (1+\theta)(\theta X_T - F_T) + \theta^2 B - m. \end{aligned} \tag{7}$$

Since banks compete to finance the entrepreneur at time 0 and they make zero profits in expectation, the entrepreneur's payoff equals the NPV of the project plus the

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expected relationship benefit, net of the monitoring cost. From Assumption 1, the expression in Eq. (7) is always greater than zero, and thus always larger than the payoff the entrepreneur would get proposing an innovative project to a bank (i.e. 0). This means that if only bank finance were available, then the entrepreneur would always pursue a traditional project, because an innovative project cannot be funded in equilibrium by banks, even though the NPV of the innovative project is larger than the one of the traditional one.

2.3.2. *Venture capital funding-project choice*

When the entrepreneur approaches a VC for funds, the VC proposes the entrepreneur to buy a fraction α of the firm, depending on the type of the project she proposes. The entrepreneur could get financed by a VC both for the traditional and the innovative project, since under Assumption 2 both α_T^* and α_I^* are smaller than 1 and therefore feasible. Nevertheless, when deciding to approach a VC the entrepreneur has to pay the search cost K.

If the entrepreneur proposes a traditional project to the VC, she sells a fraction $\alpha_T^* = \frac{(1+\theta)F_T+m}{\theta(1+\theta)X_T}$ of the firm, getting a payoff equal to the following:

$$\begin{aligned}\Pi_T^{VC} &= (1-\alpha_T^*)(\theta X_T + \theta^2 X_T) - K \\ &= \frac{\theta(1+\theta)X_T - (1+\theta)F_T - m}{\theta(1+\theta)X_T}\theta(1+\theta)X_T - K \\ &= (1+\theta)(\theta X_T - F_T) - m - K. \end{aligned} \tag{8}$$

From Assumption 2, the term in Eq. (8) is positive and equals the NPV of the traditional project, net of the monitoring cost m and the search cost K, which is borne by the entrepreneur. This is because venture capitalists compete at time 0 and make zero profit in expectation, without considering the search cost paid by the entrepreneur.

Alternatively, the entrepreneur could propose to the VC an innovative project. If the entrepreneur is successful, the VC can add value in the last period and increase the cash flow by V. In exchange for funding, the VC buys a portion of the firm equal to $\alpha_I^* = \frac{(1+\theta)F_I+m}{\theta(1+\theta)X_I+\theta^2 V}$. The resulting payoff for the entrepreneur is as follows:

$$\begin{aligned}\Pi_I^{VC} &= (1-\alpha_I^*)(\theta X_I + \theta^2(X_I+V)) - K \\ &= \frac{\theta(1+\theta)X_I + \theta^2 V - (1+\theta)F_I - m}{\theta(1+\theta)X_I + \theta^2 V}(\theta(1+\theta)X_I + \theta^2 V) - K \\ &\quad \times (1+\theta)(\theta X_I - F_I) + \theta^2 V - m - K. \end{aligned} \tag{9}$$

Now the profit of the entrepreneur equals the NPV of the innovative project plus the VC value-added V, net of monitoring and search costs. Again, this is the case because of competition among financiers at time 0.

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2.4. *Equilibrium*

To solve the model, I need to find the menu of actions (*Project*; *Financier*) chosen by the entrepreneur. From the previous sections there are three menus of actions feasible for the entrepreneur at time 0:

(1) (*Traditional*; *Bank*), which yields a payoff Π_T^B;

(2) (*Traditional*; *VC*), which yields a payoff Π_T^{VC};

(3) (*Innovative*; *VC*), which yields a payoff Π_I^{VC}.

Comparing the first two cases is easy. In fact:

$$\begin{aligned}&\Pi_T^B - \Pi_T^{VC}\\&\quad = (1+\theta)(\theta X_T - F_T) + \theta^2 B - m - [(1+\theta)(\theta X_T - F_T) - m - K]\\&\quad = \theta^2 B + K > 0 \Rightarrow \Pi_T^B > \Pi_T^{VC}.\end{aligned}$$

The entrepreneur always prefers bank financing to venture capital when choosing a traditional project. The result follows from the fact that banks can build relationships with the entrepreneur and add value, by offering her incentive-compatible repayments to keep her around. On the other hand, finding venture capital is costly for the entrepreneur, and she does not benefit from any value added in this case. Therefore the model shows that an entrepreneur who wants to pursue subsistence entrepreneurship (Schoar, 2010), relationship lending is the optimal form of financing.

It is also easy to show that conditionally on looking for venture capital, the entrepreneur prefers the innovative project to the traditional one. In fact:

$$\begin{aligned}&\Pi_I^{VC} - \Pi_T^{VC}\\&\quad = (1+\theta)(\theta X_I - F_I) + \theta^2 V - m - K - [(1+\theta)(\theta X_T - F_T) - m - K]\\&\quad = (1+\theta)[(\theta X_I - F_I) - (\theta X_T - F_T)] + \theta^2 V > 0 \Rightarrow \Pi_I^{VC} > \Pi_T^{VC}.\end{aligned}$$

The result follows from Assumption 1. Pursuing the innovative project under venture capital funding yields the entrepreneur both a higher project NPV and the value-added by the venture capital.

Therefore the choice of the entrepreneur restricts to choosing bank funding and start a traditional project or looking for venture capital proposing an innovative project. The entrepreneur is willing to look for venture capital if and only if:

$$\begin{aligned}&\Pi_I^{VC} > \Pi_T^B\\&(1+\theta)(\theta X_I - F_I) + \theta^2 V - m - K > (1+\theta)(\theta X_T - F_T) + \theta^2 B - m\\&\underbrace{\Delta NPV + \theta^2 V}_{Benefit\ of\ Innovation} > \underbrace{\theta^2 B + K}_{Cost\ of\ Innovation}.\end{aligned} \tag{10}$$

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In equilibrium the entrepreneur will only pursue an innovative project with a venture capitalist if the *Benefit of Innovation* is bigger than the *Cost of Innovation*. The former consists of the extra-NPV that the innovative project delivers and the value added that the VC can generate. The latter comprises the search cost of getting venture capital, as the innovative project cannot be financed by a bank, and the opportunity cost of forgoing building relationships with a bank, earned when carrying out the traditional project. Importantly, if the entrepreneur could finance the project with her own funds, she would always choose the innovative project, as it has a higher NPV.

Equation (10) constitutes the main result of the model. In fact, it shows that under certain values of the parameters the model predicts that relationship lending impairs the ability of the venture capitalists to finance innovative projects. Importantly, the result does not come from the fact that VCs and banks compete directly. Venture capitalists and banks are linked to each other through the choices of the entrepreneur.

The inequality in Eq. (10) holds for higher values of V, lower values of K and B and for bigger differences in the NPV of the two projects. On the other hand, it means that when venture capital is scarce (higher K) and venture capitalists more inexperienced (lower V), a higher degree of relationship lending (higher B) requires a bigger wedge in project NPVs to push the entrepreneur to choose innovative projects.

Therefore, in economies in which the venture capital industry is in its early stages, a significant degree of relationship lending could result in more entrepreneurs choosing not to innovate. In turn, this prevents new venture capitalists from entering the market, in a self-sustaining equilibrium in which few innovators get funded. As a result, relationship banking could be an important factor in preventing the development of the venture capital industry. This does not happen through a direct link between banks and venture capitalists, but rather through a feedback effect in entrepreneurial choices: relationship banking alters the type of projects that entrepreneurs are willing to start, this crowds out VCs' investment opportunities, keeping new entrants out of the market; the scarcity and inexperience of venture capitalists then further tilts entrepreneurial choices to favor noninnovative projects.

3. Extension-Continuum of Entrepreneurial Projects

In this section, I generalize the previous model, allowing the entrepreneur to choose among a continuum of projects, rather than a binary set. Every project differs according to a parameter γ, which governs the evolution of cash flows, funds, monitoring cost and relationship banking benefit. The parameter γ can take any value in the interval $[0; \gamma_{\text{Max}}]$.

The structure of the project is the same as before: three periods with the possibility for the entrepreneur to roll over the project at the intermediate stage. The entrepreneur needs to obtain $F(\gamma)$ at time 0 and 1, and gets $X(\gamma)$ at time 1 and

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2, always with probability θ. The financier financing the entrepreneur at time 0 has to bear a monitoring cost $m(\gamma)$. Relationship banking, defined as the entrepreneur sticking with the same bank for two periods, yields a benefit $B(\gamma)$ at time 2. I define $\text{NPV}(\gamma)$ as the NPV of the one-period project (i.e. $\text{NPV}(\gamma) = \theta X(\gamma) - F(\gamma)$). I make the following assumptions regarding the elements of the model:

(1) $\frac{\partial X(\gamma)}{\partial \gamma} > 0 \forall\, \gamma$.

(2) $\frac{\partial F(\gamma)}{\partial \gamma} > 0 \forall\, \gamma$.

(3) $\frac{\partial \text{NPV}(\gamma)}{\partial \gamma} > 0 \forall\, \gamma$.

(4) $\frac{\partial m(\gamma)}{\partial \gamma} > 0 \forall\, \gamma$.

(5) $\frac{\partial B(\gamma)}{\partial \gamma} < 0 \forall\, \gamma$ and $B(\gamma) > 0$ for $\gamma < \bar{\gamma} \wedge B(\gamma) < 0$ for $\gamma > \bar{\gamma}$.

(6) $\frac{\partial[(1+\theta)\text{NPV}(\gamma) - m(\gamma)]}{\partial \gamma} > 0 \forall\, \gamma$.

(7) $\theta X(\gamma_{\text{Max}}) - F(\gamma_{\text{Max}}) - m(\gamma_{\text{Max}}) < 0 < (1+\theta)X(0) - F(0) - m(0)$.

(8) $\frac{\partial V(\gamma)}{\partial \gamma} > 0 \forall\, \gamma$.

Under the first assumption, the cash flow of the project is increasing in the degree of innovation. The second assumption states that the funding needed by the entrepreneur grows with the degree of innovation chosen, but, as for the third assumption, the one-period NPV of the project is monotonically increasing in γ. Also, the monitoring cost is increasing in innovation, by the fourth assumption. Moreover, the fifth assumption gives the evolution of the relationship lending benefit as a function of innovation: the more innovative the project the smaller the benefit from relationship banking. If the innovativeness of the project is greater than the threshold $\bar{\gamma}$, this benefit becomes a cost. Notably, this is not necessary for the main result of the model. If $B(\gamma)$ were 0, rather than negative, for $\gamma \geq \bar{\gamma}$, the model would yield the same result. This assumption makes the function $B(\gamma)$ differentiable.

Assumption 6 states that a project grows more profitable the higher the degree of innovation, even if that entails paying higher monitoring costs. Lastly, assumption 7 yields that the one-period project is not profitable enough to cover the monitoring cost no matter the degree of innovation chosen. This assumption makes it impossible for a financier to break-even without being able to finance the entrepreneur for more than one period.

3.1. *Bank finance*

Now the entrepreneur has to choose a level of innovation γ so as to maximize her payoff. I start by solving the entrepreneur's problem conditionally on looking for bank finance. The repayments offered by banks will be functions of the degree of innovation chosen. At time 1, the incumbent bank can offer a repayment that makes the entrepreneur indifferent between switching bank and keeping the same one.

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Calling $R'(\gamma)$ and $R''(\gamma)$ the repayments offered at time 1 by, respectively, the incumbent and an outsider:

$$R''(\gamma) = \frac{F(\gamma)}{\theta} \quad \text{and} \quad R'(\gamma) = \frac{F(\gamma)}{\theta} + B(\gamma) = R''(\gamma) + B(\gamma). \tag{11}$$

The entrepreneur would refinance the project with the incumbent only if $R'(\gamma) < R''(\gamma)$. This is true only if $\gamma < \bar{\gamma}$. An entrepreneur has no incentive to stick with an incumbent that shrinks her cash flow, and she will always switch if she has chosen a level of innovation higher than $\bar{\gamma}$. Given that the entrepreneur always switches, there is no bank willing to finance a project with a level of innovation $\gamma > \bar{\gamma}$.

On the other hand, if the entrepreneur has chosen a level of innovation smaller than $\bar{\gamma}$ at time 0, the incumbent bank would set a repayment so as to make the entrepreneur indifferent between sticking and switching: $R'(\gamma) = \frac{F(\gamma)}{\theta} + B(\gamma)$. At time 0, a bank would set a time 1 repayment $R(\gamma)$ so as to break-even in expectation:

$$\begin{aligned} &-F(\gamma) - m(\gamma) + \theta(R(\gamma) - F(\gamma) + \theta R'(\gamma)) = 0 \\ &R(\gamma) = \frac{F(\gamma) + m(\gamma)}{\theta} - \theta B(\gamma) | \gamma < \bar{\gamma}. \end{aligned} \tag{12}$$

The last step is to find the optimal choice of the entrepreneur in terms of level of innovation γ, given the best responses of banks and conditionally on looking for bank funding. An entrepreneur maximizes her total payoff:

$$\underset{\gamma}{Max} \ \Pi(\gamma) \begin{cases} \Pi(\gamma) = (1+\theta)(\theta X(\gamma) - F(\gamma)) - m(\gamma) + \theta^2 B(\gamma), & \text{for } \gamma < \bar{\gamma}, \\ \Pi(\gamma) = 0, & \text{for } \gamma \geq \bar{\gamma}. \end{cases} \tag{13}$$

Given assumptions 5 and 6, the entrepreneur will always choose a level $\gamma^* < \bar{\gamma}$, as her payoff would be strictly positive. If she chooses a $\gamma \geq \bar{\gamma}$, no bank would finance her and she would get a payoff of 0. Conditionally on choosing $\gamma < \bar{\gamma}$, the level of innovation chosen, γ_B^* satisfies:

$$\exists \gamma_B^* < \bar{\gamma} \quad \text{s.t.} \quad (1+\theta)(\theta X'(\gamma_B^*) - F'(\gamma_B^*)) - m'(\gamma_B^*) + \theta^2 B'(\gamma_B^*) = 0. \tag{14}$$

I am agnostic about the solution γ_B^*. Depending on the shape of the functions, γ_B^* could be in the interior of the interval $(0; \bar{\gamma})$ or a corner solution, either 0 or $\bar{\gamma}$:

- *If* $\frac{\partial[(1+\theta)\text{NPV}(\gamma) - m(\gamma)]}{\partial \gamma} > -\theta^2 B'(\gamma) \forall \gamma \Rightarrow \gamma_B^* = \bar{\gamma}$,
- *If* $\frac{\partial[(1+\theta)\text{NPV}(\gamma) - m(\gamma)]}{\partial \gamma} < -\theta^2 B'(\gamma) \forall \gamma \Rightarrow \ \gamma_B^* = 0$,
- *If* $\frac{\partial[(1+\theta)\text{NPV}(\gamma) - m(\gamma)]}{\partial \gamma} = -\theta^2 B'(\gamma)$ for some $\hat{\gamma} \in (0; \bar{\gamma}) \Rightarrow \gamma_B^* = \hat{\gamma}$.

Therefore, conditionally on getting bank financing, relationship banking imposes an upper limit to the optimal level of innovation that an entrepreneur is willing to choose.

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3.2. *VC finance*

Alternatively, an entrepreneur could invest the search cost K and look for VC funding. As in the main model, VCs offer equity-based financing by buying a break-even portion of cash-flow rights α, which now will be a function of the degree of innovation of the project (i.e. $\alpha(\gamma)$). The search cost for the entrepreneur to find a VC is fixed and does not depend on the level of innovation chosen by the entrepreneur. A VC asks the entrepreneur a fraction of equity $\alpha(\gamma)$ such that

$$\begin{aligned} &-m(\gamma) - F(\gamma) + \alpha\theta X(\gamma) + \alpha\theta^2(X(\gamma) + V(\gamma)) - \theta F(\gamma) = 0 \\ &\Rightarrow \alpha^*(\gamma) = \frac{(1+\theta)F(\gamma) + m(\gamma)}{\theta(1+\theta)X(\gamma) + \theta^2 V(\gamma)}. \end{aligned} \tag{15}$$

The condition for VC financing to be feasible is $\alpha^*(\gamma) < 1$, as the VC cannot buy more than 100% of the firm. Re-arranging and combining with assumption 6 yields:

$$(1+\theta)\text{NPV}(\gamma) - m(\gamma) + \theta^2 V(\gamma) > 0. \tag{16}$$

The interpretation of Eq. (16) is the same as in the basic model: the project must be sufficiently profitable and VC value added must be sufficiently relevant, to offset the monitoring cost. Notably, the inequality in Eq. (16) is always satisfied under assumption 7. The total payoff of the entrepreneur under VC financing is

$$\Pi = (1+\theta)(\theta X(\gamma) - F(\gamma)) - m(\gamma) - K + \theta^2 V(\gamma). \tag{17}$$

As is the case in the baseline model, the payoff of the entrepreneur equals the sum of the two periods NPVs net of monitoring and search costs. As in the previous subsection, I can find the optimal level of innovation the entrepreneur is willing to choose under VC financing. The entrepreneur chooses γ to maximize her expected payoff:

$$\begin{aligned} &\underset{\gamma}{\text{Max}}\ \Pi = (1+\theta)(\theta X(\gamma) - F(\gamma)) - m(\gamma) - K + \theta^2 V(\gamma) \\ &\quad (1+\theta)(\theta X'(\gamma) - F'(\gamma)) - m'(\gamma) + \theta^2 V'(\gamma) > 0 \forall\, \gamma \\ &\Rightarrow \gamma^*_{VC} = \gamma_{\text{Max}}, \end{aligned} \tag{18}$$

where the inequality comes directly from assumptions 6 and 8. Therefore, it must be that $\gamma^*_{VC} > \gamma^*_B$, namely the optimal level of innovation is higher under VC financing than under bank funding with relationship lending. Notably, without any relationship benefit, under bank financing the entrepreneur would not be able to get funded, no matter the project chosen.

3.3. *The entrepreneur's choice*

At time 0, the entrepreneur has to choose whether to look for a VC or get bank funding. Given financiers' best responses, the entrepreneur would choose a level of innovation γ^*_{VC} when obtaining venture capital and γ^*_B when securing funding from a bank.

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The entrepreneur chooses the strategy that yields the highest expected payoff. The condition under which she decides to obtain bank financing is as follows:

$$\begin{aligned}&(1+\theta)(\theta X(\gamma_B^*) - F(\gamma_B^*)) - m(\gamma_B^*) + \theta^2 B(\gamma_B^*)\\ &\quad > (1+\theta)(\theta X(\gamma_{VC}^*) - F(\gamma_{VC}^*)) - m(\gamma_{VC}^*) - K + \theta^2 V(\gamma_{VC}^*),\end{aligned} \tag{19}$$

which can be rearranged as

$$\begin{aligned}&\underbrace{K + \theta^2[B(\gamma_B^*) - V(\gamma_{VC}^*)] + [m(\gamma_{VC}^*) - m(\gamma_B^*)]}_{Cost\ of\ Innovation}\\ &\quad > \underbrace{(1+\theta)[\mathrm{NPV}(\gamma_{VC}^*) - \mathrm{NPV}(\gamma_B^*)]}_{Benefit\ of\ Innovation}.\end{aligned} \tag{20}$$

The condition in Eq. (20) mirrors Eq. (10) in the baseline model. If the cost of innovation, defined as the sum of the cost of looking for VC financing, the opportunity cost of forgoing relationship banking benefit and the spread in monitoring costs due to starting a more innovative project, outweighs the benefit of innovation, which is the spread in NPV due to starting a more innovative project, the entrepreneur would resort to less innovative projects and will not use VC financing.

Importantly, the cost of innovation is increasing in monitoring costs and relationship lending benefit. Furthermore, from assumptions 4 and 5 the functions $m(\gamma)$ and $B(\gamma)$ are, respectively, increasing and decreasing in γ. Therefore, the greater the distance between γ_B^* and γ_{VC}^* the higher the cost of innovation. The difference between the two levels of innovation crucially depends on the condition in Eq. (14): when the function $B(\gamma)$ is very steep (i.e. its first derivative particularly negative), $\gamma_B^* = 0$ and the distance with γ_{VC}^* is maximized. Choosing VC funding, and therefore a more innovative project, is particularly costly in this situation, in which the relationship benefit is very high for the least innovative projects.

On the other hand, as in the baseline model, when VCs significantly increase the profitability of the project they finance (i.e. steep $V(\gamma)$) and when the search cost to obtain venture capital is low, the cost of innovation is lower. Notably, the benefit of innovation depends only on the entrepreneur, in the sense it depends only on how profitable the more innovative project is, compared to less innovative ones. At the same time, the cost of innovation does not depend on the entrepreneur, but rather on the efficiency and structure of the financing conditions. This is another main contribution of this paper: to show that the decision to innovate or not crucially depends on the financing conditions faced by entrepreneurs. Depending on these conditions, entrepreneurs may avoid innovating and using venture capital, in favor of less innovative projects pursued under bank financing.

4. Empirical Predictions and Future Research

The model presented in this paper generates a set of testable predictions at the micro level and provides insights for future research directions. First, firms with stronger

exposure to relationship lending, for example those borrowing from concentrated banking markets or operating in regions with a high prevalence of relationship-based intermediaries, should be less likely to pursue innovative projects. Empirically, this could be tested by linking measures of bank–firm relationship intensity (e.g. duration, exclusivity, or share of credit from a main bank) to firm-level innovation outcomes such as patenting, R&D intensity, or entry into new technological fields (Berger & Schaeck, 2011).

Second, the model predicts that such firms should also be less likely to seek or obtain venture capital financing. This suggests testable hypotheses using matched bank–firm–VC datasets: conditional on observables, firms with stronger bank relationships should be less likely to obtain subsequent VC funding, particularly for firms operating in sectors where innovation is more discretionary. As a corollary, this would imply that policies designed to help innovative start-ups through the use of public guarantees on bank funding may have their impact reduced by pushing these firms into long-lasting bank–firm relationships (Manaresi *et al.*, 2021, Core, 2025).

Third, the strength of these effects should vary systematically with local venture capital conditions. In regions where VC search costs are higher due, for example, to thinner VC markets, weaker networks, or geographic distance from VC hubs, the crowding-out effect of relationship lending should be more pronounced. Similarly, where venture capitalists provide lower value added (e.g. in less developed VC ecosystems), the relative attractiveness of bank financing for traditional projects should increase, further discouraging innovative activity. These predictions could be examined using regional variation within countries, exploiting differences in VC density, investor experience, or historical shocks to local financial ecosystems.

Fourth, my theoretical framework implies heterogeneous effects across industries. In sectors where innovation requires specialized knowledge or active investor involvement, the comparative disadvantage of banks should be stronger, making the distortion induced by relationship lending more salient. Conversely, in more traditional sectors (i.e. sectors in which current economic activity is more concentrated), the impact should be weaker. Similarly, the conclusions of the model encourage potential empirical strategies based on exogenous variation in bank structure. Policy changes, bank mergers, or regulatory reforms that affect the intensity of relationship lending could be used as sources of identification to study their impact on firm-level innovation choices and VC activity. For instance, shocks that strengthen bank–firm ties should lead to a relative decline in innovative investment and VC financing in affected regions or firms.

Taken together, these empirical implications highlight that the interaction between banks and venture capital should operate at a granular level across firms, regions, and industries, rather than solely through aggregate cross-country differences and long-term trends. From a policy perspective, the results suggest that fostering venture capital investment requires more than simply subsidizing VC activity. The broader structure of the financial system, and particularly the prevalence and nature of relationship lending, can shape entrepreneurial incentives and,

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ultimately, the direction of innovation. Policies aimed at promoting high-growth, innovative entrepreneurship should therefore consider how different forms of financial intermediation interact and jointly influence project selection.

5. Conclusions

This paper develops a theoretical framework linking relationship lending and venture capital through entrepreneurial project choice. The central insight is that banks and venture capitalists do not compete directly for the same transactions; rather, they interact indirectly by shaping the set of projects that entrepreneurs choose to undertake. Relationship lending alleviates financing frictions and relaxes credit constraints, but at the cost of limiting the scope of feasible projects to those that fit banks monitoring technologies and expertise. As a result, when relationship lending is sufficiently valuable, some entrepreneurs optimally switch from more innovative, high-upside projects to more traditional, lower-return ones. This endogenous shift in project choice reduces the pool of ventures suitable for VC financing and generates a crowding-out effect on venture capital activity.

The model further shows that this crowding-out effect is stronger when venture capital is harder to access (i.e. higher search costs) or when venture capitalists are less experienced and therefore add less value. Importantly, under self-financing, entrepreneurs would always choose the more innovative projects, highlighting that the distortion arises from the structure of financial intermediation rather than from technological constraints. Overall, the framework provides a novel mechanism through which the organization of the banking sector can influence not only the availability of credit but also the direction of innovation and the development of venture capital markets.

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