行政院國家科學委員會補助專題研究計畫成果報告

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借貸市場的事後道德危險行為

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計畫類別：×個別型計畫　　□整合型計畫

計畫編號：NSC89-2415-H-002-053-

執行期間：89 年 08 月 01 日 至 90 年 08 月 31 日

計畫主持人：陳南光

本成果報告包括以下應繳交之附件：

□赴國外出差或研習心得報告一份

□赴大陸地區出差或研習心得報告一份

□出席國際學術會議心得報告及發表之論文各一份

□國際合作研究計畫國外研究報告書一份

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摘要

從過去的研究我們發現，絕大部分的文獻均致力於設計一套符合誘因機制的契約來消除其所帶來的負面效果。在均衡時，當符合誘因機制的限制式成立，則道德危險的行為在事後便不至於出現。然而，如果借貸者可以隱藏部分收入，使借貸者或執法者無法循線尋獲。則貸款者即使有能力償付，也可能選擇倒帳。這時，即使放款者事前知悉貸款者可能故意倒帳而將這種可能性納入契約中，也可能無法遏止事後道德危險行為的產生。現實世界中，我們看到許多不同類型的道德危險行為確實存在。詐欺，掏空公司資金，盜賣公司資產，攜款潛逃和惡性倒閉等報導時有所聞。

本研究的目的是在契約的強制執行有困難的情況下，分析借貸契約的可能面貌，解釋事後道德危險行為的後果，並且應用在分析投資的最適性問題上。當借貸契約無法有效完全執行時，會發生借款人惡性倒帳的情況。同時我們發現過度投資的現象會發生在自有資本對債務比例小於投資計劃報酬的相對比例。如果政府對利息收入補貼(課稅)，則可消除過度(過少)投資，但這個政府並不見得是有益社會福利的。

關鍵詞

事後道德危險，契約強制執行，惡性倒帳，過度投資.

Abstract

The purpose of this study is to explain how the existence of ex-post moral hazard behavior in the credit markets affects the nature of financial contracting and the optimality of investment, and then derive certain policy implications. We relax the assumption that contracts are perfectly enforceable.

The moral hazard problem in this context is “looting,” as stressed by Akerlof and Romer (1993). Then we investigate the optimality of aggregate investment and its policy implications under an environment in which financial contracts are imperfectly enforceable. We show that the notion of either an over- or under-investment is compatible with a loan interest rate higher than the risk-free rate, and a positive fraction of default. Too much investment occurs when the ratio of own capital to debt (leverage ratio) is smaller than the ratio of project returns in terms of future

values across periods and too low investment occurs if otherwise. A subsidy (tax) on the risk-free interest income can close the over- (under-) investment gap, but this policy may not be welfare improving.

Key words

Ex-post Moral hazard, contract enforcement, looting, over-investment.

計畫緣由與目的

The “lemon's principle” outlined by Akerlof (1970) has been applied to all sorts of markets in which asymmetric information gives rise to an adverse selection problem. The implication for credit markets is that when the true qualities of potential borrowers are not uniform and can only be privately observed, low-quality borrowers will drive high-quality borrowers out of the market and thus the credit market shrinks. Stiglitz and Weiss (1981) find that the adverse selection problem leads to credit rationing. Therefore, there is under-investment in aggregate compared with the optimal level of investment when there is symmetric information. In contrast, De Meza and Webb (1987) reach an entirely different result using a framework in which the environment and information structure are very similar to Stiglitz and Weiss. They show that an adverse selection problem causes good entrepreneurs to draw in bad and consequently leads to too much investment than is socially efficient. As pointed out in their paper, it is their specification of the structure of stochastic project returns that leads to the strikingly different results. Thus, it raises a question regarding the optimality of investment in an environment in which the structure of stochastic project returns plays no role.

Apart from the difference in specification, a common feature of the above two papers together with a large body of literature is that the financial contracts are perfectly enforceable, that is, lenders are able to take over whatever the borrowers have in the state of default. Borrowers may default because their investment returns are below what were promised to the lenders. Another possibility, however, is that borrowers can profit more by running away without paying their debts. Absconding without paying debt is feasible only when the lenders have no full control of the investment returns or the savings of the borrowers, in other words, borrowers are able to hide output from lenders. In fact, this type of ex-post moral hazard behavior is very often observed in the real world.

Akerlof and Romer (1993) point out this aspect of moral hazard where entrepreneurs intend to go broke in order to grab more profits than they can get if they stayed in business. They name it “looting” to distinguish this behavior from the pursuit of highly risky investment in order to “gamble for resurrection.” This involves another important aspect of financial contracting, that is, financial contracts may not be perfectly enforceable in the sense that lenders and the courts are not entirely able to enforce borrowers to repay even if they can afford the debts. “Poor accounting, lax regulation, or low penalties for abuse give owners an incentive to pay themselves more than their firms are worth and then default on their debt obligations.” (Akerlof and Romer (1993), p.2) In particular, looting is more likely when looters can count on the government to bear the losses. In the literature concerning moral hazard problem, however, the behaviors such as misrepresentation and hiding output from lenders for private consumption can be completely prevented if the financial contract is properly designed, that is, moral hazard behavior will not be observed in equilibrium as long as incentive compatibility constraints hold.

結果與討論

We study the optimality of aggregate investment in a non-stochastic environment with asymmetric information in which financial contracts are imperfectly enforceable. We show that the notion of either an over- or under-investment is compatible with a loan interest rate higher than the risk-free rate, and a positive fraction of default. Some agents are drawn into borrowing and investment in order to reap more profit than they otherwise could, and to run away with cash while leaving their projects behind. Given the occupational choices and default decisions, whether the aggregate investment exhibits over- or under-investment in general depends on the borrower's own capital-debt ratio and the pattern of cash flows. An over-investment occurs if the ratio of own capital to debt is smaller than the ratio of cross-period cash flows in terms of future values, and vice versa. In other words, too much investment occurs when the stake in borrowers’ projects is too low or when the cash flows of investment returns are accrued relatively quick.

計畫成果自評

The results in our model have policy implications for economies in which contract enforcement is prohibitively costly either due to primitive screening and monitoring technology or under-development of the court system. First, in these economies, when entrepreneurs prefer projects that yield a faster stream of returns, it is more likely to result in over-investment, either because it is easier for entrepreneurs to be solvent or because this may attract more borrowers in order to pocket a higher profit and run away without repaying. Second, over-investment is also more likely to arise in economies where entrepreneurs have a low level of net worth relative to their debt, which may be due to, for example, a lenient collateral requirement or lending practice.

We show that a subsidy (tax) on the risk-free interest income can close the over- (under-) investment gap, but, in contrast to De Meza and Webb, the policy tends to reduce social welfare. Alternatively, a lump-sum transfer can only exacerbate the problem of over-investment because it provides the wrong incentives to the market. A lump-sum transfer in case of under-investment yields the same effect as a tax on risk-free interest income.

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