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RELATIONAL AND PROFESSIONAL DELEGATION IN CHINESE FAMILY FIRMS

This paper mainly discusses the owners' choice between relational and professional delegation in Chinese family firms during the transition period. Under relational delegation, owners delegate the tasks to their kindred; and under professional delegation, owners delegate the tasks to non-kin professional managers. Our theoretical analysis shows that under some conditions it is optimal for owners to choose relational delegation, while under other conditions it is optimal for owners to adopt professional delegation.

Keywords: relational delegation; professional delegation; moral hazard; principal-agent; family firm.

JEL Classification: D23; L20; M21.

Цзяньцай Пі

РОДИННЕ І ПРОФЕСІЙНЕ ДЕЛЕГУВАННЯ В КИТАЙСЬКИХ СІМЕЙНИХ ФІРМАХ

У статті розглянуто вибір власників між родинним і професійним делегуванням у китайських сімейних фірмах у перехідний період. У разі родинного делегування власники передають ухвалення рішень своїм родичам, а в разі професійного делегування власники передають управління професійним менеджерам, які не є родичами. Показано, що за деяких умов для власників оптимальним є родинне делегування, тоді як в інших умовах оптимальним є професійне делегування.

Ключові слова: родинне делегування; професійне делегування; моральний ризик; принципал-агент; сімейна фірма.

Форм. 18. Літ. 26.

Цзяньцай Пі

РОДСТВЕННОЕ И ПРОФЕССИОНАЛЬНОЕ ДЕЛЕГИРОВАНИЕ В КИТАЙСКИХ СЕМЕЙНЫХ ФИРМАХ

В статье рассмотрен выбор владельцев между родственным и профессиональным делегированием в китайских семейных фирмах в переходный период. В случае родственного делегирования владельцы передают принятие решений своим родственникам, а в случае профессионального делегирования владельцы передают управление профессиональным менеджерам, не являющимся родственниками. Показано, что при некоторых условиях для владельцев оптимальным является родственное делегирование, в то время как в других условиях оптимальным является профессиональное делегирование.

Ключевые слова: родственное делегирование; профессиональное делегирование; моральный риск; принципал-агент; семейная фирма.

1. Introduction. China's private-owned enterprises, especially family firms, play an important part in endogenously promoting China's economic growth performance (Whyte, 1995; Anderson et al., 2003; Allen et al., 2005; Pi, 2010). But during China's transition from the planning track to the market one, a lot of institutional problems

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turn up, such as a lack of effective manager market (Pi, 2010). Family firms need managerial abilities when they grow bigger and bigger. On the one hand, owners trust their family members, and always delegate important tasks to them. However, these family members often lack managerial abilities and cannot fulfill the delegated tasks well. On the other hand, owners distrust hired non-kin managers, although they may have more managerial abilities and can perform the delegated tasks better. In order to assign their family members to appropriate positions and bring them to their competence, owners often provide them with on-the-job training. It is trust between owners and their family members that makes the internal monitoring mechanism of family firms almost unneeded. However, some family members are not qualified for their positions even if they have high priority in promotion and training. In this circumstances owners have to delegate some important tasks to non-kin managers. At the same time, it is distrust between owners and non-kin managers that makes the internal monitoring mechanism of at family firms needed. Distrust results from the imperfectness of the manager market, where non-kin managers often betray owners without any formal punishment if they choose to leave their current positions. The introduction of internal monitoring mechanism is costly, so owners have to make a trade-off. In fact, this trade-off can be generalized into the owners' choice between relational managers and professional ones. According to Zhang and Ma (2008), this kind of choice is "largely determined by the relative strength of impetus factors and impediment factors".

In the light of the definition in Wikipedia, "Delegation is the assignment of authority and responsibility to another person to carry out specific activities". Delegation theory is an important and active academic area in mainstream economics. There are many original papers which developed the theory of delegation to the extent of its maturity. Delegation is thought of as a double-edged sword. That is to say, delegation entails both the benefit and the cost to a principal. As far as the benefit of delegation is concerned, many studies were undertaken from different perspectives. Holmstrom (1984) argues that the benefit of delegation is to allow a principal to employ agents' specific knowledge. Williamson (1985) and Grossman and Hart (1986) hold that delegation can induce agents to make specific investment. Baliga and Sjoström (1998) and Laffont and Martimort (1998) highlight that delegation can serve as an effective arrangement to deal with the agents' problem of collusion. Rajan and Zingales (1998) and Baker et al. (1999) deem that delegation can act as a commitment device to loosen monitoring on an agent. Aghion et al. (2004) hold that delegation can be used to check agent's intention to cooperate. However, the delegated agent may abuse his power, which will do harm to principal. There are many studies which try to find different solutions to reduce the cost of delegation. Corts and Neher (2003) and Alonso and Matouschek (2007, 2008) concentrate on the role of principal's effective commitment to deal with agent's strategical behavior. Lohmann and Hopenhayn (1998), Narayanan and Davila (1998) and Foss and Laursen (2005) center on the role of principal's monitoring or control systems. Currarini and Feri (2006) and Marino (2006) focus on principal's alternative choice to delegation which is contingent on constraint conditions.

Analogous to Lohmann and Hopenhayn (1998), Narayanan and Davila (1998) and Foss and Laursen (2005), this paper also introduces the monitoring mechanism

when owners choose professional managers. However, when owners choose relational managers, there is no monitoring mechanism in family firms. This paper also conducts a comparative institutional analysis, which is not between delegation and its alternative just like in Currarini and Feri (2006) and Marino (2006), but between different modes of managerial delegation. There is a paper that is closely related to ours in that it makes a trade-off between different modes of managerial delegation (Das, 1997), but it centers on delegation of quantity or price setting power to managers by owners, which is essentially different from ours. For the sake of expositional simplicity, throughout the paper the owners' choice of relational managers is called relational delegation, and the owners' choice of non-kin professional managers is called professional delegation.

The rest of the paper is organized as follows. Section 2 is the basic setup. Section 3 provides the model of relational delegation. Section 4 offers the model of professional delegation. Section 5 conducts a comparative analysis of the outcomes derived from two different models. Some concluding remarks are made in Section 6.

2. The Basic Setup. In this section, we follow Innes (1990) and Laffont and Martimort's (2002) analytical framework. It is assumed that the delegated relational or professional manager is risk-neutral. If he exerts effort level $e \in \{0, 1\}$, the firm's added-value will be \bar{V} with probability $\pi(e)$, and \underline{V} with probability $1 - \pi(e)$, where $0 < \pi(e) < 1$. When the delegated manager's performance is good, he can get a bonus; however, when his performance is bad, he will not be punished. That is to say, he is protected by limited liability. When he exerts no effort, his effort cost is $\Psi_0 = 0$. The following mathematical definitions should be noted, $\pi(1) = \pi_1$, $\pi(0) = \pi_0$, $\Delta\pi = \pi_1 - \pi_0 > 0$, $\Delta V = \bar{V} - \underline{V} > 0$, where the subscripts 0 and 1 represent $e = 0$ and $e = 1$, respectively.

There are two modes of delegation that owner of family firms can choose from, either relational delegation, or professional delegation.

When relational delegation is adopted, owner delegates the task to a relational manager, who is always trusted. We use the superscript R to denote relational delegation. When it is under relational delegation, if relational manager exerts effort, then his effort cost is $\Psi_1 = \Psi_1^R = \Psi > 0$; however, if a relational manager does not exert effort, then his effort cost is $\Psi_0 = \Psi_0^R > 0$. The reason why we set $\Psi_0^R > 0$ is that there is some kind of spiritual and psychological cost when a relational manager shirks, which is similar to Pi (2000, 2011a, 2011b). We assume that $\Psi_0^R > \Psi$, which means that for a relational manager, exerting effort without pricks of conscience brings more disutility than shirking with some interior guilt to an owner. In this case, $\pi(e)$ is set equal to $\rho(e)$ in order to separate it easily from the case of professional delegation. That is to say, $\rho(1) = \rho_1$, $\rho(0) = \rho_0$, $\Delta\rho = \rho_1 - \rho_0 > 0$.

When professional delegation is adopted, an owner delegates a task to a professional non-kin manager, who is probably distrusted by an owner. We use the superscript P to denote professional delegation. When it is under professional delegation, if a professional manager exerts effort, then his effort cost is $\Psi_1 = \Psi_1^P = \Psi > 0$; however, if he does not exert effort, then his effort cost is $\Psi_0 = \Psi_0^P > 0$. The above assumptions are similar to those in traditional literature. In order to control professional manager, an owner has to adopt a monitoring mechanism, which costs c to an

owner. This monitoring mechanism can detect manager's shirking behavior with probability ρ , and the caught manager will be fined f . In this case, $\pi(e)$ is set equal to $q(e)$ in order to separate it easily from the case of relational delegation. That is to say, $q(1) = q_1, q(0) = q_0, \Delta q = q_1 - q_0 > 0$.

Although ρ_1, ρ_0, q_1 , and q_0 are all exogenously given, their relations can be explained by their real-life implications. When a professional manager is more able or has more useful specific knowledge than a relational manager, his success probabilities may be higher than those of a relational manager. That is to say, $q_1 \geq \rho_1$, and $q_0 \geq \rho_0$. However, when a professional manager is less able or has less useful specific knowledge than a relational manager, his success probabilities may be lower than those of a relational manager. That is to say, $q_1 < \rho_1$, and $q_0 < \rho_0$.

Throughout the paper, for the sake of expositional simplicity, just like in Pi (2011a), we call Ψ_0^R the uneasiness cost, Ψ the exertion cost, c the monitoring cost, and ρf the expected punishment cost.

The timing of the principal-agent game is as follows.

(1) At $t=1$, the owner of the family firm offers a take-it-or-leave-it efficiency wage contract $\{\underline{t}, \bar{t}\}$ to the manager, either relational or professional. Here, we set $\bar{t} > \underline{t} \geq 0$, and \bar{t} can be seen as a bonus.

(2) At $t=2$, the owner of the family firm chooses whether to incentive the manager or not.

(3) At $t=3$, the manager chooses an effort, which is equal to 1 or 0.

(4) At $t=4$, the family firm's added-value is realized.

(5) At $t=5$, the signed contract is enforced.

3. Relational Delegation

When it is under relational delegation, the owner's programming problem will be:

$$\begin{aligned} & \max_{\{\underline{t}, \bar{t}\}} \rho_1(\bar{V} - \bar{t}) + (1 - \rho_1)(\underline{V} - \underline{t}) \\ \text{s.t.} \quad & \rho_1 \bar{t} + (1 - \rho_1) \underline{t} - \Psi \geq \rho_0 \bar{t} + (1 - \rho_0) \underline{t} - \Psi_0^R \end{aligned} \tag{1}$$

$$\rho_1 \bar{t} + (1 - \rho_1) \underline{t} - \Psi \geq 0 \tag{2}$$

$$\underline{t} \geq 0 \tag{3}$$

(1), (2), and (3) are the relational manager's incentive compatibility, participation, and limited liability constraints, respectively. In order to neglect the relational manager's participation constraint when he exerts no effort (namely, $\rho_0 \bar{t} + (1 - \rho_0) \underline{t} - \Psi_0^R \geq 0$), we assume that $\frac{\Psi_0^R}{\rho_0} \leq \min\left\{\frac{\Psi - \Psi_0^R}{\Delta \rho}, \frac{\Psi}{\rho_1}\right\}$ or $\min\left\{\frac{\Psi - \Psi_0^R}{\Delta \rho}, \frac{\Psi}{\rho_1}\right\} < \frac{\Psi_0^R}{\rho_0} \leq \max\left\{\frac{\Psi - \Psi_0^R}{\Delta \rho}, \frac{\Psi}{\rho_1}\right\}$.

According to the standard incentive theory, it is easy for us to find that constraint (3) is binding and that constraint (1) is binding when $\Psi \geq \frac{\rho_1}{\rho_0} \Psi_0^R$, and that constraint (2) is binding when $\Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$.

Solving this programming problem, we obtain:

If $\Psi \geq \frac{\rho_1}{\rho_0} \Psi_0^R$, then

$$\underline{t}^{R^*} = 0 \quad (4)$$

$$\bar{t}^{R^*} = \frac{\Psi - \Psi_0^R}{\Delta \rho} \quad (5)$$

If $\Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$, then

$$\underline{t}^{R^*} = 0 \quad (6)$$

$$\bar{t}^{R^*} = \frac{\Psi}{\rho_1} \quad (7)$$

The superscript R^* stands for the second-best state under relational delegation. \bar{t}^{R^*} is the manager's efficiency wage under relational delegation.

If $\Psi \geq \frac{\rho_1}{\rho_0} \Psi_0^R$, then the owner's equilibrium utility will be:

$$U_O^{R^*} = \rho_1(\bar{V} - \frac{\Psi - \Psi_0^R}{\Delta \rho}) + (1 - \rho_1)\underline{V} = \rho_1(\Delta V - \frac{\Psi - \Psi_0^R}{\Delta \rho}) + \underline{V} \quad (8)$$

If $\Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$, then the owner's equilibrium utility will be:

$$U_O^{R^*} = \rho_1(\bar{V} - \frac{\Psi}{\rho_1}) + (1 - \rho_1)\underline{V} = \rho_1\Delta V - \Psi + \underline{V} \quad (9)$$

Throughout paper, we use the subscript O to denote the owner of the family firm.

For the sake of simplicity, we assume that $\Delta \rho \Delta V \geq \max\{\frac{\rho_1(\Psi - \Psi_0^R)}{\Delta \rho}, \Psi\}$, which can ensure that the owner always chooses to incentivize the relational manager.

4. Professional Delegation

When it is under the professional delegation, the owner's programming problem will be:

$$\begin{aligned} & \max_{\{\underline{t}, \bar{t}\}} q_1(\bar{V} - \bar{t} - c) + (1 - q_1)(\underline{V} - \underline{t} - c) \\ \text{s.t.} & \quad q_1\bar{t} + (1 - q_1)\underline{t} - \Psi \geq q_0\bar{t} + (1 - q_0)\underline{t} - \rho f \end{aligned} \quad (10)$$

$$q_1\bar{t} + (1 - q_1)\underline{t} - \Psi \geq 0 \quad (11)$$

$$\underline{t} \geq 0 \quad (12)$$

(10), (11), and (12) are the professional manager's incentive compatibility, participation, and limited liability constraints, respectively. In order to neglect the professional manager's participation constraint when he exerts no effort (namely, $q_0\bar{t} + (1 - q_0)\underline{t} - \rho f \geq 0$),

we assume that $\frac{\rho f}{q_0} \leq \min\{\frac{\Psi - \rho f}{\Delta q}, \frac{\Psi}{q_1}\}$ or $\min\{\frac{\Psi - \rho f}{\Delta q}, \frac{\Psi}{q_1}\} < \frac{\rho f}{q_0} \leq \max\{\frac{\Psi - \rho f}{\Delta q}, \frac{\Psi}{q_1}\}$.

According to the standard incentive theory, it is easy for us to find that constraint (12) is binding and that constraint (10) is binding when $\Psi \geq \frac{q_1}{q_0} \rho f$, and that constraint (11) is binding when $\Psi < \frac{q_1}{q_0} \rho f$.

Solving this programming problem, we obtain:

If $\Psi \geq \frac{q_1}{q_0} \rho f$, then

$$\underline{t}^{P^*} = 0 \tag{13}$$

$$\bar{t}^{P^*} = \frac{\Psi - \rho f}{\Delta q} \tag{14}$$

If $\Psi < \frac{q_1}{q_0} \rho f$, then

$$\underline{t}^{P^*} = 0 \tag{15}$$

$$\bar{t}^{P^*} = \frac{\Psi}{q_1} \tag{16}$$

The superscript P^* stands for the second-best state under professional delegation. \bar{t}^{P^*} is the manager's efficiency wage under professional delegation.

If $\Psi \geq \frac{q_1}{q_0} \rho f$, then the owner's equilibrium utility will be:

$$U_O^{P^*} = q_1(\bar{V} - \frac{\Psi - \rho f}{\Delta q}) + (1 - q_1)\underline{V} - c = q_1(\Delta V - \frac{\Psi - \rho f}{\Delta q}) + \underline{V} - c \tag{17}$$

If $\Psi < \frac{q_1}{q_0} \rho f$, then the owner's equilibrium utility will be:

$$U_O^{P^*} = q_1(\bar{V} - \frac{\Psi}{q_1}) + (1 - q_1)\underline{V} - c = q_1\Delta V - \Psi + \underline{V} - c \tag{18}$$

For the sake of simplicity, we assume that $\Delta q \Delta V \geq \max\{\frac{q_1(\Psi - \rho f)}{\Delta \rho}, \Psi\}$, which can ensure that the owner always chooses to incentivize the professional manager.

5. Comparative Analysis

In this section, we will conduct a comparative analysis of the equilibrium outcomes under different modes of delegation.

By comparison, it is easy for us to obtain the following 6 propositions.

Proposition 1: When $\frac{\rho_1}{\rho_0} \Psi_0^R > \frac{q_1}{q_0} \rho f$ if $\Psi < \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V + c \geq 0$, then it is optimal for the owner to choose relational delegation; if $\Psi < \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V + c < 0$ then it is optimal for the owner to choose professional delegation.

Proof: When $\frac{\rho_1}{\rho_0} \Psi_0^R > \frac{q_1}{q_0} \rho f$ if $\Psi < \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V + c \geq 0$, then from (9) and (18), we obtain: $U_O^{R^*} - U_O^{P^*} = (\rho_1 - q_1)\Delta V + c \geq 0$.

When $\frac{\rho_1}{\rho_0} \Psi_0^R > \frac{q_1}{q_0} \rho f$ if $\Psi < \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V + c < 0$, then from (9) and (18), we obtain: $U_O^{R^*} - U_O^{P^*} = (\rho_1 - q_1)\Delta V + c < 0$.

From Proposition 1, we know that when the uneasiness cost is high enough relative to the expected punishment cost and at the same time the exertion cost is low enough relative to the expected punishment cost, if the monitoring cost is high

enough, then the owner tends to choose relational delegation; and if the monitoring cost is low enough, then the owner tends to choose professional delegation.

Proposition 2: When $\frac{\rho_1}{\rho_0} \Psi_0^R > \frac{q_1}{q_0} \rho f$ if $\frac{q_1}{q_0} \rho f \leq \Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V - \Psi + q_1 \frac{\Psi - \rho f}{\Delta q} + c \geq 0$, then it is optimal for the owner to choose the relational delegation; if $\frac{q_1}{q_0} \rho f \leq \Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V - \Psi + q_1 \frac{\Psi - \rho f}{\Delta q} + c < 0$, then it is optimal for the owner to choose the professional delegation.

Proof: When $\frac{\rho_1}{\rho_0} \Psi_0^R > \frac{q_1}{q_0} \rho f$ if $\frac{q_1}{q_0} \rho f \leq \Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V - \Psi + q_1 \frac{\Psi - \rho f}{\Delta q} + c \geq 0$ then from (9) and (17), we obtain: $U_O^{R*} - U_O^{P*} = (\rho_1 - q_1)\Delta V - \Psi + q_1 \frac{\Psi - \rho f}{\Delta q} + c \geq 0$.

When $\frac{\rho_1}{\rho_0} \Psi_0^R > \frac{q_1}{q_0} \rho f$ if $\frac{q_1}{q_0} \rho f \leq \Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V - \Psi + q_1 \frac{\Psi - \rho f}{\Delta q} + c < 0$ then from (9) and (17), we obtain: $U_O^{R*} - U_O^{P*} = (\rho_1 - q_1)\Delta V - \Psi + q_1 \frac{\Psi - \rho f}{\Delta q} + c < 0$

From Proposition 2 we know that when the uneasiness cost is sufficiently high relative to the expected punishment cost and at the same time the exertion cost is moderate, if the monitoring cost is sufficiently high, then the owner tends to choose relational delegation; and if the monitoring cost is sufficiently low, then the owner tends to choose professional delegation.

Proposition 3: When $\frac{\rho_1}{\rho_0} \Psi_0^R > \frac{q_1}{q_0} \rho f$ if $\Psi \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c \geq 0$, then it is optimal for the owner to choose relational delegation; if $\Psi \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c < 0$, then it is optimal for the owner to choose professional delegation.

Proof: When $\frac{\rho_1}{\rho_0} \Psi_0^R > \frac{q_1}{q_0} \rho f$ if $\Psi \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c \geq 0$, then from (8) and (17), we obtain: $U_O^{R*} - U_O^{P*} = (\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c \geq 0$

When $\frac{\rho_1}{\rho_0} \Psi_0^R > \frac{q_1}{q_0} \rho f$ if $\Psi \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c < 0$, then from (8) and (17), we obtain: $U_O^{R*} - U_O^{P*} = (\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c < 0$.

From Proposition 3 we know that when the uneasiness cost is high enough relative to the expected punishment cost and at the same time the exertion cost is high enough relative to the uneasiness cost, if the monitoring cost is high enough, then the owner tends to choose relational delegation; and if the monitoring cost is low enough, then the owner tends to choose professional delegation.

Proposition 4: When $\frac{q_1}{q_0} \rho f \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ if $\Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V + c \geq 0$, then it is optimal for the owner to choose relational delegation; if $\Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V + c < 0$, then it is optimal for the owner to choose professional delegation.

Proof: When $\frac{q_1}{q_0} \rho f \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ if $\Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V + c \geq 0$, then from (9) and (18), we obtain: $U_O^{R*} - U_O^{P*} = (\rho_1 - q_1)\Delta V + c \geq 0$

When $\frac{q_1}{q_0} \rho f \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ if $\Psi < \frac{\rho_1}{\rho_0} \Psi_0^R$ and $(\rho_1 - q_1)\Delta V + c < 0$, then from (9) and (18) we obtain: $U_O^{R*} - U_O^{P*} = (\rho_1 - q_1)\Delta V + c < 0$.

From Proposition 4 we know that when the uneasiness cost is sufficiently low relative to the expected punishment cost and at the same time the exertion cost is sufficiently low relative to the uneasiness cost, if the monitoring cost is sufficiently high, then the owner tends to choose relational delegation; and if the monitoring cost is sufficiently low, then the owner tends to choose professional delegation.

Proposition 5: When $\frac{q_1}{q_0} \rho f \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ if $\frac{\rho_1}{\rho_0} \Psi_0^R \leq \Psi < \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + \Psi + c \geq 0$, then it is optimal for the owner to choose relational delegation; if $\frac{\rho_1}{\rho_0} \Psi_0^R \leq \Psi < \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + \Psi + c < 0$ then it is optimal for the owner to choose professional delegation.

Proof: When $\frac{q_1}{q_0} \rho f \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ if $\frac{\rho_1}{\rho_0} \Psi_0^R \leq \Psi < \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + \Psi + c \geq 0$, then from (8) and (18), we obtain: $U_O^{R*} - U_O^{P*} = (\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + \Psi + c \geq 0$.

When $\frac{q_1}{q_0} \rho f \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ if $\frac{\rho_1}{\rho_0} \Psi_0^R \leq \Psi < \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + \Psi + c < 0$, then from (8) and (18) we obtain: $U_O^{R*} - U_O^{P*} = (\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + \Psi + c < 0$.

From Proposition 5, we know that when the uneasiness cost is low enough relative to the expected punishment cost and at the same time the exertion cost is moderate, if the monitoring cost is high enough, then the owner tends to choose relational delegation; and if the monitoring cost is low enough, then the owner tends to choose professional delegation.

Proposition 6: When $\frac{q_1}{q_0} \rho f \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ if $\Psi \geq \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c \geq 0$, then it is optimal for the owner to choose relational delegation; if $\Psi \geq \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1)\Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c < 0$, then it is optimal for the owner to choose professional delegation.

Proof: When $\frac{q_1}{q_0} \rho f \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ if $\Psi \geq \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1) \Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c \geq 0$,

then from (8) and (17), we obtain: $U_0^{R^*} - U_0^{P^*} = (\rho_1 - q_1) \Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c \geq 0$.

When $\frac{q_1}{q_0} \rho f \geq \frac{\rho_1}{\rho_0} \Psi_0^R$ if $\Psi \geq \frac{q_1}{q_0} \rho f$ and $(\rho_1 - q_1) \Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c < 0$,

then from (8) and (17) we obtain: $U_0^{R^*} - U_0^{P^*} = (\rho_1 - q_1) \Delta V - \rho_1 \frac{\Psi - \Psi_0^R}{\Delta \rho} + q_1 \frac{\Psi - \rho f}{\Delta q} + c < 0$.

From Proposition 6 we know that when the uneasiness cost is sufficiently low relative to the expected punishment cost and at the same time the exertion cost is sufficiently high relative to the expected punishment cost, if the monitoring cost is sufficiently high, then the owner tends to choose relational delegation; and if the monitoring cost is sufficiently low, then the owner tends to choose professional delegation.

6. Concluding Remarks. In this paper, we mainly discuss the owners' choice between relational and professional delegation in Chinese family firms. In order to maximize their utility functions, in the principal-agent game owners will make their choices according to the backward induction, which is a process of reasoning backwards in time. Our theoretical analysis shows that under some conditions it is optimal for owners to choose relational delegation, while under other conditions it is optimal for owners to choose professional delegation. Specifically, there are 6 distinct cases that we should pay close attention to. Whatever the case may be, the monitoring cost plays a very important role in determining the owners' choice of delegation modes. That is to say, when the monitoring cost is sufficiently high, it is optimal for owners to choose relational delegation; however, when the monitoring cost is sufficiently low, it is optimal for owners to choose professional delegation. On the one hand, different cases may mean different choices. On the other hand, different cases may imply the same choice. What is important is that in different cases the critical values of monitoring cost may be greatly different or just identical. In a word, the choice of delegation modes in Chinese family firms is condition-dependent.

Acknowledgement: This work is supported by the Major Bidding Project of the National Social Science Foundation of China (Grant No. 10zd&020), the Humanity and Social Science "Reform Program" of "Project 985" of Nanjing University (Grant No. NJU985FW01), and the Priority Academic Program Development (PAPD) of Jiangsu Higher Education Institutions.

References

- Aghion, P., Dewatripont, M., Rey, P. (2004). Transferable Control, Journal of the European Economic Association, 2(1), 115-138.
- Allen, F., Qian, J., Qian, M. (2005). Law, Finance, and Economic Growth in China, Journal of Financial Economics, 77(1), 57-116.
- Alonso, R., Matouschek, N. (2007). Relational Delegation, RAND Journal of Economics, 38(4), 1070-1089.
- Alonso, R., Matouschek, N. (2008). Optimal Delegation, Review of Economic Studies, 75(1), 259-293.
- Anderson, A. R., Li, J.-H., Harrison, R. T., Robson, P. J. A. (2003). The Increasing Role of Small Business in the Chinese Economy, Journal of Small Business Management, 41(3), 310-316.

- Baker, G., Gibbons, R., Murphy, K. J.* (1999). Informal Authority in Organizations, *Journal of Law, Economics, and Organization*, 15(1), 56-73.
- Baliga, S., Sjoström, T.* (1998). Decentralization and Collusion, *Journal of Economic Theory*, 83(2), 196-232.
- Colombo, M. G., Delmastro, M.* (2004). Delegation of Authority in Business Organizations: An Empirical Test, *Journal of Industrial Economics*, 52(1), 53-80.
- Corts, K. S., Neher, D. V.* (2003). Credible Delegation, *European Economic Review*, 47(3), 395-407.
- Das, S. P.* (1997). Strategic Managerial Delegation and Trade Policy, *Journal of International Economics*, 43(1-2), 173-188.
- Foss, N. J., Laursen, K.* (2005). Performance Pay, Delegation and Multitasking under Uncertainty and Innovativeness: An Empirical Investigation, *Journal of Economic Behavior and Organization*, 58(2), 246-276.
- Grossman, S. J., Hart, O. D.* (1986). The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration, *Journal of Political Economy*, 94 (4), 691-719.
- Holmstrom, B.* (1984). On the Theory of Delegation, in M. Boyer and R. Kihlstrom, eds., *Bayesian Models in Economic Theory*. New York: North-Holland.
- Innes, R. D.* (1990). Limited Liability and Incentive Contracting with Ex-ante Action Choices, *Journal of Economic Theory*, 52(1), 45-67.
- Laffont, J.-J., Martimort, D.* (1998). Collusion and Delegation, *Rand Journal of Economics*, 29(2), 280-305.
- Laffont, J.-J., Martimort, D.* (2002). *The Theory of Incentives*. New Jersey: Princeton University Press.
- Lohmann, S., Hopenhayn, H.* (1998). Delegation and the Regulation of Risk, *Games and Economic Behavior*, 23(2), 222-246.
- Marino, A. M.* (2006). Delegation versus an Approval Process and the Demand for Talent, *International Journal of Industrial Organization*, 24(3), 487-503.
- Narayanan, V. G., Davila, A.* (1998). Using Delegation and Control Systems to Mitigate the Trade-Off Between the Performance-Evaluation and Belief-Revision Uses of Accounting Signals, *Journal of Accounting and Economics*, 25(3), 255-282.
- Pi, J.* (2010). Transitional Governance of Chinese Family Firms, *Actual Problems of Economics*, 9 (111), 312-320.
- Pi, J.* (2011a). The Choice between the Formal and Relational Financing in Chinese Family Firms, *Economic Computation and Economic Cybernetics Studies and Research*, 45(1), 189-201.
- Pi, J.* (2011b). Relational Incentives in Chinese Family Firms, *Panoeconomicus*, 58(4), 511-524.
- Rajan, R., Zingales, L.* (1998). Power in a Theory of the Firm, *Quarterly Journal of Economics*, 113(2), 387-432.
- Whyte, M. K.* (1995). The Social Roots of China's Economic Development, *China Quarterly*, 144 (Special Issue), 999-1019.
- Williamson, O. E.* (1985). *The Economic Institutions of Capitalism*, New York: Free Press.
- Zhang, J., Ma, H.* (2008). Adoption of Professional Management in Chinese Family Business: A Multilevel Analysis of Impetuses and Impediments, *Asia Pacific Journal of Management*, 25(2), 171-188.

Стаття надійшла до редакції 17.01.2012.