Corporate Governance, Executive Compensation Incentives and Corporate Performance --- Analysis of Improved Principal-Agent Innovation Model

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***Abstract* — In this paper, the case of the introduction of observable variables to expound research on principal - agent model, and establish the innovation model of company executive compensation incentives. By comparing the effect of model incentive before and after bringing other observable variables, we analyze the change of incentive intensity, agency costs, actual income and risk sharing, which theoretically proves the superiority of the model. It is concluded: there is not causal relationship between the effort of operator and fixed remuneration paid to him, but based on the output pay system, there will be significant incentive effects on the operators.**

Keywords - corporate governance; principal-agent model; executive compensation incentive; corporate performance

I. INTRODUCTION

More and more scholars recognized that, bring the principal-agent theory to the level of corporate governance is very necessary. In corporate governance, the company entrusted the decision-making rights and responsibilities to the agent, and different agents assume a different strategic role. The extent of the company's difficulties in observation and evaluation process depends on the strategic role of an agent. Meanwhile, China's enterprise reform has reached a critical step, while corporate governance becomes an important content to improve business performance.

Jensen M.,Meckling W(1976) [1] think due to the number of pay can be controlled to a low level, the management risk, which the behavior-based compensation plans bring is relatively low. Therefore, whatever the strategic role of an agent, we all require an effective incentive and restraint mechanisms. YUAN Jiangtian et al. (2006) [2] using the multi task principal agent model, this study analyzes the SOE(state owned enterprise) manager's incentive contracts in two aspects: the tasks are inter-independent and inter-dependent. We find that, when the tasks are inter-dependent, the incentive contract with a SOE manager is not only multi tasked, but also threshed. That is, the incentive for a SOE manager is positive only when both the SOE manager's political performance and preference performance satisfy the threshed incentive conditions simultaneously; otherwise, it is negative. The threshed incentive conditions are thereby presented in this article. CHEN Qian et al. (2012) [3]on the basis of deeply analyzing and refining the equity incentive process, under the assumptions that stock market is effective and shareholders are risk neutral and senior executives are risk averse, taking maximization of shareholders' return as decision objective, a mathematical model is set up to research principle-agent relationship of listed companies under equity incentives theoretically. The results show that, under equity incentives, the optimal equity incentive quantity of shareholders to senior executives, and senior executives' optimal effort level, and the total equilibrium expected return of shareholders and senior executives will increase in senior executives' abilities, and decrease in intensity of industry competition and uncertainty of market environment. The research results of this paper, to some extent, reveal the effective mechanism of equity incentives on the principle-agent relationship of listed companies, and clarify the optimal equity incentive quantity of shareholders to senior executives and senior executives' optimal effort level and their effect factors. CHEN Jiatian(2014) [4] using an agency theory framework and data from listed companies on the SME board of China，we explore the effects of family ownership，family control and family involvement on executive compensation in family firms ， in comparison with non-family firms． The results show that the level of executive compensation and the pay-performance sensitivity in family firms are lower than those in non-family firms．Pyramids structure exerts a significant effect on executive compensation ， which varies across types of family firms．The presence of family members has no significant effects． The results further confirm the implication of exploring the executive compensation on the basis of the classification of family firms.

Scholars' research shows that the reason why the state-owned enterprises lack of vitality and behaved inefficient isn't scarcity and the pros and cons of entrepreneur resources, but rather the lack of an effective mechanism that brings the limited operator resources into production and management areas. Therefore, the rational design of executive compensation incentive system is imperative.

II. THE PRELIMINARY

The earliest research about enterprise managers incentive was finished by Taussings and Baker in 1925, but the difference with the theory is that, they found that only a very small correlation between business operators' pay and corporate performance. They were much unexpected about this, so they began to strengthen the research of other factors affect manager compensation. After this, it had principal-agent theory, labor capital theory, corporate governance theory and so on, raised their explanatory framework from a different perspective on managerial compensation and incentive issues.

Agency theory is a classical theory to explain the company's governance issues; it is built on asymmetric information based on game theory. Information asymmetry may occur before the signing of the contract. For example, in the used car market, used car sellers know more about performance than the old car buyer. After the signing of the contract will also occur information asymmetry. For example, shareholders usually can not observe whether the business operators put enough effort. In addition to this, operator knows more information on the development of business opportunities than the owners. Due to the presence of asymmetric information, people always trying to reduce the trouble caused by information asymmetry before signing the contract. Because shareholder hiring managers proxy his own business, separated the rights of ownership and management, in this case, the problem caused by information asymmetry is very typical. Berle.AdolfAugustus and GardinerC.Means summarized arising conflicts because the separation of ownership and management, then proposed the principal-agent theory. The principal-agent theory which is living in the mainstream believes that, it is the principal-agent relationship between business owners and managers. Because the information asymmetry between the business owners and managers, in order to encourage the agents to work for the client, principal should work as agent performance-based remuneration is paid to the agent.

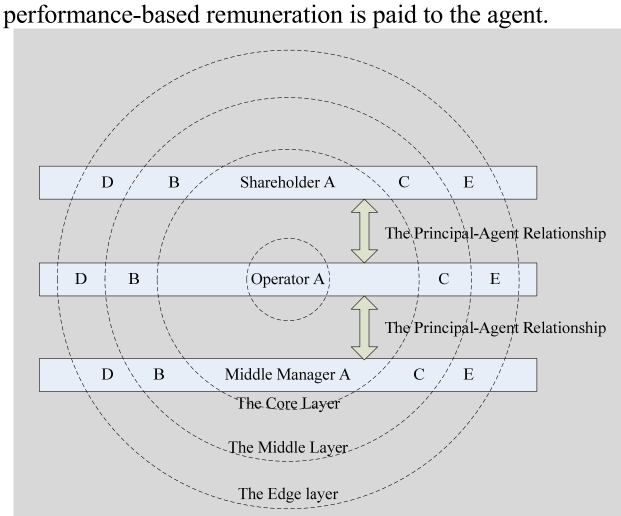

Figure 1. The principal-agent relationship picture

III. CONSTRUCTION OF INCENTIVE MODEL: EXTENSION RESEARCH OF PRINCIPAL-AGENT THEORY

The core of agency model is to solve the issues of agent's moral hazard and adverse selection, and the root causes of the problems are asymmetric information between principal and agent. The design principle of incentives is, Principal by means of a distribution system to reward the agent for more information, in order to reduce information asymmetry between principal and agent. The essence of incentive is a useful supplement for the incomplete contracts, inducing the agents' decision-making objectives and principals' interest objectives to be converged.

Through the above analysis, we will further expand the agency theory, construct operators incentive contract which reflected output-based compensation plans.

A. Basic Assumptions of the Model

Assumption 1 We assumed the company's output function is:

$$\pi = \eta(A + B)a + \delta\theta \tag{1}$$

where, $a(a > 0)$ as a vector of effort, represents for operator effort, ethical standards and so on. Here we taken a as a one-dimensional variable, represents for operator effort. The quality and quantity of management which provided by the operators depends on the effort variable a . A(A>0) represents for operator's ability level; B(B>0) represents for company's hardware capabilities; η(η>0) is adjustment coefficient; δ is the influence coefficient of exogenous variables on output; θ as mean value is 0, variance is the normally distributed random variables of θ 2, represents for uncertainties of output, as a exogenous variable can't be controlled. Therefore, the expected value of output is:

$$E\pi = E[\eta(A + B)a + \delta\theta] = \eta(A + B)a \tag{2}$$

$$Var(\pi) = Var(\eta(a + B)a + \delta\theta) = \delta^2\sigma^2$$

So we can see that, operator effort a influence firm performance, but not influence the variance of output.

Assumption 2 We assumed that they signed the following explicit compensation contract:

$$s(\pi, z) = \alpha + \beta(\pi + \varepsilon z) = \alpha + \beta[\eta(A + B)a + \delta\theta + \varepsilon z)] \tag{3}$$

where, a as the fixed salary of operators, is independent of π ; β is compensation incentive strength factor; z represents for important characteristic values which can be observed in another company with the company's strategic role(As a key factor for output, market share, sales revenue and other else), z as mean value is 0, variance is σz2. β(π +εz) is operator's risk revenue, and related to enterprise output π and output can be observed z; ε represents for relationship between operator's risk revenue and z.

Assumption 3 We can use the cost of money to descript effort cost of operators C(a) for: C(a)＝b a 2 /2; At the same time operators pursuit the leisure satisfaction, the effect of leisure converted into the monetary cost is: f(1- a)=m(1- a)2/2.

Among them, functions of C'(a)>0；C''(a)>0，C(a) has a characteristic of increasing and convex; b represents for the cost coefficient of effort, the higher numbers b is, indicate that the greater disutility effect to bring; m represents for the preference factor of operators to the leisure, the higher numbers m is, the larger positive effect to bring by the same leisure.

Assumption 4 Investors are risk-neutral, managers are risk-averse.

We assume that ρ is the risk factor of operators, related to the attitude of operators for risks, and also related to the risk of corporate management.

Among them, ρ ＞0 represents for aversion risk; ρ ＝0 represents for neutral risk; ρ ＜0 represents for appetite risk. Cost of risk assumed by the operator is related to the share of risk β and the uncertainty of enterprise output. If the operator is risk-appetite, ρ has a greater value, then the operator's income may be reduced, while enterprise's uncertainty output will affect the operator's income.

B. Establishment and Derivation of the Model

Because the investors are risk-neutral, the company's expected utility equal to the expected revenue:

$$\begin{aligned} Ev &= E(\pi - s(\pi, z)) = E(\pi - \alpha - \beta(\pi + \varepsilon z)) \\ &= (1-\beta)\eta(A+B)a - \alpha \end{aligned} \tag{4}$$

Operator's Actual revenue is:

$$\begin{aligned} w &= s(\pi, z) + f(1-a) - C(a) = \alpha + \\ &\beta[\eta(A+B)a + \delta\theta + \varepsilon z] + \\ &m(1-a)^2/2 - ba^2/2 \end{aligned} \tag{5}$$

The risk borne by the operator is:

$$Var(\pi + \varepsilon z) = \beta^2[\delta^2\sigma^2 + \varepsilon^2\delta^2 + 2\varepsilon\operatorname{cov}(\pi, z)] \tag{6}$$

Operator's certainty equivalent income is:

$$\begin{aligned} ACE &= W = E(w) - pVar(\pi + \varepsilon z)/2 \\ &= \alpha + \beta\eta(A+B)a + m(1-a)^2/2 - ba^2/2 - pVar(\pi + \varepsilon z)/2 \\ &= \alpha + \beta\eta(A+B)a + m(1-a)^2/2 - ba^2/2 - \\ &p\beta^2[\delta^2\sigma^2 + \varepsilon^2\delta^2 + 2\varepsilon\operatorname{cov}(\pi, z)]/2 \end{aligned} \tag{7}$$

Investor's target is maximize Ev, operator's target is maximize W. Thus, the incentive contract issues between them can be described as:

$$\max_{\alpha,\beta,a} Ev(\pi - s(\pi, z)) = \max_{\alpha,\beta,a}\left[(1-\beta)\eta(A+B)a - \alpha\right] \tag{8}$$

$$\begin{aligned} &\alpha + \beta\eta(A+B)a + m(1-a)^2/2 - ba^2/2 \\ &- p\beta^2[\delta^2\sigma^2 + \varepsilon^2\delta^2 + 2\varepsilon\operatorname{cov}(\pi, z)]/2 \ge w^0 \end{aligned} \tag{9}$$

Under the optimal circumstances of completely symmetrical information, operator participated in constraint (IR) for W= w0, w0 is the reserved utility of operators, while reserved income level. If the operator's certainty equivalent income is less than the reserved utility, he will refuse to accept this contract. Thus, we can get:

IR:

$$\begin{aligned} &\alpha + \beta\eta(A+B)a + m(1-a)^2/2 - ba^2/2 \\ &- p\beta^2[\delta^2\sigma^2 + \varepsilon^2\delta^2 + 2\varepsilon\operatorname{cov}(\pi, z)]/2 = w^0 \end{aligned} \tag{10}$$

Make (10) substituted into the objective function:

$$\max_{\alpha,\beta,a}\left[\begin{aligned} &(1-\beta)\eta(A+B)a + \beta\eta(A+B)a + m(1-a)^2/2 \\ &-ba^2/2 - \rho\beta^2[\delta^2\delta^2 + \varepsilon^2\sigma^2 + 2\varepsilon\operatorname{cov}(\pi, z)]/2 - w^0 \end{aligned}\right] \tag{11}$$

With the objective function, respectively seeking the first derivative for a 、β, make it equal to zero, we can get two of the most optimal first-order conditions.

$$\begin{cases} a^* = [\eta(A+B) - m]/(b-m) \\ \beta^* = 0 \end{cases} \tag{12}$$

In the case of asymmetric information, incentive is invalid, operator's any level of effort are able to meet the enterprise's maximize expected utility. For an enterprise, the operator does not bear any risk. Pareto Optimal Incentive is the fixed income client paid to the operator just equal to the operator's reserved wage plus the effort cost and minus the leisure cost, operator's real income is equal to its reserved revenue.

Because operator's level of effort a can be observed by the principal, Optimal level of effort requires the marginal expectations of effort equals to the marginal cost of effort.

According to the Pareto Optimum, then company's output also reached the optimal level.

When the information is asymmetric, operator's level of effort a can't be observed by the principal.

Seeking the first derivative of a in (10), we can get incentive compatibility constraint:

$$\beta\eta(A+B) - m(1-a) - ba = 0$$

$$\text{IC:}\quad a = \frac{\beta\eta(A+B) - m}{b-m}$$

So, the problem of incentive contract can be described as:

$$\max_{\alpha,\beta,a} Ev(\pi - s(\pi,z)) = \max_{\alpha,\beta,a}\left[(1-\beta)\eta(A+B)a - \alpha\right]$$

s.t. (IR):

$$\alpha + \beta\eta(A+B)a + m(1-a)^2/2 - ba^2/2 -$$

$$p\beta^2[\delta^2\sigma^2 + \varepsilon^2\delta^2 + 2\varepsilon\,\mathrm{cov}(\pi,z)]/2 = w^0$$

$$\alpha + \beta\eta(A+B)a + m(1-a)^2/2 - ba^2/2 - p$$

$$\text{IC:}\quad a = \frac{\beta\eta(A+B) - m}{b-m} \tag{13}$$

The constraint is substituted into the objective function, we can get:

$$\max_{\alpha,\beta,a}\left[\begin{aligned} &\eta(A+B)\frac{\beta\eta(A+B)-m}{b-m} \\ &+\frac{d(1-\frac{\beta\eta(A+B)-m}{b-m})^2}{2} \\ &-\frac{b(\frac{\beta\eta(A+B)-m}{b-m})^2}{2} \\ &-\frac{\rho\beta^2[\delta^2\sigma^2+\varepsilon^2\delta_Z^2+2\varepsilon\,\mathrm{cov}(\pi,z)]}{2} - w^0 \end{aligned}\right] \tag{14}$$

Make the derivation of β and ε, and set its derivative is zero, we can get the first order condition:

$$\begin{aligned}\frac{dEv}{d\beta} &= \frac{\eta^2(A+B)^2}{b-m} - \frac{mb\eta(A+B)}{(b-m)^2} \\ &+\frac{m\beta\eta^2(A+B)^2}{(b-m)^2} - \frac{b\beta\eta^2(A+B)^2}{(b-m)^2} \\ &+\frac{bm\eta(A+B)}{(b-m)^2} \\ &-\rho\beta[\delta^2\sigma^2 + \varepsilon^2\delta_Z^2 + 2\varepsilon\,\mathrm{cov}(\pi,z)] = 0\end{aligned} \tag{15}$$

$$\frac{dEv}{d\varepsilon} = -\frac{1}{2}\rho\beta^2[2\varepsilon\delta_Z^2 + 2\,\mathrm{cov}(\pi,z)] = 0 \tag{16}$$

Then we can get:

$$\beta = \frac{\frac{\eta^2(A+B)^2}{m-b}}{\frac{\eta^2(A+B)^2}{m-b} - \rho[\delta^2\sigma^2 + \varepsilon^2\delta_Z^2 + 2\varepsilon\,\mathrm{cov}(\pi,z)]} \tag{17}$$

Because of Arrow-pratt absolute risk aversion$\rho>0, 0\le\beta\le1$,

Thus, $2\delta_Z^2\varepsilon + 2\,\mathrm{cov}(\pi,z) = 0$

$$\varepsilon = \frac{-\mathrm{cov}(\pi,z)}{\delta_Z^2} \tag{18}$$

Put the equation (18) into equation (17) :

$$\beta = \frac{\frac{\eta^2(A+B)^2}{m-b}}{\frac{\eta^2(A+B)^2}{m-b} - \rho[\delta^2\sigma^2 - \frac{\mathrm{cov}^2(\pi,z)}{\delta_Z^2}]} \tag{19}$$

C. Analysis of the Model

When ε=0, operator's revenue is not related to z, cov(π,z)=0, in this case the operator's incentive intensity is:

$$\beta' = \frac{\dfrac{\eta^2 (A+B)^2}{m-b}}{\dfrac{\eta^2 (A+B)^2}{m-b} - \rho\delta^2\sigma^2}$$

$$= \frac{\eta^2 (A+B)^2}{\eta^2 (A+B)^2 - \rho\delta^2\sigma^2 (m-b)} \tag{20}$$

$$= \frac{\eta^2 (A+B)^2}{\eta^2 (A+B)^2 + \rho\delta^2\sigma^2 (b-m)}$$

Then we can get:

$$\beta = \frac{\dfrac{\eta^2 (A+B)^2}{m-b}}{\dfrac{\eta^2 (A+B)^2}{m-b} - \rho[\delta^2\sigma^2 - \dfrac{\operatorname{cov}^2(\pi,z)}{\delta_z^2}]}$$

$$= \frac{\eta^2 (A+B)^2}{\eta^2 (A+B)^2 + \rho[\delta^2\sigma^2 - \dfrac{\operatorname{cov}^2(\pi,z)}{\delta_z^2}](b-m)}$$

$$\frac{\eta^2(A+B)^2}{\eta^2(A+B)^2 + \rho\delta^2\sigma^2(b-m)} = \beta'$$

So we can improve operator's share of the remaining share by put z into the incentive contract, and then improve its incentive intensity.

The operator's level of effort is:

$$a = \frac{\beta\eta(A+B) - m}{b-m} \geq \frac{\beta'\eta(A+B) - m}{b-m} = a'$$

The operator's level of efforts improved correspondingly.

Before we put z into the incentive contract, operator's risk is:

$$\operatorname{var}(\pi) = \beta'^2\delta^2\sigma^2 = \frac{\eta^4 (A+B)^4 \delta^2\sigma^2}{[\eta^2 (A+B)^2 + \rho\delta^2\sigma^2 (b-m)]^2}$$

$\operatorname{var}(\pi + \varepsilon z)$

$$= \frac{\eta^4 (A+B)^4 (\delta^2\sigma^2 - \dfrac{\operatorname{cov}^2(\pi,z)}{\delta_z^2})}{\eta^2 (A+B)^2 + \rho[\delta^2\sigma^2 - \dfrac{\operatorname{cov}^2(\pi,z)}{\delta_z^2}(b-m)]^2}$$

Because of $0 \leqslant \delta \leqslant 1$, $\dfrac{\operatorname{cov}^2(\pi,z)}{\delta_z^2} > 0$, we can calculated: var(π +εz) < var(π), operator's risk reduced than previously.

Client's expectations income:

Ev

$$= \frac{\eta^2 (A+B)^2}{2(b-m)[1 + \rho(b-m)\dfrac{(\delta^2\sigma^2 - \operatorname{cov}^2(\pi,z))}{\delta_z^2}\eta^2 (A+B)^2]}$$

$-w^0$

Client's expectations income is greater than before we put z into the incentive contract.

Operator's actual revenue is:

$w = w^0$

$$+\frac{\rho\delta^2\sigma^2}{2(1 + \rho(b-m)[(\delta^2\sigma^2 - \dfrac{\operatorname{cov}^2(\pi,z)}{\delta_z^2}) / \eta^2 (A+B)^2]^2}$$ Op

erator's actual revenue is greater than when it is only related to π.

Cost of distributor:

AC=Ev*-Ev=

$$\frac{\dfrac{\rho[\delta^2\sigma^2 - \operatorname{cov}^2(\pi,z)]}{\delta_z^2}}{2[1 + \rho(b-m)(\delta^2\sigma^2 - \dfrac{\operatorname{cov}^2(\pi,z)}{\delta_z^2}) / \eta^2 (A+B)^2]}$$

$$\leqslant \frac{\rho\delta^2\sigma^2}{2[1 + \rho(b-m)\dfrac{\delta^2\sigma^2}{\eta^2 (A+B)^2}]} = \text{AC}$$

The cost of distributor is also reduced.

For any new variable z can be observed, as long as z has more information about θ and a than the original variable π, we can reduce the cost of distributor if we put z into the incentive contract, then increase client expected revenue. But the premise is the observation of z has no cost, or the observation of z spend less than the reduced cost of agency, then z can be meaningful.

IV. CONCLUSIONS

In this paper, we expounded research of the principal - agent model in the case of considering of other observable variables, especially to establish the company executive compensation incentive model. This innovation model covers multiple explanatory variables, including operator's performance, operator's ability, capabilities of hardware investment, the level of effort, leisure preference and other uncontrollable external environmental factors.

On the one hand it makes the model closer to reality. We compared the model incentive effects before and after including of other observable variables, analyzed the before and after variety of excitation intensity, agency costs, actual income, risk sharing, to theoretically prove the superiority of the model, and concluded:

(1) The operator's level of effort is unrelated to his pay of fixed remuneration; by increasing the fixed payments to operators has no incentive efforts. Therefore, output-based compensation plan can play a significant incentive effect to the company managers.

(2) The quota of output share and monitoring signals are interrelated in the operator's contract system. The quota of output share β is related to additional information weights which can be observable ε, so in the design of compensation contracts, we should consider the impact of other monitoring information, it is more reasonable that we get the two pieces of information together in an organic link in the contract.

(3) After the introduction of observable variables z, operator's degree of excitation has been improved, operator's risk and the cost of agency both have been reduced, this shows that it is a optimum choice, if we considering of the influence of the important assessment index value of another company with the same strategic goals (such as output, market share, sales revenue and so on) and then put it into the incentive contract. By comparing of two companies with the similar investment background, it can reflect the relationship of profit and operator's level of effort more realistic.

ACKNOWLEDGMENTS

The authors thank the reviewers who gave a through and careful reading to the original manuscript. Their comments are greatly appreciated and have help to improve the quality of this paper. This research was supported by the Natural Science Foundation of Shandong Province (Grant No. ZR2013GQ010), and Social Sciences (Grant No. 12YJC790121), and Collaborative Innovation Center of Financial Industry Optimization and Regional Development Management, Shandong University of Finance and Economics(Grant No.14XTY04-16) for assistance.

REFERENCES

[1] Jensen M.,Meckling W, “Theory of the Firm: Managerial Behavior , Agency Costs and Ownership Structure”, Journal of Financial Economics(4)305-360,1976

[2] YUANJiang tian, ZHANG Wei, “ Multitask principal agent model and study on SOE manager ’ s incentive issues. ” ,JOURNAL OFMANAGEMENTSCIENCES IN CHINA,(9)45-53,2006.

[3] CHEN Qi-an,ZHANG Hong-zhen,XU Li, “Study on Principal-agent Model of Listed Companies Based on Equity Incentives”,Chinese Journal of Management Science(20)372-379, 2012.

[4] CHEN Jiatian, “An Empirical Research on CEO Compensation in Listed Family Firms --Based on Dual Principal-agent Perspective”, Mangement review (26)159-167,2014.

[5] Frederic Palomino, “Relative Performance Objectives in financial markets”, Journal of Financial Intermediation (5)351-375,2005.

[6] Bebchuk L.,Fried J., “ Pay without Performance: The Unfulfilled Promise of Executive Compensation ” , Harvard University Press,2004.

[7] Blonigen,Bruce A.,Christopher J.Ellis,Diet rich Fausten.,, “Industrial Groupings and Foreign Direct Investment”, Journal of International Economics (1)75-91,2005.

[8] James W.Bannister,Harry A.Newman, “ Analysis of Corporate Disclosure on Relative Performance Evaluation ” , Accounting Horizons (11)235-246, 2003.

[9] Werner,S., “ Recent developments in international management research: are view of top management journals”, Manage (28)227-305,2002.

[10] ZHENGJun-jun, TANXu, FANWen-tao, “An incentive model with stocks based on principal agent theory”, Journal of management sciences in China (8)24-29, 2005

[11] Sattayaraksa Tharnpas, Boon-itt Sakun, “ A Study of CEO Transformational Leadership, Organizational Factors and Product Innovation Performance: Scale Development and a Theoretical Framework”, International Journal of Innovation Science,7(2) 107-126,2015

[12] TAN Zh-i xin, KONG Xiang-zhi, “ Incomplete Contract, Asymmetric Information and Incentive to Cooperative Operators: Construction and Application of Principal- Agent Model of Farmer Cooperatives ” , Journal of renmin university of China (15)34-42,2011

[13] Abd El salam El Rayyes, Jaume Valls-Pasola, “The Effect of Research & Development Activities and Open Innovation Activities: A Key to Low/ Medium Technology Industries and Firms in Catalonia”, International Journal of Innovation Science,5(4) 225-236,2013.

[14] Croci E.,Gonenc H.,Ozkan N, “ CEO Compensation , Family Control and Institutional Investors in Continental Europe” ,Journal of Banking and Finance(12)3318-3335,2012.

[15] Wiseman R.M., Cuevas-Rodriguez G., Gomez-Mejia L.R, “Towards a Social Theory of Agency ” , Journal of Management Studies(1)202-222,2012.

[16] Joan Badrinas, Joaquim VilàAn, “Innovation Management System to Create Growth in Mature Industrial Technology Firms ” , International Journal of Innovation Science 7,(4) 249-262, 2015

[17] Chen C.J., Hsu C.Y., Chen Y.L, “The Impact of Family Control on the Top Management Compensation Mix and Incentive Orientation”, International Review of Economics and Finance(1)29-46, 2014

[18] Cueto D.C, “Substitutability and Complementarily of Corporate Governance Mechanisms in Latin America”, International Review of Economics & Finance(1)310-325,2012

[19] Amoako-Adu B.,Baulkaran V.,Smith B.F, “ Executive Compensation in Firms with Concentrated Control: The Impact of Dual Class Structure and Family Management ” , Journal of Corporate Finance(3)1580-1594,2011.

[20] Holly Chiu, Joshua Fogel, “The Impact of Manager Influence Tactics on Innovation Implementation of a Knowledge Management System”, International Journal of Innovation Science,6(4) 185-204, 2014.

[21] Gomez-Mejia L.R.,Larraza-Kintana M.,Makri M, “The Determinants of Executive Compensation in Family-controlled Public Corporations”, Academy of Management Journal(2)226-237,2003.

[22] Combs J. G.,Penny C.R.,Crook T.R. et al, “The Impact of Family Representation on CEO Compensation”, Entrepreneurship Theory and Practice(6)1125-1144,2010.

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