



# BioTechnology

*An Indian Journal*

**FULL PAPER**

BTAIJ, 10(17), 2014 [9465-9474]

## Research on external member silence of top management team in private enterprise: An evolutionary game perspective

Lu Jie<sup>1\*</sup>, Wu Mengyun<sup>2</sup>, Wu Huimin<sup>2</sup>

<sup>1</sup>School of Management, Jiangsu University, Zhenjiang 212013, (P.R.CHINA)

<sup>2</sup>School of Finance & Economics, Jiangsu University, Zhenjiang 212013, (P.R.CHINA)

E-mail: mewu@ujs.edu.cn

### ABSTRACT

With the increasingly informationization and globalization of the economic environment, Silence is Gold is no longer pursued as a golden rule. However, in the domestic enterprises, especially private enterprise, employee silence has become a pervasive phenomenon in organizations. Compared to junior staffs, silence of the senior managers will have a greater negative impact. Therefore, in this paper, with the help of evolutionary game theory, we consider the family members and external executive members which exclude family members as the two groups, and build the game model of the two groups to explore the selection and evolution of the senior managers' silence strategy in the process of the game, which is repeated and has the memory of the past, hoping to provide a new perspective to study employee silence. According to the above analysis, we will also discuss the way to break the employee silence to build an excellent management team and make great contributions to the sustainable development of private enterprises.

© 2014 Trade Science Inc. - INDIA

### KEYWORDS

Private enterprise;  
External executive members;  
Family members;  
Employee silence;  
Advise;  
Evolutionary games.

### INTRODUCTION

The Silence of the External Members in the Executive Team was an important reason of the failure of Enron Corporation which had a fabulous performance. In the Enron Company, a large part of the directors who can get a handsome consulting fee each year are well-paid consultant company. However, these directors whose term of offices is 15 years are lived superior and sat sluggish on the boards from the beginning to end. They keep silent to most of the management behavior until the bank-

ruptcy of Enron.

Private enterprise which is an important part of national economy in our country and the most active economic growth point made huge contribution to China's economic development. However, its existing problems began to emerge unceasingly with the developing economy and expanding private enterprises scale. The problem of enterprise internal management faced by private enterprises is notable. Although founder of the enterprise indeed plays a decisive role to the success of the enterprise in the business start-up phase, the leader's personal abil-

## FULL PAPER

ity alone has been difficult to meet the needs of the enterprise long-term development. The legendary story of entrepreneur individual struggling for the enterprise we heard has a limited effect on the management. Under the background of rapidly changing economic requirement, with the continuous development of the enterprise, it is high time to complete the enterprise management upgrading using external forces and build a united strong senior management team (TMT). But as a result of family culture and traditional ideas, the private enterprises still take the paternalistic management mode which directly contributes to the silence problem of external executive members as the principal thing.

In the early stage of private enterprises, core members of the family often possess the enterprise ownership and management rights. However, with the expansion of the enterprise and rising demand for management of the enterprise, private enterprises need to employ the professional management personnel outside the family member to make up for the lack of enterprise internal management mode using their professional knowledge and management experience. The separation of ownership and rights of management makes the contradiction between members of the family and outside executives gradually emerge. First of all, members of the family can choose to support suggestions from external executive members and encourage their bold recommendations or choose to oppose them and implement autocratic. Secondly, external executive members as the “outsiders” of the enterprise also have two choices which are choosing bold suggestions in the process of enterprise management and challenging the authority of the member and keeping silent to comply with members of the family. It can be found that the relationship between the member of the family and outside executives is the consequence of the game. The two group’s different behavior strategy has a corresponding benefits and costs. In order to further explore the interactive dynamic evolutionary process of the game behavior, we will use the game theory to carry on research.

Evolutionary game theory as the result of the evolution is a combination of game theory and evolutionary dynamics. It treats an individual or a group

participated in the evolutionary game as the research object, and assumes the interaction between individuals or groups to return. And the decision of each side will be carried on the dynamic adjustment by learning, imitation and so on. In addition, it also changes due to the changing of game history and environment. As a result, a strategy with high returns will be favored, and the strategy with low returns tends to disappear. The traditional game theory requires that participants must be rational, players are not allowed to make mistakes in the process of game and each stage must be fully rational. However, these strict constraints are obviously difficult to achieve in most practical problem research, because the person is not entirely rational and can’t keep rational in every stage of the decision-making. Smith (1973) and Price (1973) put forward the basic concept of the evolutionary game theory—Evolutionary Stable Strategies (ESS) to solve the problem effectively. They slam the completely rational assumption, so as to find a new breakthrough in the research of game theory, expand the application range of this methodology, and develop the evolutionary game in different areas.

Therefore, with the help of evolutionary game theory, this paper considers the members of the family and outside members of the executive as two groups of game, constructs two groups strategy option game model, analyses the equilibrium and stability of the model, and explores the selection and evolution of silence or not chose by external executive members in the repeated process of gaming which have the past memory. As a result, it is helpful to provide a new angle for the research of employee silence problems. And according to above analysis, it can be discussed that how to break the staff silence. Finally, the author also points out the way to break internal silent in the senior management team for building an excellent management team and realizing the sustainable development of the private enterprise.

## LITERATURE REVIEW

**The definition and classification of employee silence**

Morrison and Milliken(2000)who came up with employee silence at the earliest thought that silence is the behavior of holding their own opinions when the employee face the organization's potential problems and it would be known as organizational silence when this silence developed to be a group phenomenon. Silence behavior was defined as "The employee keep on real expression about their individual behavior, cognitive or emotional evaluation while they have the ability to influence or change the situation" by Pinder and Harlos (2001) in the angle of attitude of employees. According to them, employee silence could be divided into acquiescent silence which indicates that employees hold opinions negatively and silence of negative act which means that employees keep silent actively in order to protect themselves or maintain a good interpersonal relationship. Dyne, etc. (2003) who further define the boundary conditions of employee silence exclude unconscious silence behavior without thinking and behavior having no opinions. Meanwhile Dyne divided silence behavior into defensive silence, acquiescent silence and pro-social silence in view of silent motivation based on research of silence studied by Pinder and Harlos. The first two are similar to silence of negative act and acquiescent silence put forward by Pinder. The definition of last one is that employees whose motivation is altruism or cooperation keep their objections in order to safeguard the common interests of the group and maintain harmonious working environment.

Domestic scholars Zheng Xiaotao (2008) who combined China's cultural background considered that the staff should have put forward their thoughts, suggestions, opinions so as to improve management of the department or organization with the help of experience and knowledge, but they choose to hold opinions, refine or filter their views because of various reasons. In the opinion of Zheng Xiaotao, on the basis of questionnaire investigation and literature research, employees silence can be divided into three dimensions including acquiescent silence, defensive silence, and indifferent silence. The first two are similar to the ideas of Dyne, Pinder, and so on, while indifferent silence was not mentioned in the previous research. It is described to be that employees

keep the point of view negatively when they face the present work and commitment from the organization of low level. In other words, they are indifferent to the interests of the organization.

### **Silence of top management team from the perspective of evolutionary game**

In private enterprises, external executives tend to prefer silence by comparing the income and cost of the game. The behavior of not silence will be equivalent to advising for the sake of simplifying the game model. In fact, only getting the support from members of the family, can external professional managers achieve the benefits resulted from advising. However, under the influence of traditional culture, due to the origin and history of private enterprise, few founder of the private enterprise be willing to decentralize, which makes outside executives generally believed that the family members prefer to implement autocracy without supporting and adopting the opinions of the "outsiders".

Under this hypothesis, external executives determine its strategic choice through comparing the different benefit between advising and keeping silent. On the one hand, contradiction and conflict will appear easily between ownership and rights of management when external executives choose to break the silence and advise actively. Disadvantages are obvious. The behavior of advising may bring the risk of "removing" to them, which will prejudice the developing of their careers, even though their recommendation contributes to the enterprise development. On the other hand, if they select to keep silent, it will not bring damage to them. In addition, it also helps to maintain the harmony of senior management team, and the steady development of the career.

External executives prefer to silence by means of comparing the cost and benefit to avoid conflict within the team even though they found the problems existing in the enterprise or have a good idea for it. The pseudo harmonious problem resulted from employee silence is often easily ignored by people due to its concealment. What's more, this phenomenon will lead to a bad performance of management team, and bring the danger of destruction before enterprises' being conscious of the risk. Therefore, it is

FULL PAPER

necessary to build a game model, explore the evolution of the game strategic selection selected by principal parts. On this basis, appropriate steps should be taken to make the mode of the game between both sides ideal, reduce the silence phenomenon within the senior management team, and help private enterprises to realize sustainable development.

**GAME BETWEEN FAMILY MEMBERS AND EXTERNAL EXECUTIVES IN THE ENTERPRISE**

**Model assumptions**

(1) We assume the subject of the game is members of the family and external executives in private enterprises.

(2) There are two strategies including supporting advice ( $a_1$ ) and opposing advice ( $a_2$ ) for members of the family and two choices which is keeping silent ( $b_1$ ) and being not silent ( $b_2$ ) for external executives in the process of the game. And the behavior of not being silent is equivalent to advice.

(3) Under the condition of family members encouraging suggestions, privately operated enterprise will gain profits ( $R_1$ ) due to active advice from external executives. However, plethoric information because of their excessive advice will bring a certain noise that affects decisions making, which results in a certain amount of loss of enterprises ( $C$ ). Outside executives obtain revenue  $\pi$  due to their advice for contributing to the development of enterprises and realizing self-worth.

(4) Under the condition of family members doing not encourage suggestions, the conflict will emerge if the external executives advise boldly and challenge authority. The enthusiasm of external executives will be reduced. Contradictions within internal executive team will bring certain loss to private enterprises ( $L$ ). On the other hand, enterprise

is also likely to reap the benefits  $R_2$  because executives who provide enterprises with useful information come up with recommendations boldly, and then problems inside business enterprises can be found. However, profits  $R_1$  are less than profits gained under the condition of family members supporting suggestions ( $R_2 < R_1$ ) due to the conflict within the team and restrict from members of the family. In the meantime, the conflict between external executives and members of the family will exert a bad influence on the external executive  $t_1$ . Their choice of obedience to authority and silence mean a loss  $L$  to the enterprise, while their silence which maintain harmony within the team has a positive impact on the development of their careers, which may lead to earnings  $t_2$  to external executives.

On the basis of the above analysis, we can get a pay off matrix shown in TABLE 1 about the evolutionary game between two groups including members of the family and external executives.

**Model evolution**

We assume that in the initial state, the proportion of supporting suggestions ( $a_1$ ) selected by members of the family is  $p$ , and the proportion of opposing suggestions ( $a_2$ ) is  $1 - p$ . And the proportion of being not silent ( $b_1$ ) for external executives is  $q$ , while the proportion of silence ( $b_2$ ) is  $1 - q$ . TABLE 1 shows each expected revenue resulted from strategy  $a_1$  and strategy  $a_2$ :

$$u_1 = q(R_1 - C) \tag{1}$$

$$u_2 = q(R_2 - C - L) + (1 - q)(-L) \tag{2}$$

Formula (1) and (2) present the average income of family members:

$$u = pu_1 + (1 - p)u_2 \tag{3}$$

Similarly, the expected revenue resulted from strategy and strategies as follows:

$$v_1 = p\pi + (1 - p)(-t_1) \tag{4}$$

$$v_2 = (1 - p)t_2 \tag{5}$$

TABLE 1 : The pay off matrix

Members of The Family	External Executives	
	Not Silence (Suggestions)	Silence
Supporting Suggestions	$(R_1 - C, \pi)$	$(0, 0)$
Opposing Suggestions	$(R_2 - C - L, -t_1)$	$(-L, t_2)$

TABLE 2 : The analysis result of local stability

Equilibrium	DetJ	Plus-minus	Tr(J)	Plus-minus	Result
$p = 0, q = 0$	$u(t_1 - t_2)$	+	$-L - (t_1 - t_2)$	-	Ess
$p = 0, q = 1$	$(R_1 - R_2 - L)(t_1 - t_2)$	+	$R_1 - R_2 - L + (t_1 - t_2)$	+	instable
$p = 1, q = 0$	$L\pi$	+	$L + \pi$	+	instable
$p = 1, q = 1$	$(R_1 - R_2 - L)\pi$	+	$-(R_1 - R_2 - L) + \pi$	-	Ess
$p = p^*, q = q^*$	$-u(t_1 - t_2) \frac{R_1 - R_2 - L}{R_1 - R_2} \left( \frac{\pi}{\pi + t_1 - t_2} \right)$	-	0		Saddle Point

The formula (4) and (5) reveal the average income of external executives:

$$\bar{v} = qv_1 + (1 - q)v_2 \tag{6}$$

According to the theory of biological evolution, one side using the strategy of low income is possible to change their strategies and imitate the strategy with higher-yield, which makes the proportion of members adopting different strategies changed. In accordance with Malthusian dynamic equation, a replicate dynamic equation about family members can be obtained:

$$F_a(p) = \frac{dp}{dt} = p(u_1 - \bar{u}) = p(1 - p)[q(R_1 - R_2) - L] \tag{7}$$

In the same way, we can also get replicate dynamic equation for external executives:

$$F_b(q) = \frac{dq}{dt} = q(v_1 - \bar{v}) = q(1 - q)[p(\pi + t_1 - t_2) - (t_1 - t_2)] \tag{8}$$

According to equation (7) and (8), Jacobi matrix can be obtained:

$$J = \begin{pmatrix} (1 - 2p)[q(R_1 - R_2) - L] & p(1 - p)(R_1 - R_2) \\ q(1 - q)(\pi + t_1 - t_2) & (1 - 2q)[p(\pi + t_1 - t_2) - (t_1 - t_2)] \end{pmatrix}$$

We have the ability to find out the determinant and rank:

$$DetJ = (1 - 2p)(1 - 2q)[q(R_1 - R_2) - L] \times [p(\pi + t_1 - t_2) - (t_1 - t_2)] - pq(1 - p)(1 - q)(R_1 - R_2)(\pi + t_1 - t_2)$$

$$Tr(J) = (1 - 2p)[q(R_1 - R_2) - L] + (1 - 2q)[p(\pi + t_1 - t_2) - (t_1 - t_2)]$$

**Model analysis**

It can be realized from the above assumption that  $p$  and  $q$  mean the proportion for two groups choosing a strategy. Therefore, the scope of  $p$  and  $q$  are  $0 \leq p \leq 1$  and  $0 \leq q \leq 1$ . And the equilibrium of dynamic replicated equations should be located in the plane area,  $S = \{(p, q) | 0 \leq p \leq 1, 0 \leq q \leq 1\}$  which makes the value of dynamic replicated equation (7) and (8) is 0. We can find that the number of local equilibrium of dynamic replicated equations is 5 through calculating. They are O(0,0), P(1,0), D(1,1), E(0,1)

and saddle point  $S(p^*, q^*)$ . And we should note that

$$p^* = \frac{t_1 - t_2}{\pi + t_1 - t_2} \text{ and } q^* = \frac{L}{R_1 - R_2}$$

According to the analysis method of local stability of Jacobi matrix, two stable equilibrium points (ESS) including O(0,0) which means that family members oppose advice while external executives keep silent and D(1,1) which indicates that members of family support suggestions while external executives break silence can be found in the system through analyzing the value of  $DetJ$  and  $Tr(J)$ . Dynamic phase diagram can represent the evolutionary game of two groups:

It can be seen from the Figure 1 that evolutionary paths of the system depend on the location of saddle point  $S(p^*, q^*)$  in the plane area OHDE and the initial proportion of two strategies including supporting silence and advice chose by family members and external executives  $(p_0, q_0)$ .

**(1) The location of the  $S(p^*, q^*)$**

If  $p^* + q^* > 1$ , the saddle point S is close to D. At

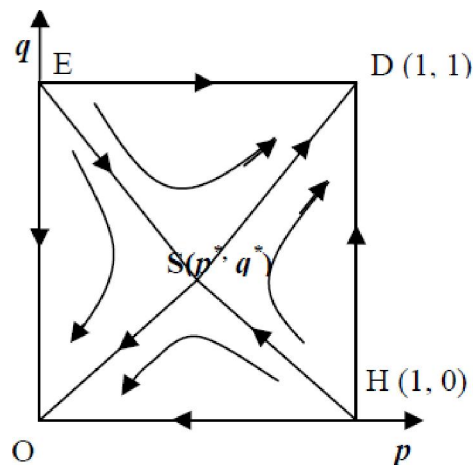
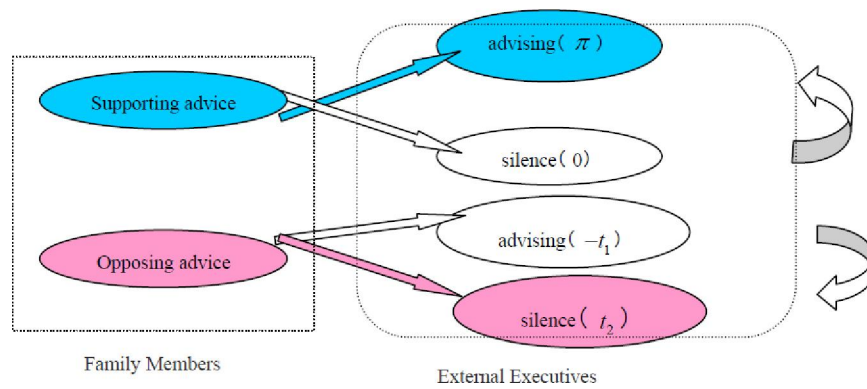


Figure 1 : The systemic dynamic phase diagram



**Figure 2 : Different management mode of family members**

the moment, the area of OHSE is larger than HDES, and the system tends to indicate that family members refuse to encourage advice while external executives keep silent. If  $p^* + q^* < 1$ , the saddle point S is close to point O. Under this circumstance, the area of HDES is larger than OHSE. In addition, the system tends to suggest that family members support advice and external executives break silence  $p^* + q^* = 1$ . If, we can know the area of OHSE is equal to HDES, and the probability of systemic trend to (0, 0) is same to the trend to (1, 1).

## (2) The size of the $(p_0, q_0)$

The systemic evolutionary result is thought to be that family members oppose employees' advising and external executive members choose silence when is located in the area of OHSE, so the entire enterprise fall into the predicament of the organizational silence. On the other hand, if  $(p_0, q_0)$  is located in the area of HDES, the systemic evolutionary shows the a win-win situation which means that family members are in favor of advising and external executives respond to it actively.

## Model evaluation

We find that the broken line which is connected by the point E, S, and H is the borderline because of systemic convergence to different patterns through the analysis of evolutionary game model. The point located in the top-right corner of ESH will converge to an ideal model, which makes both sides achieve a win-win; the one located at the bottom-left of ESH tends to converge to a bad model, which also makes enterprise fall into predicament of the silence. If both two groups are able to stick to evolutionary stable

strategy, the changing tactic selected by each individual in the group does not affect evolution stability. Therefore, this paper explores the strategy selection and evolution of external executives under the condition of certain family management style ( $p_0=1$  or  $p_0=0$ ) on basis of different management mode of family members.

## (1) Family members encourage employee Suggestions and democratic management

We assume  $p_0=1$ . In other words, members of the family encourage the staff recommendations and advocate democratic management. At this time, both sides can realize the evolutionary stable strategies (ESS) of "encouraging suggestions and breaking the silence" shown in the blue part of Figure 2 as long as  $q_0 \neq 0$  which means that the external executive comes up with their own ideas boldly after finding the management problems and the unreasonable decision made by members of the family. In the first game, private enterprises may face the loss C resulted from overmuch information which will influence decision-making, and gain the earnings  $R_1$  due to obtaining information which play an important role in the development of enterprises. And then the external executive also gets profits because of showing their talents and obtaining attention and regard from members of the family. That way, both sides realize maximization of benefit. With the first successful experience external executive members find that the benefit of advising far outweigh the risk, which makes refusing silence become their preferred choice in the future. Through the repeated game, the

whole process may be a virtuous circle, which is helpful for the development of private enterprises.

However, in reality of private enterprises, in order to realize the above the ideal mode, the enterprise needs a member of external executives “dare to be the first to eat the crab”, which makes  $q_0 \neq 0$ . Otherwise, external executives are unwilling to show real ideas and conflict with family members for various reasons even though members of the family are able to accept different “voices”. Therefore, it is difficult for members of the family to effectively integrate human resources, mobilize and concentrate the wisdom of the entire senior management team, and implement democratic management. To solve this problem, family members should introduce the regulating mechanism, encourage their employees, change strategy, and break the silence. In the end, the evolution of system becomes ideal, which means “encouraging suggestions — breaking the silence”.

## **(2) Members of the family do not encourage suggestions and advocate autocratic management**

We assume  $p_0=0$ . In other words, members of the family are self-centered, and want their employees to show the unconditional obedience. At the moment, if external executives voice their dauntless opinions, it is easy to arouse conflict between senior management team, which may lead to the dismissal of external executives. Obviously, it will have an effect on their future career development. External executives will bear the loss ( $T_1$ ). However, those external executives who keep silent after finding the same problems are able to realize profits  $T_2$  for maintenance of team's internal harmony. Players are possible to choose higher-yielding strategy because the entire model is based on the repeated game with the past memory. So the strategy of breaking the silence will disappear in the subsequent game. The entire external executives will choose silence instead of suggestions. At this time, second ESS will appear. Both sides can realize the stable evolution strategy of “doing not encourage advice – silence” shown in red part of Figure 2. Private enterprises will be in a dilemma of silence. It is difficult to get a negative feedback, find out and solve the manage-

ment problem. What's more, it will affect the performance of the entire enterprise because their autocratic management hit the executive's enthusiasm. As a result, private enterprises will bear the loss  $L$ .

The condition of “Does not encourage recommendations – silence” is widespread in the early stage of private enterprises. In its founding stage, members of the family can decide on their own, seize the development opportunity due to the scale and nature of enterprises. However, this model has been more and more difficult to adapt to the development of enterprises with the development of economy and growing scale of enterprise. In addition, members of the family feel hard to reach every aspect of a matter. Under this situation, both sides of game are expected to change the original strategy of “doing not encourage Suggestions” and “silence”. Only in this way, can enterprises get rid of family-based management, conform to the trend of the times, and realize democratic management.

Within an organization, however, what is good for personal always prone to conflict to what is good for the collective. In game theory, group profit can reach the maximum easily if both sides of the game choose to cooperate. But two sides are going to face the temptation of not cooperation. In their opinions, the cooperation needs cost. Therefore, it is well known that the phenomenon of “prisoner's dilemma”, “free rider” and “the tragedy of the public land” is common. Similarly, external executives face two choices containing the silence and not silence when they carry out the game with members of the family in enterprises, especially in private enterprises.

To private enterprises, the strategy of not silence may bring a certain benefit or avoid a loss, while it means a lot of unknown risk and cost to external executives. So the employee prefer to silence. Therefore, in the process of the whole game, the mode of whole game will become the first ESS for raising the income of advising and reducing the temptation of silence.

## **WAYS TO BREAK THE SILENCE**

In private enterprises, external executives tend to choose silence in most cases. What's worse, this

## FULL PAPER

choice will be diffused constantly, affect the choice of the other employees, and cause silence of tissues eventually. Apparently, it seriously affects the operation of enterprise internal team and the healthy development of the enterprise. According to the evolutionary game model, two ways can be used to break the silence. One method pays attention to changing initial proportion of two selections containing  $a_1$  and  $b_1$  chose by both groups. And the key point of other one is realizing the saddle point  $S(p^*, q^*)$  moving to bottom-left.

### (1) Improving the initial proportion of strategy $a_1$ selected by members of the family: changing the paternalistic leadership style

Leading is the biggest factors which lead to the employee silence. In domestic private enterprises, paternalistic management of high authority and low kind which is common in domestic private enterprises results in employee silence. Therefore, it is high time to break the silence. First of all, we should change the leadership style of family members. In the process of enterprise management, family members need to adopt the management style of fairness, justice and democracy, strengthen the trust of employees, and make use of human resources effectively. Secondly, "Do not suspect the man you use and do not use the man you suspect" was an important principle. It is necessary to draw on the wisdom of the masses. In addition, leaders should learn to listen, encourage opinions from the employee, which makes a peaceful atmosphere.

### (2) Improving the initial proportion of strategy $b_1$ selected by external executives: introducing and cultivating "not silent executives"

In order to get rid of the difficulty of silence, external executives who "dare to be the first to eat crab" are also needed. That is to say that  $q_0 \neq 0$ . This means that changes should start in the recruitment process. A variety of recruitment techniques, such as questionnaire survey and scene simulation can be used to pick a candidate willing to remonstrate and eliminate a silence. At the first, the new

employee with characteristics of actively advising should be absorbed in private enterprises. Secondly, attention should be paid to improving the silence of existing executive members, building the executives' awareness of being master of enterprises, and cultivating collectivism spirit. It is their duties to realize that profits of enterprises are closely linked to them. It is essential for enterprises to inspire the executive's self-expression, let them recognize that silence is the "culprit" which lead to the difficulty to achieve their own value. And it is also an important cause which results in anxiety and low satisfaction to the job. These measures are helpful to improve the cost of choosing silence strategy to encourage them to select suggestions. So the system will become ideal.

### (3) Reducing $p^*$ : improving the benefit of external executive member for suggestions

Because of  $p^* = \frac{t_1 - t_2}{\pi + t_1 - t_2}$ , we can increase the yield of external executive members for recommendations to reduce, which makes the saddle point move to the left. In private enterprises, the expected return of advice is less than the income of silence, which gives rise to employee silence. Therefore, private enterprises can adopt the method combining material rewards and spirit incentive to promote those whose advice is useful to the development of enterprises and put them in an important position. Lastly, personal income should be tied to their performance.

### (4) Reducing $q^*$ : improving the construction of culture and system and reducing the risk of advice

In order to reduce  $q^*$ , we can decrease the loss  $L$  faced by enterprises through lessening the team's conflict resulted from the advice of employees due to  $q^* = \frac{L}{R_1 - R_2}$ . In this way, the saddle point will move to bottom. In private enterprises, if senior managers come up with advice for poor decisions made by members of the family, it is easy to leads to the conflict which may result in deterioration between them. At this time, enterprises are possible to suffer a loss. The system and culture are the sally port to reduce



the loss. In the first, we can construct the open enterprise culture to reduce conflict. Specifically, higher authorities usually think that the advice from subordinate is a challenge to their power on account of the influence of traditional hierarchy and face culture. And openness of the enterprise culture can effectively avoid this kind of idea. Secondly, it is necessary to perfect internal system of enterprise to mitigate conflicts. For example, enterprises can break the bureaucracy and hierarchy, and shorten the rights' distance and psychological distance between members of the family and all employees containing external executives. In the same way, we can develop the bottom-up communication system to make the communication between higher and lower smoother. In this way, conflict can be mitigated timely and effectively.

## CONCLUSION

On basis of the above study, it can be found that the relationship between the member of the family and outside executives is the consequence of the game. And there are two evolutionary stable strategies. They are "encouraging advice—breaking the silence" and "opposing advice – silence". But external executive members of private enterprises often choose silence because of the culture and historical roots of private enterprises and autocratic management. The silence of external executives can maintain harmony within the team in a certain extent, but it will lead more and more problems in the future. We all know that Enron Enterprise with fabulous performance were bankrupt due to employee silence. Therefore, it is imperative to break the silence of external executive in private enterprises. Based on the building and analysis of evolutionary game model, the author found that two methods including changing the leadership style of family members and developing the character of advising of external executive can be used to break the silence. Meanwhile, it is essential to lay emphasis on the improving external executives' yield of advice and reducing the risk of recommendations, which is beneficial to realize the ideal mode of "encouraging advice — breaking the silence". In summary, we can

realize the sustainable development of private enterprises by building a good senior management team.

This paper focuses on the negative impact of external executives' silence, but silence is good for the development of individuals or the organization with some condition. If the motivation of the silence which is named as pro-social silence by Dyne (2003) is based on altruism and cooperation, it is profitable to the development of the organization. For example, when a decision which can effectively promote the development of enterprises is harmful for some employees, pro-social silence can encourage employees safeguard the interests of organizations and give up personal gain. For external executives, appropriate silence can effectively improve interpersonal relations and be advantageous to their career. In addition, for private enterprises, a moderate amount of silence can avoid confusion caused by too much "voice" and reduce internal conflict within the executive team. Therefore, we need view the silence dialectically in the study of employee silence. In other words, not only the negative effect but also positive influence of silence should be paid a close attention.

## ACKNOWLEDGEMENTS

This research is supported by National Natural Science Fund (71102160), Humanities and Social Sciences Project of Ministry of Education (10YJC630281), China Postdoctoral Science Foundation funded project (2012T50471) & Advanced Talent Project of Jiangsu University (09JDG050)

## REFERENCES

- [1] E.W.Morrison, F.J.Milliken; Organizational silence: a barrier to change and development in a pluralistic world, *Academy of Management Review*, **25**(4), 706-731 (2000).
- [2] G.Pinder, H.P.Harlos; Employee silence: Quiescence and acquiescence as responses to perceived injustice[J], *Research in Personnel and Human Resource Management*, **20**, 331-369 (2001).
- [3] L.V.Dyne, I.C.Ang S.Botero; Conceptualizing em-

## FULL PAPER

- ployee silence and employee voice as multidimensional constructs[J], *Journal of Managerial Studies*, **09**, 1359-1392 (2003).
- [4] Liu juqin, Lv Bo; The construction of systematic strategy to break the behavior of employee silence based on lever model [J], *Modernization of market*, **10**, 37-40 (2012).
- [5] Yang Fengrui, Xie Yunlu; Silence is not gold-reducing employee silence behavior through developing of human resource [J], *Business management*, **08**, 89-91 (2009).
- [6] Zheng Xiaotao; Research on the relationship among the employees trust of organization, Factors of trust and employee silence [D], Shanghai: Shanghai jiaotong university, (2007).
- [7] Zhang Jinping; Effects on employee silence due to leadership style of private enterprise [J], *Management survey*, **27**, 128-131 (2013).
- [8] Shi Kan, Gao Liping, Huang Xu, Sha Yuejia; Leadership authorization behavior impact on employee silence: analysis of trust adjustment [J], *Management review*, **10**, 94-101 (2012).
- [9] He Xuan; Why employees know without speaking-local empirical study of employee silence behavior [J], *Nan Kai management review*, **03**, 45-52 (2010).
- [10] Zhou Jiantao; Research on the mechanism of action of employee silence because of power distance orientation[D], Huazhong university of science and technology, (2013).
- [11] Nie Erde; Financing analysis of small and medium-sized enterprises based on the perspective of game theory [J], *Financial studies*, **06**, 27-31 (2011).
- [12] Duan Jinyun; Research on the relationship between advice and silence of employees: Novartis's network perspective [J], *Nan Kai management review*, **80**, 80-88 (2012).