



Research Article

ISSN : 0975-7384  
CODEN(USA) : JCPRC5

## The risk recognition of enterprise creative talents based on ecological system theory

Chu Sheng Chen and Xiang Qian Zhang

College of Business Administration, Hua Qiao University, Quanzhou, China

---

### ABSTRACT

*Innovative talents are to create value for the enterprises, but it also brings certain risks. Multiple social network system between individuals and the business circumstances determines that risk recognition of the creative talents is complex and dynamic. Relying solely on the HRM process is an ineffective way to solve the personnel risks. The analysis of environmental factors as a nested ecological environment system provides a new angle for us to explain the effects of environmental factors on the risk of talents and its working mechanism. The ecological system optimization is the basic point of risk recognition of creative talents. The soft powers, such as HRM value chain management, creative talent network construction, open ecological regulation and strong internal social capital, are effective ways to reduce the risks of creative talents, and to build the core competitiveness of enterprises.*

**Keywords:** Ecological System Theory; Creative talents; Risk recognition

---

### INTRODUCTION

The enterprise as mainly body for innovation production, is the final platform for the integration of knowledge, technology and innovative ability. The creative talents are the core of this platform, who have the spirit of creation and strong innovative ability, bringing higher performance than other human resources. These talents create business value to enterprises, but at the same time there are certain risks such as brain drain, commercial secrets leakage or less and less incompetent. In the increasingly fierce competition for talents and in talent scarcity era, it is important to inspect the risks of the creative talents and manage it. How to avoid and reduce the risk is a principal task of creative-type organization. Talent risk identification is to analyze enterprise risk factors associated with talents, to how it exists and how the potential factors change into reality risks. It is the basic work to prevent risks, then to reduce the risk of loss. The domestic research on talent risk recognition mainly lies in three stages, including talent introduction, talent use process and brain drain stage from the perspective of the function of human resources management. The representative foreign study about it is Price-Mueller model (1981) and Mobley model (1991). They found that external factors, individual factors and process factors are key factors in talent flow risk. [1] Domestic and foreign scholars focus on talent risks from different angles, but lack of a framework to integrate these risk factors, especially lack of the research from the perspective of creative talents.

#### 2 A scientific view on the risk creative talents from the ecosystem perspective

In the social ecosystem, enterprises or individuals can perceive the changes in the market because external market, service market and the talent market are open. So the risks of creative talents are complicated and dynamic. Creative talents maintain close social interaction to receive all kinds of information about innovation to keep the creative inspiration. Otherwise, the creative talents will no longer be innovative. And human capital in these people will degrade. This social information exchange may bring the negative influence such as frequently job hopping, or recruitment by the competitors, then the loss of organization's human capital and social capital. There are different impacts on different enterprises. The social structure of enterprises determines the loss degree of tacit knowledge

from the out flowing talents.[2] The development of high-tech industries strengthens the symbiotic interaction between enterprises, integrates the diversified enterprises into an ecological system to the formation of network structure with internal fuzzy boundary. Many studies show that environmental system has an important impact on organizational behavior and innovation behavior. Innovative organizations need to establish an ecological system of business management model in order to provide a guarantee management for the innovation. Thus, individual coexist with the enterprises can handle their own affairs independently and flexibly for innovation while maintaining individual openness. [3]

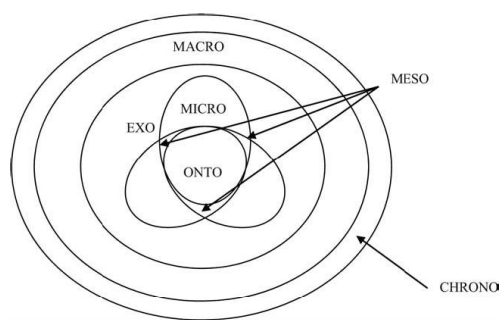
Ecosystem focuses on organizational changes that contribute to environmental characteristics and conditions. The organization consists of several interdependent subsystems with respective functions and purposes, including individuals, teams, structures, subsystems and policies, in which any change will affect the whole system. These variables, such as structure, scale, technology and leadership style, coexist in the organizational environment. Therefore, it's reasonable to elaborate the relationship among them and explore the organizational and environmental factors from the ecosystem perspective. [4]Talent subsystem is also influenced by organizational and environmental factors. Compared with the general human resources, the creative talents are more sensitive to the organizational HR management environment, living environment, work environment, regional environment and industry environment. The higher risk appetite of the staff in hi-tech enterprises lead to higher job-hopping intention, and the decision is not only restricted by internal network of relationships, but also affected by the external social network. [5]Scholar Will Harvey found that that social factors and lifestyle are important factors which affect the first-class employee country migration. For the first-class talents of international flows or professional immigration overseas the key motivation is to find a new way of life, good culture environment for children, better employment opportunities and fun for the new environment. The early stage is the main occupation opportunity, but the latter is more concerned about the family, life style etc. Country and region environment plays an important role, because overseas talents like better and better the environment with ease, freedom for selection and for their own future development. [6] Clearly, factors influencing on the risk of creative talents are of diversity and complexity, and any change of individual factors, organizational factors and external factors may lead to it. Talent risk management is a systematic project, whatever it is concerned with the individual, organizational or external factors. They are unique to the system. It is the interaction between these systems to bring risks. The present study focuses on the analysis of various factors in a simple and parallel way, rarely involving the interaction between influencing factors. And ecological systems theory takes the individual and the environment among the complex structure as a completely nested system, through the analysis of the interaction among systems in the environmental changes to explore the development tendency of the individuals. It helps to clarify how the risk of creative talents is to transform because of the potential risk factors to the reality from the ecological system theory, then to identify it. How does multilayer environmental factor play a role? How to build a comprehensive protection against personnel risks and attain the core competitiveness of enterprises?

### **3 The ecological system theory and the identification of the risk of creative talent**

#### **3.1 Overview of Ecological System Theory**

In 1935 the British ecologist Tansley proposed the concept of ecosystem, the ecological system is a complete system, including not only the organic complex, but also the whole environment physical factors, in which any creature that is not isolated, and there is interdependence between individuals, between individuals and groups. In 1979 Bronfenbrenner brought the ecosystem concept into the field of sociology, studied the dynamic interaction between human biological development and ecological environment, then refined the ecological systems theory of human development system model. The model is then famous in the field of social psychology, as shown in figure 1. The individual stays in a concentric circle structure with the multiple nested environment system, from the directly environment (family) to indirect environment (Social Culture), in which each system interacts with other system. All these constitute the social ecological framework of individual development. [7] In this ecological framework, there is reciprocity or two-way exchange between the environment and the individual for mutual adaptation. Individual plays an active role in the interaction with the environment, constantly adjusts the adaptability to environment, in order to maintain the dynamic balance.

3.1.1 Microsystems. Microsystem refers to the face to face or individual direct level exchange system. It involves the interaction between members of small groups, the activities of family members. For example, the relationship between family members or team members' relationship will directly affect the individual working condition.



**Figure1: The mode of ecological system theory**

3.1.2 Mesosystems. Mesosystem refers to the interactive relationship among microsystem in which individual participate. In talent management mainly refers to that the family members influences his (her) participation or team work has impacts on family life. For example, the physical condition of the parents and demand for the children help will affect the talents flow decision.

3.1.3 Exosystems. Exosystem refers to the indirectly influencing systems that individuals involve. It mainly refers to the influence of other work team or something outside the organization related to the business activities on individuals. For example, the improving salary level in other companies will affect the individual's satisfaction about work; counterparts launching new product may indirectly affect individual working activity.

3.1.4 Macrosystems. Macrosystem refers to the social-cultural value system which influences the individual thoughts and behaviors. It reflects the social and moral standards through the micro, meso and outside ecological system to affect family members' thoughts and behaviors. For example, low carbon consumption, belief, people-oriented social values permeability in the social members affect the family, enterprise culture, ultimately affect the behavior and decision of individual.

3.1.5 Chronosystem. It refers to long term system. The environmental events and the life style change over time. So microsystem, mesosystem, macrosystems will vary with time.

### **3.2 The Risk Recognition Model of Enterprise Creative Talents Based on the Ecological System Theory**

The ecological system theory helps to show the organic integration of risk factors of creative talents. It can identify risk factors as follows. Figure 2 shows a nested ecosystem with creative talents.

3.2.1 Microsystem is the system in which enterprise creative talents directly exchange, mainly refers to the family, work team (including direct leadership, colleagues, subordinates), human resource management (HRM). Everyone is in unique family, thus the interaction between family members will directly affect the growth and life of talents values. It is one of the main factors to talent flow; The internal enterprise, unreasonable team structure, internal team goal conflicts, the adjustment for personality conflicts, incentive mechanism especially the imperfect profit distribution mode is main causes of brain drain; [8] Human resources management department belongs to the functional management departments at a higher level, but its policy formulation and implementation, employee communication also directly affects the enthusiasm of creative talents.

3.2.2 Mesosystem includes a personal life circle(LC), units in the organization(UIO), industrial peer groups (IPG), business supply chain system(BSCS). Personal life circle refers to the other group members beyond the family or other friends circle. Personal life circle will indirectly affect the personal values and work style; units in the organization are composed of by the other team or department in the same company. Based on the Justice Theory of Adams, individuals may perceive the actual operation conditions of the other team or department, consider and judge it consciously or unconsciously, and feel fair or not fair; Because the creative talents are the knowledge workers in general, more sensitive to the development of peers in the same field, more willing to participate in peer interaction, so the influence of peers and other similar groups on creative talents is larger. At the same time, innovation needs the resources and support, as innovation organization is dependent on suppliers and customers to provide part of the creation from the network.

3.2.3 Exosystem mainly includes the living environments(LE), government agencies(GA), community organizations (CO), external labor market, regional and cultural(RC) factors. These factors have influence on the individual, but the individual does not directly involve. For example some people may particularly pay attention to living

environment, so he would not choose to go to the serious polluted city. When the surrounding environment can't provide comfortable life, he will choose to leave. External labor market is composed of supply and demand labor in the market. Due to lock in a specific organization in the short time, Enterprise creative talents are not directly involved in the external labor market, but the external labor market information affects individual perception, then influences their judgment, choice of occupational behaviors.

3.2.4 Macrosystem is a social and cultural value system, in which the main factors are the cultural value (CV), beliefs (BS), occupation view(OV). Such as Japan advocates "the industry serving for country", which bring the generation of outstanding innovative industrialist after the second-world war. The policy of being promoted or "rewarded according to status" stabilizes the team of talents to a certain extent; In Europe and USA the guiding concept of performance oriented fit to their job hopping culture. China now advocating creative ideas or "china dream" will affect all social systems.

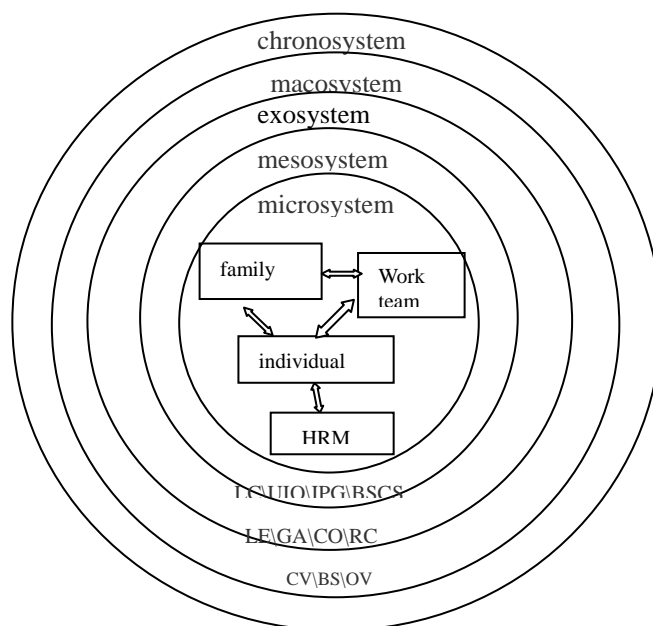


Figure 2 The risk recognition model of creative talents

3.2.5 Chronosystem is long term system in which everything changes. Each system affects each individual with mutual influence, mutual constraints through energy and information transfer. In the future system, the cloud computing era, creative economic will change each member of society, which has essential influence on the way of life and way of working.[9]

The above analysis shows that the various risk factors of creative talents from the perspective of ecological system can be further integrated. Scholar Yan pointed out that the human resource ecosystem is composed of internal ecological system, the enterprise value chain system and external ecological system. HRM subsystem and the society, the natural environment are integrated into a matter-energy- information space system. In the HR system, ideal ecological space is suitable for survival and its development is in the pursuit by individuals. But when the reality of ecological environment and ideal ecological environment appears seriously dislocated, not meeting individual needs, imbalances are emergent. Imbalance means that the dominant human resources risks begin to appear. The negative environmental factors of creative talents risk exist at all the moment, only when the environmental factors excess "ecological threshold" will lead to loss risk. [10]

As can be seen from Figure 2, risk of creative talents is actually a "failure" phenomenon generated in the process of interaction between creative talents and social environment. "Failure" means there is relative harmony and disharmony in the relationship between man and environments, not the so-called appropriate individual or inappropriate environment. First of all, when individuals fail to adapt to the system in exchange of balance, the pressure will be generated, and then there will be imbalance among people's demand, capacity and environment. The creative talents imbalance exchange in social ecological system, such as the life changing, interpersonal tensions, ambient pressure, individual needs problem, capabilities and social environment perception, dissatisfaction will appear. The creative individual needs self-adjustment until the re-establishment balance matches environment; secondly, individual needs adequate resources provided by environment to improve the relationship between the

people and the environment. People will create a suitable place in the process of adaptation to the environment, namely "niche" (perched position), which is a comfortable and unique place that the individual and the environment depends on each other for survival.

#### **4 Implication for the risk management from the above analyse**

4.1 Innovative enterprises should not only consider the strategy of talent but also its ecosystem environment in the risk management for creative talents. Because of the complex networks in the social organization for enterprise creative talents, their ecological system is so multidimensional and dynamic that the system interaction influences the talents stability and use efficiency. The sustainable development of enterprises needs to maintain the balance of power in the subsystems so as to give the individual with good "niche", which is the central position in the ecological system. So making the ecological system better is the basic starting point to the risk management of creative talents.

4.2 Optimization of value chain management for creative talents. The value chain refers to the process of talent value creating- evaluation – allocation process. Value chain management can realize the energy exchange balance between the individual and the environment. These balances not only meet the need of self-realization, but also meet the requirements of the creative talents in microsystem environment, which is the basic security and stability to creative talents ecological system. Creative talent risk management starts from the personnel selection, matching talents to organization or position. This is the first step to value creation and exert the value of talents, also the basis of value evaluation and value distribution. And organizational strategic performance management system and salary management system is good assurance to achieve talent value evaluation and value distribution.

4.3 Using creative talent network to regulate the ecological system. The ecosystem views that an open system can be controlled and regulated. It can improve the individual and environmental adaptability through the better relationship between the individual and the environment. As soon as the possibly ecological environment imbalance is evaluated, we can remove or reduce the imbalance through appropriate interventions. The ecosystem view of human resources management requires systematic thinking, attention to internal and external environmental changes, making full use of the favorable environment. The introduction of various resources available from internal and external organization establishes creative talent network in order to keep the talent with "activity" and "freshness". The Cook curve tells us that the strong time of fellow creativity is about 4 years. They need continuing to provide growth opportunities such as education, training, job rotation, update knowledge, so as to maintain and enhance creativity. Creative talents management should be dredged, "not blocking" in the interaction among different social environment or technology environment, which needs to establish two-way talent optimization mechanism, give training in the use of talents. Innovative talents in the pursuit of value creation like free working environment also, the flow of talent is to get rid of something limited in his past workplace or the living environment. For the microsystem and mesosystem, enterprise organization can control and regulate them at large, such as creating a harmonious, tolerant team culture to meet the needs of the innovative freedom, personalized needs, to build trust, reciprocity, and unity of the leadership culture to create a harmonious working atmosphere. All organizations can't change the macrosystem or exosystem environment, but can make use of its positive side to improve the creative talent environment, such as Chinese implementing the Plan of Science and Technology Innovation, production - study - research platform and supporting policies by the local government. Enterprises can encourage creative talents to participate in or better utilize these resources to develop innovation. In fact, in the era of knowledge economy and market economy, talent resource is flowing. The individual will choose platform according to "the fittest retained". So, speaking of the enterprise, the key ecological environment system regulation of creative talents is to build a talent network, which can keep talents to realize value, making the organization attain the condition of "talents staying" rather than "stay talents".

4.4 Strengthening the internal social capital to build the core competitiveness of enterprises. The social view of ecological system emphasizes on the social supporting network from an environmental level, also advocates promoting individual and team competence from the overall perspective. Coping with the possible block in the development to help find the best "niche" for creative talents and get ecological security for creative talents growth and retention.

Internal social capital mainly exists in the organization, among employees, managers, Department of social capital, which is conducive to the internal resource exchange, information transmission and acquisition of knowledge in the microsystem and mesosystem, to enhance the capability of intra organizational knowledge transfer, sharing and integration, to promote knowledge innovation of enterprise system. Internal social capital keeps innovation achievements and innovative thinking in the business continuity through teamwork, which is kept to build the core competitiveness of enterprises.

## CONCLUSION

This paper attempts to analyze the risk factors of the creative talents from the ecosystem perspective, integrating the various risk factors into formation from the interactive perspective. It puts forward some suggestions of risk management system of creative talents, avoiding single human resource management function invalid in response to talent risks. That is inevitable in risk management of creative talents in modern enterprise.

## Acknowledgement

Fund Project: "project supported by the fundamental research funds for the central universities · philosophy and social science of Huaqiao University young scholars growth project" (12SKGC-QT02).

## REFERENCES

- [1]Peter W. Hom, Angelo J. Kinicki. *The Academy of Management Journal*, **2001**, 44(5),98-112.
- [2]Scott B. Droege, Jenny M. Hoobler. *Journal of Management Issues*, **2003**, 15(1),12-25.
- [3]Dong Sidai, Tong Dezhi. *Theory and Modern Enterprise*,**1999**(3),36-37.
- [4]Seleshi Sisaye. *Leadership & Organization Development Journal*, **2011**,32(4),379-398.
- [5]Irene Hau S.C, Ignace N.G, Yuan Hong Y. *The International Journal of Human Resource Management*, **2012**, 23(4),89-96.
- [6]Will Harvey. *Human Management International Digest*,**2013**, 21(1), 37-40.
- [7]Bronfenbrenner, U.The Ecology of Human Development[M]. *Harvard University Press, Cambridge*, **1979**, 105-109.
- [8]Zou Qiong. *Anhui Agricultural Sciences*,**2010** (33) ,134-136.
- [9]Yan Aimin. *Journal of Central South University (SOCIAL SCIENCE EDITION)*,**2006**(12),67-71.
- [10]Sun WenXia. Wu Bo. *JiangSu Business Discussion*,**2009**(11), 130-132.