Application of Management Game Theory to the Practice of Human Resource Management

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Abstract: In the process of human resource management, only scientific management and handling different sorts of problems can provide powerful guarantee for the business benefits. The author analyses the feasibility of applying the management game theory to the human resource management, and the problems in applying the management game theory to sports team management, and studies the methods of scientifically managing the human resource. So it can be taken as a theoretical guide to the scientific human resource management.

Key words: game theory, management game theory, human resource management

The human resource managers and the higher administrators have concerned for a long time such topic as the results of the human resource management or the devotion of it to the organization. In the process of human resource management, only scientific management and handling different sorts of problems can provide powerful guarantee for the business benefits. The author analyses the feasibility of applying the management game theory to the human resource management, and the problems in applying the management game theory to sports team management, and studies the methods of scientifically managing the human resource. So it can be taken as a theoretical guide to the scientific human resource management.

1 GAME THEORY AND MANAGEMENT GAME THEORY

A Game theory

Game theory is a science to study the decision when the decision subject activities make direct function and the balance of the decision. That is to say, when a subject, such as a person or an enterprise makes a decision and it will be influenced by the decision of the other person or the other enterprise and on the contrary it influences the decision of the other person or the other enterprise. Therefore, in this aspect game theory is policies theory. There are so many examples on how decision activities influence each other. Almost all the examples in our lives are such. There are games in human resource management, such as project competition, different policies are applies to different competitors in the bid for the project. In the inner management of an enterprise, different methods are applies to t different management objects and different targets.

There are cooperative game and non-cooperative game. When the human activities influence each other, if the litigants can make a binding agreement, that is cooperative game. If a binding agreement can not be made, that is, a party cannot force another party to obey the agreement and each party can only choose its own best action, this is non-cooperative game. Cooperative game can be divided into two-party cooperative game and multi-party cooperative game. As a science, game theory comprehensively applies mathematics, logics, and other science methods to analyze and study decision-making process comprehensively and completely, and provides scientific methods theory for people as to how to make sensible decisions to the problems with game quality.

B Management game theory

The core of management is how to arouse the subjective initiative to the maximum to work creatively, which includes the game between the supervisor and the supervisee. Modern management is man-centered. The efficiency of a organization inner part lies in the industry level of all the staff. So, motivation and restriction becomes the main function of management. In an enterprise, how to improve the staff quality, how to create an environment in which the staff can feel the fairness, how to reach an agreement between the organization target and the personal target, are the problems which in the process of management an organization should consider how to apply management
motivation and restriction methods. From the aspect of social reality, the fake commodities, the pollution, the illegal judgments in the football games, the deregulation of the sportsmen and other problems are all caused by misuse of management motivation and restriction methods. To construct effective management and restriction mechanism is demanded urgently in modern management practice. Management game theory is a new science on how to design motivation and restriction mechanism. It is a new and important division of game theory in management application. The mathematic base which is studied quantificationally and modellingly in Management game theory is game theory.

The design of management motivation and restriction includes needs motivation, target motivation, model motivation, stress restriction, correction restriction.

II. APPLICATION OF MANAGEMENT GAME THEORY TO HUMAN RESOURCE MANAGEMENT

The human resource management is to arouse to the maximum the activity of every employee. The staff management is the chief problem in enterprise management. Under the new condition in which modern economics develop quickly, the human resource management cannot be simply concluded as the relation of obeying and being-obeyed as in the past. Only to manage sensibly and scientifically after fully considering all aspects of factors, can make real effects in the human resource management and provide powerful guarantee. An enterprise is usually a group made of many people. The game between the supervisor and the supervisees exists all the time. In the process of management the supervisor should consider how to balance the relative factors of all aspects to make the best management effects. To apply fully the motivation and restriction mechanism and to balance the advantage and the disadvantage can solve some problems in the present human resource management.

A. Applying management motivation to realize the human resource management target

1) Needs motivation. Maslow's need hierarchy theory shows the human needs are displayed from the lower level to the higher and in hierarchy form. When a level of need is met, its motivation function will disappear. And a higher level of need becomes a new motivation factor. In the human resource management of an enterprise, to the same employee, needs levels in different period are different. For an instance, when a graduate takes a job, he will feel satisfied if the enterprise can make his learning to meet practical needs and the salary is ok. But some times later, he will want to gain higher salary when he considers the problem of how to improve his life level or of marriage. If his enterprise cannot meet his needs he will find another one. Different needs of the staff in different stages should be considered fully in the human resource management, and the corresponding solution should be taken to make the best management effects and to arouse the enthusiasm of the staff to the maximum.

2) Target motivation. Fromm, American psychologist, believes the grades of motivation function of a motivation factor (or target) are influenced by its expectancy and valence, which can be shown as motivation power=valence×expectancy. This formula shows: first, the target should be appropriate. In the human resource management the target should fit to the staff or the enterprise group, based on the staff real working abilities. Without considering the staff abilities and deciding mindedly a higher target for the enterprise, cannot definitely arouse forceful motion power. On the contrary, if the target is too small, it also cannot arouse more powerful motivation. Secondly, the relation between achievement and reward should be handled correctly. Modern society is economic society. When the staff gain certain achievement and reach a certain target, they hope to get the corresponding reward. In this way, they can feel their own value is displayed. Thirdly, the staff enthusiasm should be aroused by applying expectancy. The staff of different culture levels or different skill levels have different expectation for themselves. Some staff’s expectation is higher. They are optimistic blindly. If their target cannot be reached, they will feel a failure sense. Some staff’s expectation is lower. They are relaxing and make no effort to seek progress. The supervisor should analyze carefully these problems and build the proper target for the enterprise and the staff.

3) Model motivation. An advanced enterprise is made of excellent staff, especially those master craftsmen, senior staff, who are valuable treasure for the enterprise. Their words and actions, to the younger staff, make greater function than the sermon of the supervisor or the manager. Therefore, they should restrict themselves more severely, in the human resource management, to play their roles.
Applying management restriction mechanism to realize enforceable management target of human resource

1) Stress restriction. According to the management target the direct function of restricting the supervisee (such as to construct competition environment) can form an outer stress. It can make people feel worried and nervous and form a sort of power to avoid punishment and to control. Proper stress will be transferred into motivation to work hard. But too much stress will cause upset emotion. In the human resource management the supervisors should consider the abilities and standards of the staff, then define the proper target and impose stress restriction on the staff. The radical idea that stress means power is unscientific and wrong.

2) Correction restriction. Correction restriction can be used to restrict the staff’s actions which deviate from the enterprise detailed rules so that the whole staff can advance to one target. An enterprise accepts a passel of urgent tasks. There is a rule that all the staff cannot drink before the delivery. But Mr. Hu and Mr. Yang in the sales department think they have no productive task so they drink without admission. In order to correct discipline the enterprise makes a decision that Mr.Hu and Mr. Yang are transferred from the sales department and are fined for 1000 yuan. This punishing decision is the application of correction restriction in management restriction mechanism in enterprise management. In the human resource management correction restriction can regulate effectively the staff’s irregulative actions.

III. CONSTRUCT PROPER MOTIVATION RESTRICTION MECHANISM FOR HUMAN RESOURCE MANAGEMENT

The formation of management motivation and restriction is a complicated process. First, taking the definite target as guide, target system is designed properly and analyze the detail to form decision. In the human resource management the supervisors own different motivation and restrict sources because of the supervisors’ different needs in different periods. Therefore, the key points of management motivation and restriction in different periods are different. Nash equilibrium must be applied to assemble and analyze every relative factor and the management methods would be adjusted in time. For instance, as for a middle-sized enterprise, its total target is to gain high profits. But the detail targets in different stages are not the same. Sub-target A may be to maximize the profits, sub-target B may be to gain a little profits and so on. So when we apply motivation and restriction mechanism, according to different targets we should analyze different relative factors and adjust management methods. The complete design model is like the following figure.

Management Motivation and Restriction Mechanism Design

IV. CONCLUSION

First, the feasibility of applying management game theory to human resource management is analyzed, and then the relative factors in the application of management game theory to human resource management are studied. In human resource management the management motivation and restriction mechanism is applied properly can reach the expectant management target, save the limited resources and provide the guarantee for good achievement. In the process of human resource management the relative factors are different because of different conditions of each enterprise and each group. In the operation process, based on the real condition the model should be made complete and perfect.

Reference: