Reputation Record System Enhances the Company Trust and Productivity

Chen Liu and Minghui Jiang

ABSTRACT

In this paper we study how reputation record system affects the company trust and employees’ behavior. Employers have to choose to offer a high discretion high efficiency job and a low discretion low efficiency job. Employees have to choose the efforts that expend into their jobs. There were two treatments based Bartling, Fehr & Schmidt’s experiment. In base treatment, employers do not have any pervious information about their employees; in screening treatment employers can observe the record of their employees. Overall, introducing the reputation record system (screening treatment) can enhances the productivity.  

INTRODUCTION

To improve the productivity of employees has always been an important research topic in human resource management. It requires both employees and employers to cooperate to complete the production task; however, there is antagonism in the distribution of profits generated by surplus value. Screening employees had been seen as an important method to improve the productivity in early human resource management. However, this theory had been proved to be outdated, especially after the industrial revolution, the scale of enterprises continued to grow, and the direct cost of supervision gradually increased. With the development of science and technology, the importance of potential supervision cost is paid more attention to in the modern human resource management. Modern human resource management believes that excessive supervision of employees to a certain extent could ensure the efficiency of employees, but greatly hampers the self-motivation of employees. In the long run, over controlling will reduce overall productivity.

1 Chen Liu, Minghui Jiang, Harbin Institute of Technology, Harbin, Heilongjiang, China
efficiency to a certain extent. The theory has been proved by many researchers. Falk & Kosfeld[1] proved that if employers want to control employees during working, employees will be less willing to expand effort into the work. Ichniowski & Shaw [2] showed that managing system with high efficiency and low regulation has higher productivity than traditional managing system.

LITERATURE REVIEW

The control management system has certain advantages. Firstly, to control employees by hiring overseers to supervise the employees’ work, which completely abandoned the employee's self-initiative, made the company's output stable. Secondly, the operating costs were kept at a relatively low level because employers pay very low salary only to meet the basic requirements of employees. So the employers had the most part of the profit. On the other hand, the disadvantages of this management system were also obvious. This management system can only be achieved in a very harsh external environment. At the same time, it has greatly intensified social contradictions. In this harsh external environment and extremely intensive working environment without basic human rights, one of the most obvious results was that the proletarian revolution soon broke out in Europe. These problems also illustrated the importance of trust in the company environment. When the employer has no trust in employees, the enterprise would choose to maximize the supervision on employees. However, it would decrease the efficiency of employees and productivity, and even intensify the contradiction between employers and employees.

With the development of modern human resource management, people find making employees feel being trusted could increase the productivity. Especially with the proletarian revolution and the emergence of socialism, it was impossible for employers to regulate their employees without restraint. Various countries have also introduced laws and regulations on working hours, minimum wages and management patterns. At first, many people pointed out that the reduction of supervision in management would inevitably lead to the reduction of employees’ efforts input; the cost of production would increase and profit would decrease. Companies that relaxing regulation will not be able to compete with tightly regulated companies. However, with the gradual relaxation of management, it is found that the overall productivity of some companies who reduced regulations on employees had not decreased; in fact, it decreased the cost of control and increased productivity. Under this background, human resource management paid more and more attention to employees’ participation in work.

However, modern human resource management theory believes that blindly reduce the control will make the companies more vulnerable. Doeringer & Piore [3] pointed out that in the labor market, strict management and discretionary management should coexist. Employees responded to the discretionary management methods differently. For some employees, discretionary working environment had
little positive impact on work efficiency and greatly reduced the effort input to the work. Because many enterprises cannot observe and predict the specific work efficiency and energy input of each employee under discretionary management conditions, they had adopted a more extensive unified and strict management. But from a long-term perspective, such a management model cannot stimulate the maximum efficiency of each employee, resulting in a waste of human resources. So how to judge and predict each employee’s efficiency and efforts in different management mode had become a new problem of modern human resource management.

According to Holmstrm's model[4], if employers can infer the productivity of employees from their past performance, then the employee's efforts input and employer's interests can be balanced. Therefore, in many developed countries have introduced a cross-enterprise employee reputation record mechanism, which including a comprehensive record of employee performance in the past. By introducing the reputation system of employees’ work experience, employers can better formulate their own management model to improve the overall work efficiency. In Green's article [5], employees in the UK can enjoy greater freedom when they are divided into loyal employees group (high efforts input under discretionary management) by the company; it also shows that employers will give loyal employees better jobs (high wages, high discretion and high share of surplus) based on their loyalty. Bulow & Summers [6] and Saint-Paul [7] argue that there is a correlation between the dual labor market (high and low reputation employees) and monitoring. In a competitive labor market, employers compete with each other for high-reputation employees; at the same time, employees compete with each other for good jobs.

**METHODOLOGY**

Because of the difference between actual behavior and theories, Bartling, Fehr & Schmidt [8] design a lab experiment in order to test the effect of reputation system in real employment. During their experiment, participants were divided into two groups: employers and employees. Consider employees expended efforts $e$ and the efficiency parameters $b$ ($b>1$), to get the gross profit was $b*e$, which was gained by the employers. The cost of employee’s effort was $c(e)$, with $c(e)=e$, and the salary was $w$. Thus, the net profit of employers was

$$\Pi = b * e - w \quad (1)$$

and the payoff function for employees was

$$U = w - e \quad (2)$$
The two payoff function reflected the conflict of interests between employees and employers, which employers wanted employees to put into as many as efforts and pay them with minimum salary while employees wanted the other way.

The employer provided an employment contract to the employee that offered the employee a fix salary \( w \), and requested the employee to expand effort with minimum \( \tilde{e} \). The salary should not lower than the cost of the request effort and cannot exceed \( \tilde{w}=50 \). If the employee declined the contract, the payoff for both employees and employers are 0. If the employee accepted the contract, then the employer should pay the salary \( w \) to the employee as far as they meet the effort requirement in the contract.

The employer could offer either a contract with full discretion or one with limit discretion. These two types of contracts differed in two ways:

a. The effort of the employee expand: under the contract with discretion, the employee could choose to expand effort \( e \in \{1, 2, \ldots, 10\} \); while under the contract with limit discretion, if the employee accepted the contract, the employee should expand effort at least 3, which is \( e \in \{3, 4, \ldots, 10\} \).

b. Efficiency: under the contract with discretion, the efficiency parameter \( b=5 \); while under the contract with limit discretion, the efficiency parameter \( b=4 \).

The experiments were divided into two treatments: the base treatment and the screening treatment. Under the base treatment, employers cannot receive the employee’s past record.

Under the screening treatment, the employer could observe the employee’s past record of effort expand, salary received and requested effort in past employment contract.

The employer used two different strategies trust strategy and control strategy available in both base treatment and screening treatment. Under trust strategy, employer offered a job with full discretion, high wages, high request effort and high share of surplus for employee. Under control strategy, employer offered a job with limit discretion, low wages, low requested effort and low share of surplus for employee.

**RESULT**

Figure 1 showed the result of Bartling, Fehr & Schmidt’s experiment [8]. Under base treatment, the optimal strategy was control strategy although limit discretion decrease working efficiency. Under screening treatment, the optimal strategy would accord to the employee’s past record. If the employee had a good reputation in the past, trust strategy (discretion) was the optimal strategy; while if the employee had a bad reputation in the past, control strategy was the optimal strategy.
According to the employee’s reputation, which denoted by r, the reputation equals to the efforts expanded in the previous three periods. Reputation was sorted into three parts: when r<3.5, the employee had a bad reputation; when 3.5≤r<6.5, the employee had a medium reputation; and when r≥6.5, the employee had a good reputation. The results were proved by figure 1. Under base treatment, the employer offered limited discretion along with low wages (w<10) jobs could gain higher profit than the employer offered discretion along with low wages jobs (t-test, p≤0.001) and medium wages (10≤w<20) jobs (t-test, p≤0.001). In fact, under base treatment, the employer offered full discretion incurred loses on average. Under screening treatment, there is no significant difference for the bad reputation employees compare with base treatment, as the employer offered limited discretion and low wages jobs for the employee could make more profit than both jobs with full discretion, low wages and jobs with limited discretion, medium wages(t-test, p≤0.001). Therefore, employers provided limited discretion and low wages for employees in base treatment and employees with bad reputation in screening treatment could make higher profit than other strategies. However, this result does not hold with employees with good reputation under screening treatments. Under screening treatments, full discretion and high wages (w≥20) made the highest profit. When employers provided high wages, the profit of full discretion jobs was higher.
than the profit of limited discretion jobs; when the employer provided full discretion, high wages jobs made more profit than low wages jobs (t-test, p≤0.001).

Under screening treatment, employees expanded more effort when they got high wages. However, in base treatment the slope of wage-effort was too small, the high wage strategy made low profit for employers. In addition, employees would expand more effort in limited discretion jobs than full discretion jobs when wages were at a low level. Consequently, the control strategy was the optimal strategy. Under base treatment, despite full discretion or limited discretion jobs, high salary means higher effort. However, employees expanded more effort in limited discretion jobs than in full discretion jobs. Therefore, the control strategy was the optimal strategy in base treatment.

CONCLUSIONS

With social progressing, the types of jobs become more diversification; put different employees in different types of jobs could improve efficiency. According to the analysis of above experiments, it is obvious that introducing the reputation system of employment makes trust strategy with discretion in jobs may be more profitable for employers. The construction of the reputation system of employment should be in progress and screened by government, that it should truly reflect employees’ past performance and won’t be a method for employers threatening employees. Therefore, the reputation system of employment could encourage the cooperation between employers and employees and make jobs more efficient.

REFERENCES