



Dynamic Design of Compensation System Based on Diversified Project Features —Taking the Project Manager as an Example

Liwei Liu

School of Business Management, North China Electric Power University

Bei Nong Road, Beijing 100086, China

E-mail: vliu@sohu.com

Erdong Zhao (Corresponding author)

School of Business Management, North China Electric Power University

Bei Nong Road, Beijing 100086, China

E-mail: teacherzed@163.com

Abstract

With the development and extensive application of project team work under the matrix organizational structure, the traditional compensation system based on the job-evaluation method has been greatly challenged. The job-evaluation method is designed to compliment functional or divisional structure in a static or at least stationary context, which is often ineffective and even counterproductive in the quick changing environments.

This paper is an attempt to design a dynamic compensation model by setting a “project adjusting index” based on the key diversified project features. The objective is to primarily rationalize the firm’s pay structure, and to make project employee could be paid according to their contributions to the organization on the norm of equity.

Keywords: Dynamic compensation, Diversified project features, Project manager

1. Introduction

This Project team working format under matrix organization has been widely adopted, especially by those companies in engineering construction industry, IT industry or consultancy industry providing high-tech and intelligence service.

Even though researchers have extensively investigated the relation between compensation, incentives and motivation, most of the theoretical literature has considered these issues in a static or at least stationary context. In fact, the actual relation between compensation, incentives and performance evolves dynamically in non-stationary world, especially for today when teams have become a popular way to organize business (Cheryl Zobel, 1999). In China, many companies have just newly changed into the matrix structure. However, many of them still adopt the traditional, job-evaluation compensation systems designed in the functional structure. The salary of project managers and the employees are almost the same in the traditional job-based compensation system, no matter how and what they contribute in the different projects, which greatly influence the motive of the project team workers and the project managers.

What makes an effective project team compensation system? How to revise the static compensation system to adapt to the changing projects environment, how to pay dynamically for the project manager? In this paper we will discuss.

2. What is dynamic compensation?

2.1 Stationary Compensation: Job evaluation-based Compensation System

Job evaluation is a formal process by which the relative worth of various jobs in the organization is determined for pay purposes. A systematic comparison of worth of one job with that of another job eventually results in the creation of a wage or salary hierarchy unique to the organization. Essentially, job evaluation relates the amount of pay for each job to the extent to which that job contributes to organizational effectiveness. (John M. Ivancevich, 1998:331) There are four most frequently used methods of job evaluation, they are job ranking, classification, point system and factor comparison. The greatest number of job evaluation plan use the point system (Paula England & Kilbourne, 1991) Point system is also called Hay-point System. Edward Hay and other associates of the Hay Group, developed the Guide Chart-Profile

Method of Job Evaluation in the early 1950's. (Craig Skenes and Brian H. Kleiner, 2003)

The employee compensation is closely related with the job, or job analysis and evaluation result under hay points systems. Hay points methods begins with a systematic analysis of the underlying attributes and demands of jobs. Each of the jobs studied is characterized in terms of various common dimensions and distinctions, such as the types and complexity of knowledge required, number of employee supervised, amount of capital overseen, type and unpleasantness of working conditions, and so on. These measures then used to put all the jobs on a one-dimensional scale of "value". When the measures is scaled and then subjectively determined weights are used to compute a weighted average, where the weights reflect what is important to the firm. For example, a firm whose culture emphasizes HRM might choose to weight heavily the number of employees supervised. The result is an abstract measure of each job's value to the firm. The firm then can determine an average wage it wishes to pay and the amount of dispersion in wages it wishes to have, assigning wages to specific jobs based on this value-to-the-firm measure. (Baron& Kreps:285)

2.2 Dynamic compensation: Revised Hay-Point System

Hay system appears to employees to be an objective method for finding appropriate compensation levels, thereby lending legitimacy to the firm's wage structure and heightening perceptions of procedural and distributive justice. (Baron& Kreps,:285) However, this mode of compensation is quite suitable for those enterprises with stable operation environment, clear organization structure, many divisions of departments or jobs and the relatively stationary or fixed job.

The definition of dynamic compensation system is to make the compensation system change with the employee's performance and market factors. In this article, we define dynamic compensation system in the project context, which means that the compensation should respond to the diversified features or environment of projects, so that the personal contributions in different projects could be reflected.

3. Why dynamic compensation?

3.1 Demand of matrix organizational structure

Compensation system is closely linked with organizational structure (Cheryl Zabal, 1999). One of the most important elements of an ideal compensation system is that it fit with the overall organizational structure or design (Gross, 1995) .

With the development of globalization, matrix structure have been widely adopted by many organizations, especially those engineering construction industry, IT industry or consultancy companies providing high-tech and intelligence service. The uniqueness of matrix arrangement lies in its simultaneous realization of the advantages of functional structure and divisional structure and its combination of quick responsiveness to customers and specialized knowledge. Under matrix structure, temporary teams have become a popular way to organize business and carry out project because they enable companies to be responsive to the ever changing business arena.

Majchrzak and Qianwei (1996) pointed out that compensation was a key ingredient in cultivating a collaborative work environment. Unfortunately, many companies with newly-changed matrix structure don't support and reinforce the team concept through the compensation system, they still adopt the traditional, individually-based compensation systems designed to compliment functional or divisional structure, which are often ineffective and even counterproductive in collaborate, team-based work environments. Gross (1995) has conducted a survey and found that organizations surveyed were very pleased with their experiences with teams, but only 40 percent were pleased with their corresponding compensation systems. In another 1995 survey of 300 large companies, Lubin found only 9 percent to be very positive with respect to their team-based compensation plans (Shaw and Schneier, 1995).

3.2 Request of diversified features of projects

Project features are diversified, not only in the basic element such as resources, time schedule, budget, requirement and scope, but also in the ever-changing environmental input factors such as legal, social, political, economical and technological. The diversification of project appeals for project members' different contribution to the project. Here comes the challenge. Most of the present job evaluation-based compensation system is not able to respond to the different personal contribution, in other words, the personal effort due to diversified features of projects can't be reflected in their compensation. Even though many companies have already take many factors into consideration, such as the competitive salary level and structure in the local market, or linkage between the performance with compensation, etc., many project managers still complain that the compensation for them is unequal. For instance, in different construction project, the base salary for project managers is the same in spite of the complexity, profit, time-duration, technological difficulty, social environment and different requirement of contractor. In this case, project manager would rather select the easy and small-sized one because in the project difficult to be finished, their performance-linked bonus will be influenced.

3.3 Need of permanent change of job

Matrix structure determines the frequent disorganization and reorganization of team according to different projects. In other words, the temporariness of team project under matrix structure leads to the permanent changing nature of job.

This means, first, some certain job will only exist in the specific time duration of the certain project. As long as the project is finished, the project team members will be dispersed and enter into the status of waiting for another reunion whenever needed. Second, when another project starts, new job will also occur. There are two kinds of situation for this new job, one is that the new job maybe a totally new one, the other is that it is the job which has the same title with former job but quite different content. Of course, the perfect resolution for these new jobs is to redo the job analysis, rewrite the job description, re-evaluate the job, and redesign the compensation according to the result, so as to satisfy the employees. However, this is infeasible in practice for two reasons. First, By carrying out the above-mentioned procedures each time whenever a new project occurs, not only is unrealistic, but also the management cost will be increased; Second, job description and job specification will be almost the same for the job with the same title, the job value due to the different project features still can't be reflected in the job analysis.

4. How to design dynamic compensation system?

Considering that the real job for each employee varies with projects in matrix structure, the resolution for reflecting employee's different contribution to different projects in the compensation system is to find out a way to make the compensation adjust to the changing environment of projects, whereas without increasing the management cost.

4.1 Internal features of projects

Each project has its own features; the differences basically fall into four basic elements: resources, time, money, and most importantly, scope.

Firstly, the project scope includes project size, project goals and project requirements. The project scope means what the project is supposed to accomplish and the budget (of time, money and resources) needed to achieve these objectives. It is absolutely important that any change to the scope of the project have a corresponding change in budget, either time or resources.

Secondly, time include task durations, schedule and critical path. Schedule is to make clear the tasks, predecessors and successors. The difficulty in managing schedule lies in that resources and time are seldom enough to complete the tasks sequentially. With regard to critical Path, it means that some tasks have a little flexibility in their required start and finish date. This is called float. Other tasks have no flexibility, zero float. If a line through all the tasks with zero float is called the critical path.

Thirdly, resources include people, equipment and material needed to complete the project. Managing the people resources means having the right people, with the right skills or capacity to do the right job, in the right quantity at the right time. It also includes motivating them in the project. Moreover, the project manager has to make sure that the right equipment in the right place at the right time and that it has the supplies it needs to operate properly.

Fourthly, money include cost, profit, contingency such as weather influences etc..

4.2 The "Project Adjusting Index"

Table 1. Project adjusting index

Scope			Weight (%)
	project size	The bigger the bidding, the higher the index	20
	goal	More important to company, much higher the index.	10
	requirements	More difficult to achieve, the much higher index. Technology difficulty Difficulty degree or flexibility of critical path: to finish project within time and budget or too long to carry out Other special requirement of customer, difficulty to achieve, such as quality, safety etc..	Total 30 10 10 10
Money	Profit making		20
	Cost control		

			(depends)
Resources	people	Project employees capability, stability, effort; (the worse, the more difficulty)	10
	equipment	Equipment sufficiency at right time	
	material	Material sufficiency at right time	
Environment	natural	Difficulty degree brought by natural environmental conditions	5
	Social	Difficulty brought by social and economic environment, such as coordination with local government, or related authorities	5

Table 2. Detailed index

Technology		Flexibility of critical path	
	index		index
Common	1.0	Fixed very much	1.3
A little difficulty	1.1	Common	1.2
Moderate difficulty	1.3	Less fixed	1.1
Very difficult	1.5	loose	1.0
People availability, capability and effort		Project size	
	index		index
Worse	0.7	Very big	1.5
bad	0.8	big	1.4
Normal	1.0	medium	1.3
		small	1.1
		Very small	1.0

4.3 Steps of revised Hay-system

“Project Adjusting Index” is to make the compensation dynamically matching to project team working format in the matrix structure. Taking the project manager as an example:

There are four steps:

First step: To work out the job description for one standardized project manager in each department or in each category of major. That is to say, it can be a 3G mobile phone research & development project manager or the project manager of undersea cable research team;

Second step: To evaluate the job value by Hay-point systems, and the job scale and its matching compensation level will be determined.

Third step: To use Delphi method to determine the weight of each factor in “project adjusting index” (PAI) which will reflect the different features of the project, including the detailed factor index such as technological difficulty, the difficulty of critical path, etc..

The formula is

$$\text{PAI} = \text{Weight 1} * \text{size} + \text{Weight 2} * \text{goal} + \text{Weight 3} * \text{critical path} + \text{Weight 4} * \text{technological difficulty} + \text{Weight 5} * \text{natural environment} + \dots + \text{Weight n} * \text{certain factor} \quad (1)$$

Fourth step: By multiply the “project adjusting index” to compensation of the standardized project manager, we can get the real compensation of different project manager.

5. Conclusion

Designing any ideal compensation system is ultimately about strategic thinking (Lawler, 1990, 1995; Schuster and Zingheim, 1992). Being able to change according to the different requirement of diversified features of project or environment, the above mentioned PAI could be applied into different industry where project team is the working format, which will help the organizations struggling with how to compensate their project team workers.

References

- Paula England & Babara Stanek Kilbourne (September, 1991). Using Job Evaluation to Achieve Pay Equity, *International Journal of Public Administration*, 14, 5, pp.823-843
- John M. (1998). Ivancevich. *Human Resource Management*, Irwin McGraw-Hill.
- Craig Skenes & Brian H. Kleiner. (2003). The HAY System of Compensation, *Management Research News* Volume 26 Number 2/3/4
- Schuster, J.R & Zingheim, P.K. (1992). *The New Pay: Linking Employee and Organizational Performance*, Jossey-Bass Inc., San Francisco, CA.
- Cheryl Zobal. (1999). The “ideal” team compensation system – an overview: Part I& Part II, *Team Performance Management*, Vol. 5 No. 1, pp. 23-45. MCB University Press, 1352-7592
- Gross S.E. (1995). *Compensation for Teams: How to Design and Implement Team-based Reward Systems*, New York: American Management Association
- Majchrzak, A. and Qianwei, W. (1996). Breaking the functional mind-set in process organizations, *Harvard Business Review*, pp. 93-9.
- Shaw, D.G. and Schneier, C.E. (1995). Team measurement and rewards: how some companies are getting it right. *Human Resource Planning*, Vol. 18 No. 3, pp. 34-49.
- Lawler, E.E. (1990). *Strategic pay: Aligning Organizational Strategies and Pay Systems*, Jossey-Bass Inc., San Francisco, CA.
- Lawler, E.E. (1995). *The New Pay: A Strategic Approach* (G 95-3 (279)), University of Southern California, Center for Effective Organizations–School of Business Administration, Los Angeles, CA.
- James N. Baron & David M. Kreps: *Strategic Human Resources, Framework for General Managers*