# Study on the Factors that Influence Labor Relations Satisfaction of Private Enterprises in the Context of China's New Labor contract law

1.TANG Kuang, 2.WU Meiying, 3.QU Haihui

(1,3.School of Labor Relations and Human Resources, Renmin University, Beijing 100872, China; 2.Department of Human Resources, Guangzhou Digital Media Group, Guangzhou 510000,China)

[Abstract] Using factor analysis, this article screens four indicators including salary and welfare, working situation, labor laws and regulations as well as career development. Based on regression analysis, it is realized that labor relations satisfaction has a positive relationship with salary and welfare, working environment and organizational culture as well as career prospect. However, the enforcement of labor contract law in private enterprises is not satisfactory, and the private enterprises do not focus on labor regulations very much.

[Key Words] degree of labor relations satisfaction, labor contract law, private enterprises

## Ⅰ INTRODUCTION

With the deepening of reform and opening up, China's private enterprises have been developing greatly, and are facing fierce competition at the same time. During the process of marketization and internationalization, private enterprises can only improve market competitiveness by improving the comprehensive competence. To a large extent, enhancing the competitiveness of enterprises depends on harmonious labor relations within the enterprises. This problem has become more urgent since the implementation of Labor contract law in 2008.

Many factors affect labor relations, and harmony is realized when employers' demands of efficiency and employees' demands of equity are satisfied at the same time. In order to benefit both labor and management[1], private enterprises' labor relations should develop in the direction of equity. For quantitative evaluation of labor relations, foreign scholars are more concerned with the following areas: the rate of complaints, the number of unresolved complaints, the proportion of employees subject to disciplinary action, the loss rate, absenteeism rate, the degree of decentralized decision-making, staff participation, the ratio of supervisors and workers, and conflict resolution[2][3][4]. Domestic scholars often focus on the employment situation, contract signing rate, salary structure, stock ownership and the level of benefits[5]. It also has been proven

---

1  LV Jing-chun, LI Yong-jie: Harmonious labor relations research based on the Pareto-efficiency [J], Chinese human resource development, 2005 (10).

2  J.R Norsworthy, C.A Zabala. Worker Attitudes and the Cost of Production: Hypothesis Tests in an Equilibrium Model[J]. Economic Inquiry, 1990, 28(1): 57-78.

3  Harry C. Katz. The Decentralization of Collective Bargaining: A Literature Review and Comparative Analysis[J]. Industrial and Labor Relations Review, 1993, 47(1): 3-22.

4  Jeffrey B. Arthur. Effects of Human Resource Systems on Manufacturing, Performance and Turnover[J]. The Academy of Management Journal, 1994,37(3): 670-68.

5  YAO Xian-guo, GUO Dong-jie: Empirical analysis of restructuring enterprises' labor relations [J], Management

that labor relations satisfaction is positively related to salary, appraisal, security, and working conditions[1].

The results above have provided some frame of reference, but many deficiencies still exist in existing analyses. In qualitative research of labor relations, non-index system of model evaluation method and an indirect list-style of "labor standards" evaluation method can no doubt make evaluations of labor relations from one aspect, but are not systematic or complete. While in the existing evaluation system of labor relations research, the validation phase of indicator system is missing. For the indicators established now, they still lack technical scientific rationality and reliability. Besides, most scholars do not distinguish among the nature of the enterprises, but rather use a general standard to extract indicators of labor relations satisfaction. Therefore, for most labor disputes in private enterprises, the current labor relations research lacks pertinence and needs to be corrected. This article uses quantitative research methods to extract key indicators that affect the private enterprise labor relations satisfaction. Meanwhile, the article takes statistical testing techniques and focus on analyzing the key indicators.

## Ⅱ  CONSTRUCTION OF LABOR RELATIONS SATISFACTION INDICATORS SYSTEM

Enterprise labor relations satisfaction is subject to the laws and regulations in a given labor market, the enterprise's operational status, organizational culture, wages and benefits and many other factors. Because there is not yet a mature scale to measure labor relations satisfaction, we designed a questionnaire containing 24 indicators of labor relations based on literature review and interviews, which is shown in Table 1. To make an objective evaluation of the system of private enterprise labor relations, the status quo, characteristics and influencing factors, we conducted a special investigation which lasted two weeks. The respondents can be divided into the following three categories: labor relations professionals who include doctoral students from School of Labor and Human Resources, Renmin University of China, HR staff from private enterprises, and the general staff from private enterprises. 100 copies of the survey questionnaires were issued, of which 10 were issued to the first category, the second 20 copies, and the third 70 copies. A total of 85 questionnaires were returned, of which for the first category 6 copies, 19 copies of the second category, and for the third category 60 copies were valid questionnaires.

**Table 1    Survey of factors affecting labor relations satisfaction**

| Key indicators that affect labor relations satisfaction | Proportion | | |
|---|---|---|---|
| | >75% | 50%-75% | <50% |
| Signing status of labor contracts | √ | | |
| Probation period requirements and payment of social insurance | | | √ |
| Workers' knowledge and participation of regulations concerning themselves and significant matters | √ | | |
| Whether there are trade unions within enterprises | | | √ |

World, 2004 (5).

1  Wang Yong-le, Li Mei-xiang: Empirical Analysis of factors that affect private enterprises' labor relations [J], China Institute of Industrial Relations Journal, 2006,20 (2).

| | | | |
|---|---|---|---|
| Whether the trade unions help resolving labor disputes | √ | | |
| Wage growth | √ | | |
| Payroll situation | √ | | |
| Bonus pay | √ | | |
| Overtime pay | √ | | |
| Internal pay equity | √ | | |
| External pay competitiveness | | √ | |
| The payment of old-age insurance | √ | | |
| The payment of health insurance | √ | | |
| The payment of unemployment insurance | √ | | |
| The payment of industry-injury insurance | | √ | |
| The payment of maternity insurance | | √ | |
| The payment of housing provident fund | √ | | |
| Hardware facilities in working place (whether there is a water dispenser or an air-conditioner) | | | √ |
| Physical job stress | √ | | |
| Care from leaders | √ | | |
| Relationship with colleagues | √ | | |
| Promotion perspect | √ | | |
| Job stability | √ | | |
| Confidence of enterprises' future development | √ | | |

Source: Based on the questionnaire acquired.

It is shown from the survey that over 75% of the people think that the main factors influencing labor relations satisfaction include: the signing status of labor contracts after the implementation of the Labor contract law, workers' knowledge and participation of regulations concerning themselves and significant matters, whether there are trade unions within enterprises, whether the trade unions help resolving labor disputes, wage growth, payroll situation, the payment of bonus, the payment of overtime working, internal pay equity, the payment of old-age insurance, health insurance, industry-injury insurance, housing provident fund, physical job stress, care from leaders, relationship with colleagues, promotion prospect, and confidence of enterprises' future development. From 50% to 75% of respondents think that trade unions, external pay competitiveness, and the payment of unemployment insurance and maternity insurance are main indicators that affect the labor relations satisfaction. Due to individual differences, different respondents have various understanding of indicators. In accordance with the principle of conformity, we have selected factors that more than 50% of respondents agree with, as the indicators affect the satisfaction. As a consequence, the following three factors were removed: hardware facilities in working place (whether there is a water dispenser or an air-conditioner), probation period requirements, payment of social insurance and whether there are trade unions within enterprises.

In addition, during the investigation and interviews we also found that enforcement of labor contracts, colleagues' cooperation, whether the company has a good corporate culture, whether

the reward distribution system is open and fair, and whether the leaders will affirm the work also play a very important role in affecting labor relations satisfaction. Therefore, we put these related indicators into the indicator system, and end up with a table of indicators shown in Table 2.

**Table 2    Confirmation of indicators that affect labor relations satisfaction**

| |
|---|
| X1: Enforcement of labor contracts |
| X2: Workers' knowledge and participation of regulations concerning themselves and significant matters |
| X3: Whether trade unions help resolving labor disputes |
| X4: Wage growth |
| X5: Payroll situation |
| X6: Bonus pay |
| X7: Overtime pay |
| X8: Whether the reward distribution system is open and fair |
| X9: Internal pay equity |
| X10: External pay competitiveness |
| X11: Whether satisfied with social insurance payment |
| X12: Physical job stress |
| X13: Leaders' affirmation |
| X14: Care from leaders |
| X15: Whether the company has a good corporate culture |
| X16: Colleagues' cooperation |
| X17: Relationship with colleagues |
| X18: Promotion prospect |
| X19: Job stability |
| X20: Confidence of enterprises' future development |

## Ⅲ  SURVEY OF LABOR RELATIONS' SATISFACTION IN PRIVATE ENTERPRISES

### 1 Questionnaire Survey

Based on the indicators discussed above, we designed a questionnaire investigating the indicators that affect private enterprises' labor relations satisfaction. The questionnaire is similar to the Likert scale, and each question is measured by five levels, so that subjects may choose according to their actual answers. The labor relations satisfaction variables are designed to be dummy variables, and the respondent makes a business assessment according to the relationship between the enterprises and his or herself. Let us assume that 0 is not satisfied at all, 100 is fully satisfied; the respondents can choose at 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.

Under the help of Zhongguancun Human Resource Managers Association, we sent a total of 200 questionnaires to employees of private enterprises via e-mail. 140 valid questionnaires were recovered, with a recover rate of 70%. Of these, 22 copies are from high-level managers, 28 copies from functional department staff, 54 from technical staff, and 36 from salesman.

We use a project analysis method to analyze the indicators that affect labor relations satisfaction, that is to set an order according to the sum of scores, questions that score 27% of the pre-classified as the high group (38) while those with a score of 27% after the group classified as the low group (38). We then use average scores for significant differences. Independent sample t-test results show that the questionnaire with 20 items was identified, having the ability to discern the degree of different subjects' responses.

## 2 Factor Analysis

We have designed 20 indicators that affect labor relations satisfaction. However, these indicators are not completely independent, but intertwined. This means if a direct multi-regression analysis is done, only a small portion of variables will remain in the regression equation and information from other variables is lost. Therefore, we first use factor analysis to identify the basic data structure, and then use the generated factors to analyze the labor relations satisfaction. In this way, the weakness that there may be a high correlation among variables is overcome while at the same time, retaining the information on these variables.

⑴ **Relevance Test**

**Table3　KMO and Bartlett's Test**

| KMO Measure of Sampling Adequacy. | | .833 |
|---|---|---|
| Bartlett's test of Sphericity Value | Approx. Chi-square | 1.784E3 |
| | Df. | 190 |
| | Sig. | .000 |

Source: obtained from the results of data processing by spss13.0 version.

Table 3 is the Result of KMO Measure and Bartlett's test of Sphericity. KMO Value 0.833, which is between 0.8 and 0.9, means factor analysis is reasonable. And concomitant probability of Bartlett's test is 0.000, which is significant, also means factor analysis is reasonable.

⑵ **Calculate Eigenvalue and Contribution Rate of Correlation Matrix, Define Principal Component Number, and Compute Original Factor Loading Matrix**

**Table 4　Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 7.228 | 36.142 | 36.142 | 7.228 | 36.142 | 36.142 | 5.452 | 27.260 | 27.260 |
| 2 | 3.101 | 15.506 | 51.649 | 3.101 | 15.506 | 51.649 | 3.813 | 19.063 | 46.323 |
| 3 | 2.304 | 11.522 | 63.171 | 2.304 | 11.522 | 63.171 | 2.401 | 12.004 | 58.327 |
| 4 | 1.199 | 5.994 | 69.165 | 1.199 | 5.994 | 69.165 | 2.168 | 10.838 | 69.165 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5 | .894 | 4.469 | 73.634 | | | | | | |
| 6 | .674 | 3.369 | 77.003 | | | | | | |
| 7 | .599 | 2.994 | 79.997 | | | | | | |
| 8 | .571 | 2.855 | 82.852 | | | | | | |
| 9 | .497 | 2.487 | 85.340 | | | | | | |
| 10 | .434 | 2.172 | 87.511 | | | | | | |
| 11 | .386 | 1.931 | 89.442 | | | | | | |
| 12 | .372 | 1.862 | 91.304 | | | | | | |
| 13 | .326 | 1.630 | 92.934 | | | | | | |
| 14 | .294 | 1.470 | 94.404 | | | | | | |
| 15 | .272 | 1.361 | 95.765 | | | | | | |
| 16 | .236 | 1.182 | 96.947 | | | | | | |
| 17 | .179 | .896 | 97.843 | | | | | | |
| 18 | .158 | .792 | 98.635 | | | | | | |
| 19 | .147 | .737 | 99.372 | | | | | | |
| 20 | .126 | .628 | 100.000 | | | | | | |

Source: obtained from the results of data processing by SPSS version 13.0

Table 4 lists principal components in order of characteristic roots. This table is the result of factor extracts and factor rotation after factor analysis. Columns 2 to 4 describe the original factor solution. Columns 5 to 7 describe intermediate factor solution. Finally, Columns 8 to 10 describe final factor solution.

Extract four common factors whose eigenvalue is bigger than one. These four common factors reflect 69.12% of original variables. In general, loss of original variable information is not too much. Factor analysis works out well.

**Table 5    Component Matrix**

| | Component | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| X1: Enforcement of labor contracts | .100 | .339 | .831 | .093 |
| X2: Rules and regulations | -.048 | .330 | .812 | -.051 |
| X3: Whether the trade unions help resolving labor disputes | .173 | .457 | .696 | .255 |
| X4: Wage growth | .660 | -.410 | .135 | .180 |
| X5: Payroll situation | .699 | -.260 | .040 | .258 |
| X6: Bonus pay | .722 | -.433 | .088 | -.032 |
| X7: Overtime pay | .663 | -.442 | .254 | -.022 |
| X8: Reward distribution system | .806 | -.296 | .052 | .141 |

| | | | | |
|---|---|---|---|---|
| X9: Internal pay equity | .789 | -.282 | -.011 | -.138 |
| X10: External pay competitiveness | .732 | -.386 | .049 | .022 |
| X11:Payment of social insurance | .758 | -.403 | .074 | .062 |
| X12: Physical job stress | .492 | .494 | -.297 | .293 |
| X13: Leader's affirmation | .595 | .537 | -.124 | .255 |
| X14: Care from leaders | .575 | .504 | -.213 | -.019 |
| X15: Corporate culture | .568 | .420 | -.110 | .215 |
| X16: Colleagues' cooperation | .531 | .371 | -.367 | .187 |
| X17: Relationship with colleagues | .536 | .514 | -.240 | -.047 |
| X18: Promotion prospect | .511 | .346 | .022 | -.608 |
| X19: Job stability | .632 | .174 | .000 | -.476 |
| X20: Corporate outlook | .664 | .239 | .118 | -.385 |

Table 5 is a component matrix，which is used to reflect the variation of factor to explain each variable, thus the various variables can be expressed as four common factors：

$X_1$（enforcement of labor contracts）= $0.1F_1 + 0.339F_2 + 0.831F_3 + 0.093F_4$

$X_2$ （Workers' knowledge and participation of regulations concerning themselves and significant matters） = $-0.048F_1 + 0.030F_2 + 0.813F_3 - 0.051F_4$

......

$X_{20}$（Confidence of enterprises' future development）= $0.664F_1 + 0.239F_2 + 0.118F_3 - 0.385F_4$

## 3 Factor Denominations

In order to reduce the correlation between the principal components and to make the meaning of factors more explicit, we conduct variance maximization (Varimax) rotation to get the rotated component matrix.

**Table 6　Rotated Component Matrix**

| | Component | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| X1: Enforcement of labor contracts | .033 | .004 | .904 | .068 |
| X2: Rules and regulations | -.102 | -.127 | .853 | .137 |
| X3: Whether the trade unions help resolving labor disputes | .020 | .234 | .856 | -.024 |
| X4: Wage growth | .803 | .091 | .033 | -.011 |
| X5: Payroll situation | .739 | .276 | .018 | -.032 |
| X6: Bonus pay | .822 | .043 | -.049 | .193 |
| X7: Overtime pay | .812 | -.052 | .098 | .166 |

| | | | | |
|---|---|---|---|---|
| X8: Reward distribution system | .826 | .257 | .002 | .104 |
| X9: Internal pay equity | .749 | .173 | -.096 | .348 |
| X10: External pay competitiveness | .804 | .114 | -.057 | .160 |
| X11:Payment of social insurance | .844 | .123 | -.033 | .130 |
| X12: Physical job stress | .078 | .808 | -.012 | .037 |
| X13: Leaders' affirmation | .154 | .810 | .161 | .126 |
| X14: Care from leaders | .100 | .705 | .021 | .352 |
| X15: Corporate culture | .200 | .699 | .122 | .123 |
| X16: Colleagues' cooperation | .152 | .731 | -.137 | .113 |
| X17: Relationship with colleagues | .054 | .690 | -.006 | .364 |
| X18: Promotion prospect | .091 | .249 | .078 | .821 |
| X19: Job stability | .304 | .257 | .021 | .705 |
| X20: Corporate outlook | .325 | .309 | .170 | .656 |

Note：The rotation method is the "variance maximization method"

Resource: Obtained from the empirical results by SPSS version 13.0

In the factor analysis, the larger the absolute value of the correlation coefficient between the variable and a certain factor, the closer the relationship between factors and variables. That is, the factor may be more representative of the information in the variable.

As can be seen from Table 6, the first factor corresponds to variables such as wage growth, the payment of wages, bonus pay, overtime pay, reward distribution system, internal pay equity, external pay competitiveness and whether satisfied with the payment of social security. All of these reflect the company's payment and welfare state; therefore, we name the factor, "Salary and Welfare." The second factor corresponds to the physical job stress, leaders' affirmation, care from the leader, corporate culture, colleagues' cooperation and the relationship between colleagues, which reflect the corporate culture and working conditions; therefore, we name the second factor as the "Working Situation." The third factor corresponds to the enforcement of labor contracts, the workers' knowledge of and participation in the rules and regulations concerning their immediate interests or significant matters, the union's resolution of dispute, and these reflect the enterprise's implementation of the Labor contract law; therefore, the factor is named as "Labor Laws and Regulations." The fourth factor corresponds to variables such as promotion opportunities, job stability and whether confident about future prospects of the enterprises, which reflect the enterprises' career management of the employees; therefore, the factor is named as "Career Development."

The corresponding relationship between the four factors and indicators are as follows:

**Table 7    Extracted factors and the corresponding variable names**

| Factor name | Variable name |
|---|---|
| F1: Salary and Welfare | Wage growth |

| | |
|---|---|
| | Wage pay |
| | Bonus pay |
| | Overtime pay |
| | Whether the reward distribution system is open, equitable and just |
| | Internal salary equity |
| | External salary competitiveness |
| | Whether satisfied with the payment of social security |
| F2: Work Situation | Physical job stress |
| | Leaders' affirmation |
| | Care from the leader |
| | Corporate culture |
| | Whether the colleagues cooperate |
| | Relationship between colleagues |
| F3: Labor Laws and Regulations | Enforcement of labor contracts |
| | Workers' knowledge of and participation in the rules and regulations concerning their immediate interests or significant matters |
| | Union's resolution of dispute |
| F4: Career Development | Promotion opportunities |
| | Job stability |
| | Whether confident about future prospects of the enterprises |

In order to further understand the reliability and validity of the questionnaire, we need to do a reliability test[1]. In the previous factor analysis, four common factors were extracted; the items included are as follows:

Factor one: wage growth, wage pay, bonus pay, overtime pay, reward distribution system, the internal salary equity, the external salary competitiveness and social security payment satisfaction. These eight items reflect the company's salaries and welfares.

Factor two: physical job stress, leader's affirmation, care from the leader, corporate culture, whether the colleagues cooperate and the relationship between colleagues. These six items reflect the enterprises' working situation.

Factor three: enforcement of labor contracts, workers' knowledge of and participation in the rules and regulations concerning their immediate interests or significant matters, the union's resolution of dispute. These total three items.

---

1 In the Likert scale method, the commonly used reliability test method is the "Cronbach α" factor. The higher the reliability of the scale, the more stable the scale is. According to the point of view of scholar Gay (1992), if any measure or scale reliability coefficient is above 0.9, that scale's reliability test is very good. If a research tool's reliability is below 0.6, it should be revised. If a scale contains a number of small tests or concept level, then each small scale or concept level should be tested, not just show the reliability coefficient of the total scale.

Factor four: promotion opportunities, job stability and whether confident about future prospects of the enterprises, totals three items.

The internal consistency levels within each factor and the total scale is as follows:

**Table 8   Various factors and total scale reliability analysis**

|  | Cronbach α factor | Items |
|---|---|---|
| Factor one | 0.929 | 8 |
| Factor two | 0.867 | 6 |
| Factor three | 0.851 | 3 |
| Factor four | 0.784 | 3 |
| Total scale | 0.889 | 20 |

source：Obtained from empirical analysis by SPSS 13.0

Among them, the Cronbach α coefficient of subscale one (Factor 1) is 0.929 and the reliability is high; the Cronbach α coefficient of subscale II (Factor 2) is 0.867 and the reliability is high; the Cronbach α coefficient of subscale 3 (Factor 3) is 0.851 and the reliability is high; the Cronbach α coefficient of subscale IV (factor 4) is 0.784 and the reliability is within an acceptable range. The α coefficient of the total scale is 0.889, indicating that the reliability of this scale quite well.

The results of factor analysis are also satisfied with conditions to construct validity, which means that cumulative contribution of public factors can reach at least 40 percent. Meanwhile, each indicator should have a relatively high loaded value, say, above 0.4, on only one of the components, while low for other components.

## Ⅳ Data Analysis

### 1 Descriptive statistics of the variables

Among the 140 respondents, 106 are men, a proportion of 75.7%, and 34 are female, a proportion of 24.3%. In terms of age, more people are in the age group of 20-25 and 25-30, which account for 44.3% and 45.7% of the total sample respectively. From the point of view of marital status, the majority of people surveyed are unmarried, constituting 88.6% of the whole sample. In terms of education, most of the respondents are undergraduates, accounting for 52.9% of the total sample, followed by the post-graduates, which account for 20% of the total respondents. The majority of the respondents have 1-3 years of work experience; only 5.7% of the total respondents have work experience of more than 10 years. In terms of positions, a plurality of the respondents is technical staff, comprising 38.6% of those surveyed. Operational staff, functional staff and managers account for 25.7%, 20%, and 15.7% of all the respondents respectively. In terms of 2008 revenue, 41.4% of the respondents earned 50-100 thousand RMB last year. 27.1%, 18.6%, and 12.9% had an annual income of 20-50 thousand, 100-200 thousand and less than 20 thousand RMB respectively.

**Table 9   Descriptive Statistics of the Variables**

| Variable name | Mean | Variable name | Mean |
|---|---|---|---|
| X1: Enforcement of labor contracts | 2.79 | X11:Social insurance | 2.93 |
| X2: Rules and regulations | 2.77 | X12: Physical job stress | 2.91 |
| X3: Union resolution of dispute | 2.84 | X13: Leaders' affirmation | 3.24 |
| X4: Wage growth | 2.77 | X14: Care from the leader | 3.24 |
| X5: Wage pay | 3.86 | X15: Corporate culture | 3.27 |
| X6: Bonus pay | 2.84 | X16: Whether the colleagues cooperate | 3.29 |
| X7: Overtime pay | 2.6 | X17: Relationship between colleagues | 3.59 |
| X8: Reward distribution system | 3.07 | X18: promotion prospect | 3 |
| X9: Internal salary equity | 2.83 | X19: Job stability | 3.43 |
| X10: External salary competitiveness | 2.84 | X20: Corporate outlook | 3.39 |

Source: obtained from the results of data processing by SPSS version13.0

Seen from Table 9, the mean of "Wage pay", "Reward distribution system", "Leaders' affirmation", "Care from the leader", "Corporate culture", "Whether the colleagues cooperate", "Relationship between colleagues", "Job stability" and "Corporate outlook" are above 3, indicating that private enterprises have done better in the above nine respects and staff think highly of them. On the other hand, the mean of "Enforcement of labor contracts", "Rules and regulations", "Union resolution of dispute", "Wage growth", "Bonus pay", "Overtime pay", "Internal salary equity", "External salary competitiveness", "Social insurance" and "Intensity of work" are below 3, showing that private enterprises need to ameliorate in the above-mentioned 10 respects.

## 2 Variance Analysis

This article will select variables such as the duration of the labor contract, age, educational level，job property and dimensions that can reflect the satisfaction of labor relations to conduct univariate variance analysis. If the accompanied probability of variance test F value (Sig.) is less than the significant level of 0.05, significant difference is assumed.

The results of the variance analysis in Table 10 are as follows:
⑴ The duration of labor contracts has a significant impact on salary and welfare, working environment and career development, indicating that the different duration of labor contracts is directly related with the staff's personal interests; but different durations of labor contracts do not have a significant impact on labor laws and regulations, indicating that the implementation of the labor contract law by private enterprises is not subject to the influence of the duration of the labor contracts. This shows that enterprises don't attach enough importance to labor laws and regulations.

**Table 10  Summary of the variance analysis**

| Dependent variable | Duration of labor contract | | Age | | Educational level | |
|---|---|---|---|---|---|---|
| | F | Sig. | F | Sig. | F | Sig. |
| F1:Salaries and welfares | 3.345 | .007 | 2.102 | .103 | 3.309 | .031 |
| F2:Work environment | 4.301 | .001 | 9.084 | .000 | 2.309 | .079 |
| F3: Labor laws and regulations | .702 | .623 | .451 | .717 | .659 | .578 |
| F4: Career development | 5.462 | .000 | 8.140 | .000 | 1.906 | .132 |

Source: obtained from the results of variance analysis by SPSS version 13.0

⑵ The ages of the respondents are significantly different in terms of working conditions and environment and career development, indicating that respondents of different ages enjoy various work situations and career development. However, age differences are not significant in terms of payment and welfares, indicating companies' wages and welfare payments do not change with the age of the respondents. Nor are ages significantly different in terms of labor laws and regulations; this indicates that enterprises do not take much consideration of the workers' age when implementing the labor contract law.

⑶ The educational level of the respondents has a significant impact on salaries and welfare benefits, as well as the working environment, indicating that different educational backgrounds will affect salaries and welfares as well as job environment. From this we can see that investment in human capital has a high rate of return. However, the level of education shows no significant effect on labor laws and regulations or career development.

## 3 Regression Analysis

As the degree of labor relations satisfaction is a discrete variable with 10 equal portions, multiple linear regressions will affect the accuracy of results; therefore, we first select the Ordered Logistic regression model to conduct the regression analysis with four factors. The regression equation is as follows:

Log(satisfied/dissatisfied)$_j$= $\alpha_j$+0.752* "Salaries and welfares" +2.419* "Working environment" +0.183* "Labor laws and regulations" +0.980* "Career development"

（in the equation above, j=1,2,3,4,5,6,7,8,9。$\alpha_1$=7.246, $\alpha_2$=8.803, $\alpha_3$=9.484, $\alpha_4$=10.454, $\alpha_5$=11.485, $\alpha_6$=12.526, $\alpha_7$=14.479, $\alpha_8$=16.597, $\alpha_9$=19.117）

To further study of the impact of various variables on the degree of labor relations satisfaction, we conducted a certain technical process with the variables: if the degree of labor relations

satisfaction score in the range between 0 to 50, then re-assign it the value of 0, that is, not satisfied; if the degree of labor relations satisfaction score in 51 to 100, then re-assign it to one, that is, satisfied. After this assignment conversion, the degree of labor relations satisfaction becomes a dummy variable with the value of 1 or 0. With a stepwise logistic regression of the modified data, we have the regression equation as follows:

Log(satisfied/dissatisfied)=3.177* "whether the colleagues cooperate" +2.148* "growth rate of wage" +1.286* "union resolution of dispute" -1.915* "the payment of bonus" +1.584* "job promotion" +1.098* "the payment of overtime work" -17.721

**Table 11    Results of Stepwise Logistic Regression and Logistic Regression**

| | Stepwise logistic regression | | | | Ordered logistic regression | | |
|---|---|---|---|---|---|---|---|
| Independent variable | Coef. | Z | P>\|z\| | Independent    variable | Coef. | Z | P>\|z\| |
| X16: Whether the colleagues cooperate | 3.177 | 3.63 | 0.000 | F1: Salaries and welfares | 0.752 | 4.04 | 0.000 |
| X4: Wage growth | 2.148 | 3.29 | 0.001 | F2: Working environment | 2.419 | 7.69 | 0.000 |
| X3: Union resolution of dispute | 1.286 | 3.17 | 0.002 | F3:    Labor    laws    and regulations | 0.183 | 1.15 | 0.251 |
| X6: Bonus pay | -1.915 | -3.33 | 0.001 | F4: Career development | 0.980 | 3.09 | 0.002 |
| X18: Job promotion | 1.584 | 2.43 | 0.015 | | | | |
| X7: Overtime pay | 1.098 | -3.83 | 0.000 | | | | |
| Pseudo   $R^2$ | 0.6917 | | | Pseudo $R^2$ | 0.2861 | | |
| Prob > chi$^2$ | 0.0000 | | | Prob > chi$^2$ | 0.0000 | | |
| Number of obs | 140 | | | Number of obs | 140 | | |

Note: Z values are the significant probability of the variables; 0.05 > | z | indicates that the estimates of the coefficient are statistically significant.

Source: obtained from the results of stepwise logistic regression and logistic regression by SPSS version13.0

## Ⅴ  Main Conclusion and Discussion

First, the result of variance analysis indicates that the duration of the labor contract has a significant influence on the companies' salary welfare system. This shows that the salary welfare system of private enterprises is closely related to the time that the employees work in the enterprise—the longer they work, the higher their salary, which is also a basic means of the enterprises' human resource management. At the same time, duration of the labor contract has a significant impact on the working environment, and this indicates that the longer the labor contract, the fewer the employees' turn-over. This means they can try to adapt to their working environment and culture and get along well with both superiors and coworkers. The longer the labor contract is, the more significant impact it has on the career development, and there will be more opportunity of promotion as well as better stability compared with those who have a

shorter labor contract. However, the length of labor contract isn't significantly correlated with the labor law, which indicates that private enterprises don't take into consideration the length of labor contract when executing the labor contract law.

Because the length of the labor contract has a significant impact on the working environment and career development, enterprises should set the length of the written labor contract appropriately. After the establishment of the written labor contract, enterprises should take a comprehensive consideration of the influence of long-term and short-term contracts on their employees and on the enterprises themselves. From the perspective of labor contracts, the relation between a private enterprise and its employees is one of an employment contract. Therefore, when employers and employees have different requirements for labor contract terms, the employer should take special consideration of the property of the enterprise, the characteristic of the product, the requirement of the production and the demand for the employees, and choose the length of the labor contract scientifically.

Secondly, seen from the results of the stepwise logistic regression, among the 20 variables that can affect the degree of labor relationship satisfaction, those that can be included into the final regression are "Whether the employees cooperate with each other" ($X_{16}$) , "Salary growth rate" ($X_4$), "Workers' union solving the dispute"($X_3$), "Condition of bonus granted" ($X_6$), "Promotion prospects" ($X_{18}$) and "Overtime pay" ($X_7$) .

The regression result shows that these six variables are significant. Particularly it should be pointed out that the coefficient of the condition of bonus granted（X6）is -1.915, which indicates although bonus is conductive to the improvement of degree of satisfaction in private enterprises, the effects are quite limited. In our opinion, for a private enterprise trying to survive and develop in transitional China, labor relations are pretty complex. Generally, based on the performance appraisal, private enterprise overemphasizes the effect of bonus on the motivation to the excellent employees. However, because of the lack of synchronicity and a systematic approach among modules of an enterprise's human resource management, motivation by bonus often induces a lot of problems, especially when the bonus leads to a larger income gap within the private enterprise. What's more, under the influence of the traditional thought of "Not afraid of scarcity but of inequality", bonuses show little effects on enhancing the degree of satisfaction within the enterprise.

Third, seen from the results of the ordered logistic regression, the factors of salaries and welfares, working situations and career development are significant. This indicates that higher salaries and other welfares, a more pleasant working environment and organizational culture, and the better career development prospects of private enterprises can improve the staffs' degree of satisfaction in labor relations.

The construction of a reasonable salary system for private enterprises is very important for the improvement of labor relations. In the design and implementation of remuneration schemes, enterprises shouldn't dictate the employee's wages simply in accordance with the employer's personal interest, but should quantify the salary and incentive through a scientific performance

appraisal and evaluation system. In particular, enterprises should pay attention to factors related to salaries and welfares, such as the rate of wage growth ($X_4$) and whether the distribution of rewards is fair and equitable ($X_8$), based on just, fair and reasonable principles. What's more, in order to avoid jeopardizing their interests, enterprises should try to establish a credible pay and incentives system to achieve a greater degree of persuasion.

Working conditions are also a factor that can't be overlooked by private enterprises in constructing harmonious labor relations. In recent years, some private enterprises, especially small and medium private enterprises in developed coastal areas, frequently encounter production safety accidents and labor conflicts. These not only affect the interests of employees, but also serve as stumbling blocks in the process of social harmony. Our research finds that in order to create a good working environment, in addition to the hardware construction of working environment, enterprises should also pay attention to the soft environment construction of the organizational culture, such as physical job stress($X_{12}$), the leaders' care ($X_{13}$), and cooperation among colleagues ( $X_{16}$). These factors all affect the degree of satisfaction in labor relations.

Factors corresponding to career development include promotion prospect($X_{18}$), job stability ($X_{19}$) and future development of the enterprises ($X_{20}$), which reflect the self-expectations of the employees are highly correlated with the degree of satisfaction in labor relationship. Since 75.7% of our subjects were men and 72.9% of them have a bachelor degree or above, it can be easily understood why they value the prospects of career development in the survey.

Seen from the results of ordered logistic regression, the factor of labor laws and regulations is not significant and we think this has something to do with the implementation of China's Labor contract law in the private enterprises. In fact, the enforcement of Labor contract law in private enterprises is far from satisfactory. Lack of knowledge of the law and difficulty in safeguarding their rights all lead to the fact that employees are only concerned with wages and welfares, personal development and interpersonal relationships. Although related to their own interests, they remain indifferent to the labor rules and regulations or other such important matters. Meanwhile, the Labor contract law and other laws and regulations only reflect the government's legal orientation and regulate the behavior patterns and the corresponding legal consequences of the employers and workers. However, the enforcement of relevant laws does not necessarily mean that the labor relations in private enterprise will have a fundamental change immediately. Especially after the global financial crisis, to protect jobs and maintain social stability, the enforcement of the labor contract law and other relevant laws and regulations also have tended to weaken. Our research found that a considerable number of private enterprises attach great importance to the staff's performance appraisal and to the incentive of remuneration to employees, but don't carefully implement the Labor contract law and other relevant laws and regulations.

# References

[1] LV Jing-chun, LI Yong-jie: Harmonious labor relations research based on the Pareto-efficiency [J], Chinese human resource development, 2005 (10).

[2] Wang Yong-le, Li Mei-xiang: Empirical Analysis of factors that affect private enterprises' labor relations [J], China Institute of Industrial Relations Journal, 2006,20 (2).

[3] YAO Xian-guo, GUO Dong-jie: Empirical analysis of restructuring enterprises' labor relations [J], Management World, 2004 (5).

[4] Harry C. Katz. The Decentralization of Collective Bargaining: A Literature Review and Comparative Analysis[J]. Industrial and Labor Relations Review, 1993, 47(1): 3-22.

[5] Jeffrey B. Arthur. Effects of Human Resource Systems on Manufacturing, Performance and Turnover[J]. The Academy of Management Journal, 1994,37(3): 670-68.

[6] J.R Norsworthy, C.A Zabala. Worker Attitudes and the Cost of Production: Hypothesis Tests in an Equilibrium Model[J]. Economic Inquiry, 1990, 28(1): 57-78.