

# Research on the Non-Material Incentives of the Post-90s Knowledge Employees in Small and Medium IT Enterprises

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## ABSTRACT

In the 21st century, many developed countries has entered the information age, and China has entered the threshold of the information society. In recent years, the IT industry has become the pillar industry of China's economic and social development. The number of some small and medium IT enterprises has increased significantly. Now knowledge talents are very important for enterprises. At present, the post-90s employees have become the core strength of the enterprise. Based on the relevant incentive theory, this paper studies the non-material incentive demand of 166 post-90s knowledge employees in some small and medium IT enterprises in Hangzhou. The study found that there is a significant difference between the non-material needs and satisfaction of employees. The difference from high to low is work achievement, autonomy, organizational environment and personal growth. People of different genders, educational backgrounds and positions have different needs for non-material incentives. Then, the corresponding management suggestions are put forward.

**Keywords:** *Post-90s employees, Non-material incentives, Small and medium-sized IT enterprises.*

## 1. INTRODUCTION

In the era of knowledge and information, the information industry has become an important tool for enhancing national strength. The state's investment and institutional tilt in high-tech industries have gradually increased. As of the end of 2019, 6.73 million people were employed in the information industry across the country, an increase of 280,000 from 2018, a year-on-year increase of 4.7%. According to data from the National Bureau of Statistics, by 2018, there were more than 181,000 high-tech enterprises in our country, of which small and medium-sized high-tech enterprises accounted for more than 72%. At present, post-90s employees have become the core personnel of the company. In 2016, the turnover rate of them was as high as 30.6%, higher than the normal range of 5%. The incentives of small and medium-sized enterprises are mostly based on material incentives such as wages and bonuses. The high employee turnover rate reveals that the effect of relying solely on material incentives is not ideal. On this basis, combined with the personality characteristics and intrinsic needs of the post-90s generation, it can be concluded that for post-90s

employees, non-material incentives can not only save incentive costs, but also attract and retain talents. Therefore, based on the hierarchy of needs theory, this article summarizes the non-material incentive factors that the post-90s employees of small and medium IT companies value; At the same time, it summarizes a set of non-material incentive systems and puts forward management recommendations.

## 2. LITERATURE REVIEW

### 2.1. Research on Non-material Incentives

In 1943, Maslow's hierarchy of needs theory showed that people have two types of needs: material needs and non-material needs. This theory laid the foundation for the development of non-material incentives. Subsequently, Simon (1947) pioneered the introduction of non-material incentives into theoretical analysis<sup>[1]</sup>. On this basis, Chinese scholars have also defined non-material incentives. According to the theories of Cheng Longyun, He Peng et al. (2010)[2], this article defines non-material incentives as the organization's use of any method other than currency that can make employees

feel happy and satisfied , so that it enables employees to achieve organizational goals with a high working mood and promotes intimacy between the organization and employees.

Kanchier and Unrch (1989) believe that resigned employees have stronger needs in terms of accomplishment and creativity, and have less demand for economic remuneration than those who have not resigned<sup>[3]</sup>. Therefore, for material incentives such as wages and bonuses, employees pay more attention to non-material incentives such as self-improvement and job satisfaction<sup>[4]</sup> and non-material incentives dominate. According to the empirical investigation of employees, it is found that better leadership role models, achievement incentives, job responsibility incentives and recognition incentives<sup>[5]</sup> have a positive impact on production efficiency; and knowledge workers of different types of demand for non-material incentives is different<sup>[6]</sup>. Therefore, different incentive factors have different incentive effects<sup>[7]</sup>(Gao Shan, 2016 ). Through reasonable non-material incentive measures, non-material incentives can have better effects than material incentives<sup>[8]</sup> (Gan Yihang, 2018 ).

**2.2. Research on the Characteristics and Motivation of Post-90s Knowledge Employees**

Some scholars have carried out a series of systematic studies on knowledge workers, and proposed unique definitions of knowledge workers from different angles. According to the definition of Shi Zhenlei (2002) <sup>[9]</sup>, this article believes that the post-90s knowledge workers refer to those born after 1990, who have received education, developed professional skills or skills, and can skillfully use their knowledge to make contributions to the company. In small and medium IT companies, it mainly includes technical personnel, management personnel and sales personnel.

Post-90s have their own personality characteristics, such as open thinking, strong self-awareness, and the courage to defend rights, so their demand for incentives is also unique-the demand for material incentives such as salary and benefits is weak <sup>[10]</sup>.According to the investigation of the reasons for the "naked resignation" phenomenon of white-collar workers born in the 90s, the results show that compared with material incentives, employees born in the 90s pay more attention to personal development, challenging work, increased job opportunities, promotion possibilities and so on. They have more positive and optimistic work values<sup>[11]</sup> (Liu Hongxia, Huang Ying,2014). But at present, there are still a series of problems in corporate incentives, including the simplification of non-material incentive methods and the disconnection between non-material incentive methods and the personality characteristics of employees, and the mismatch between them<sup>[12]</sup>.

Therefore, companies should pay more attention to the issue of non-material incentives for post-90s workers.

**3. RESEARCH DESIGN**

**3.1. Selection of Non-material Incentives**

Combining the theoretical experience of the predecessors, collecting data, and combining the analysis of the current motivational situation of knowledge-based post-90s employees, the following items that can motivate employees born in the 90s are summarized, as shown in the table.

**Table 1.** Non-material incentives

leadership role model	Sound system
Organizational status	Training
Harmonious interpersonal relationship	Good communication
Personality exertion	Potential stimulation
Clear objectives	Trust
Promotion	Valued by the organization
job challenge	Office environment
Job attraction	Opportunities for decision-making
Organizational support	Work-life balance

**3.2. Research Design and Implementation**

The questionnaire is divided into two parts. The first part is the basic question, which consists of three questions, including the gender, education and position of employees; The second part is the survey of non-material incentives, which consists of 18 major questions, each of which is divided into two questions, namely, the degree of expected realization and the degree of realistic satisfaction, which are used to investigate the demand and satisfaction of non-material incentives of knowledge workers after 1990s.

An electronic questionnaire was distributed in this survey. As a new first-tier city, Hangzhou has many resources and has become one of the emerging gathering places of IT enterprises in China. At the same time, Hangzhou's preferential policies attract many talents, which makes a large number of post-90s choose to work in Hangzhou. Therefore, Taking some post-90s employees in Hangzhou as survey objects, it has certain representativeness. This survey selected more than ten small and medium-sized IT enterprises in Hangzhou, and distributed questionnaires to the post-90s employees of each enterprise. A total of

170 questionnaires were distributed, and 168 questionnaires were recovered, among which 166 were valid.

In the questionnaire, there are 103 males, accounting for 62.05%, 63 females, accounting for 37.95%; in terms of academic qualifications, 38 college students, accounting for 22.89%, 104 undergraduates, accounting for 62.65%, and 24 graduate students or above, accounted for 14.46%; in terms of positions, 89 technical personnel, accounting for 53.61%, 49 management personnel, accounting for 29.52%, 28 sales personnel, accounting for 16.87%.

## 4. DEMAND AND SITUATION ANALYSIS

### 4.1. Non-material Incentive Factor Analysis

#### 4.1.1. Validity Analysis

In this paper, spss software is used to analyze the structural validity. The results show that KMO of this questionnaire is .813. Meanwhile, the sig value of Bartlett's is  $.0000 < .05$ . Therefore, it can be judged that the questionnaire has good validity and can be analyzed by factor analysis. Then, factor analysis is carried out on 18 non-material incentive factors. From the explanation of total variables, we can know that 18 non-material can be divided into four dimensions, and the explanation rate is 65.265%. The rotated component matrix is shown in the table 2.

#### 4.1.2. Reliability Analysis

The reliability of each common factor is analyzed, and the results are shown in the table3. In terms of demand and current situation, the Cronbach's Alpha of each component is greater than .70, so we can think that each factor has high reliability, so we can divide 18 non-material incentive factors into four dimension.

**Table 2.** The rotated component matrix

	Component			
	1	2	3	4
Office environment	.824		.192	
Work-life balance	.799	.140	-.240	.259
Organizational status	.752	.212	.324	
Harmonious interpersonal relationship	.723	.101	-.213	.301
Trust	.652	.287	.221	.118
Good communication	.640	.185	.416	-.128
Sound system	.467	.265	.316	
Leadership role model		.788	.251	
Organizational support	.186	.785		.272
Training		.754	.154	.248
Clear objectives	.374	.559		.130
Promotion	.304	.529	.232	.187
Valued by the organization		.101	.808	.126
Job challenge		.155	.783	.204
Potential stimulation	.109	.408	.682	.240
Job attraction	.466		.649	
Personality exertion	.150	.185	.243	.817
Opportunities for decision-making	.123	.318	.202	.770

**Table 3.** Reliability analysis

		Cronbach's Alpha	Standardized Cronbach's Alpha	number of terms
Demand of non-material incentive factors	Component 1	.831	.832	7
	Component 2	.845	.844	5
	Component 3	.867	.867	4
	Component 4	.773	.774	2

Present situation of non-material incentive factors	Component 1	.865	.864	7
	Component 2	.809	.807	5
	Component 3	.818	.819	4
	Component 4	.775	.775	2

First of all, component 1 includes seven factors: harmonious interpersonal relationship, work-life balance, sound system, good communication, trust, office environment and organizational status. We can summarize this dimension as organizational environment dimension, which includes hard environment and soft environment.

Secondly, component 2 includes five factors: leadership role model, clear goal, promotion opportunity, organizational support and training, which can be summarized as personal growth dimension.

Thirdly, component 3 includes job recognition, job challenge, job willingness, and potential stimulation. These four factors are all related to job content and job itself. Through work, employees can be recognized by the organization, stimulate their potential, and at the same time gain an inner sense of accomplishment. Therefore, we can summarize this dimension as the dimension of work achievement.

Finally, component 4 includes personality exertion and decision-making opportunities. These two factors mean that employees need to have more autonomy at work, express their opinions and participate in decision-making. Therefore, this dimension can be summarized as autonomy dimension.

#### 4.2. Descriptive Statistical Analysis

In this study, the difference between the satisfaction of the status quo and the average demand of the four dimensions is arranged from top to bottom

It can be seen from the table that the satisfaction of the four dimensions is low, and it can be inferred that small and medium-sized IT enterprises pay less attention to the non-material incentives of post-90s employees. The post-90s employees of small and medium-sized enterprises have higher demand for the four dimensions of non-material incentives than the present situation, and there are significant differences in the degree of demand and satisfaction of the four dimensions.

The difference between the non-material incentive demand and satisfaction is ranked from top to bottom in four dimensions, followed by work achievement, autonomy, organizational environment and personal growth. Therefore, compared with the organizational environment and personal growth, small and medium-sized IT enterprises need to pay attention to work achievement and autonomy, which may achieve better results.

**Table 4.** Descriptive analysis

Serial number	Dimensions	Average Satisfaction	Satisfaction Variance	Average Demand	Demand Degree Variance	Difference between Satisfaction Mean and Demand Mean
1	Work achievement	3.187	.000	4.145	.010	.958
2	Personal growth	3.436	.022	4.131	.007	.824
3	Autonomy	3.200	.011	4.024	.001	.786
4	Work environment	3.162	.038	3.948	.066	.707

**Table 5.** Paired samples test

Group	Demand & Satisfaction	Mean	t	Df	Sig.
1	Organizational environment	5.50602	13.181	165	.000
2	Personal growth	3.47590	10.702	165	.000
3	Work achievement	3.77711	15.432	165	.000
4	Autonomy	1.67470	11.792	165	.000

### 5. COMPARATIVE ANALYSIS OF BACKGROUND VARIABLES

#### 5.1. Gender Variables

In this study, independent sample T-test and one-way ANOVA were conducted for employees with

different background information. The results show that there are significant differences in gender, age and educational background in some dimensions of non-material incentive demand of post-90s employees.

There are significant differences in personal growth and job achievement. Male post-90s employees' demand in these two dimensions is higher than that of women,

which shows that male post-90s employees pay more attention to challenging work, stimulating their own potential, clear goals and so on. Female pay more attention to organizational environment. Therefore, according to this characteristic, small and medium-sized enterprises should take targeted measures according to the different gender of employees, fully considering the factors of this person's growth and work achievement, so that retain outstanding post-90s employees.

**5.2. Educational Background Variables**

There are significant differences in autonomy among post-90s employees with different academic qualifications, among which graduate students have the highest demand for autonomy, because compared with

junior college students and undergraduates, graduate students prefer to give full play to their creativity according to their own ideas and actively participate in decision-making at work. Therefore, small and medium-sized enterprises should pay attention to the incentive of graduate students' work autonomy.

**5.3. Position Variables**

The post-90s employees of small and medium-sized IT enterprises with different educational background have great differences in autonomy, among which the demand of technicians and managers is obviously higher than that of salespeople. Therefore, when formulating incentive measures, enterprises should pay more attention to the autonomy of their work.

**Table 6.** Independent samples test

Dimensions	Gender	N	Mean	Std.deviation	F	Sig
Organizational environment	male	103	3.9057	.64373	.639	.293
	female	63	4.0181	.70196		
Personal growth	male	103	4.2136	.61246	1.066	.044***
	female	63	3.9968	.75048		
Work achievement	male	103	3.5709	.47230	6.421	.000***
	female	63	2.8984	.64144		
Autonomy	male	103	4.1068	.76904	4.795	.105
	female	63	3.8889	.93517		

**Table 7.** One-way ANOVA

Dimensions	academic degree	N	Mean	Std.deviation	F	Sig
Organizational environment	Junior college	38	3.8947	.84918	.676	.510
	Undergraduate	104	3.9354	.62978		
	Graduate student and above	24	4.0893	.47439		
Personal growth	Junior college	38	4.2263	.93018	1.255	.288
	Undergraduate	104	4.1385	.56984		
	Graduate student and above	24	3.9500	.60505		
Work achievement	Junior college	38	3.2842	.79271	.428	.653
	Undergraduate	104	3.3019	.58392		
	Graduate student and above	24	3.4250	.56047		
Autonomy	Junior college	38	3.6974	.78447	19.046	.000***
	Undergraduate	104	3.9471	.82414		
	Graduate student and above	24	4.8750	.26580		

**Table 8.** One-way ANOVA

Dimensions	academic degree	N	Mean	Std.deviation	F	Sig
Organizational environment	Technical personnel	89	3.8668	.68369	1.892	.154
	Management personnel	49	4.0962	.50708		
	Sales staff	28	3.9490	.82039		
Personal growth	Technical personnel	89	4.2135	.62943	1.590	.207

	Management personnel	49	4.0041	.61980		
	Sales staff	28	4.0929	.86664		
Work achievement	Technical personnel	89	3.3955	.53850	1.555	.214
	Management personnel	49	3.2327	.67001		
	Sales staff	28	3.2071	.80826		
Autonomy	Technical personnel	89	4.1404	.79053	3.584	.030***
	Management personnel	49	4.0204	.86578		
	Sales staff	28	3.6607	.87192		

Note: \*\*\* indicates significant correlation at the level of .05

## 6. CONCLUSIONS AND SUGGESTIONS

From the above analysis, it can be seen that there are significant differences between the needs and satisfaction of the post-90s employees of small and medium-sized IT companies in the four dimensions. Therefore, improvements need to be made in these four areas. At the same time, employees with different backgrounds have different needs. Therefore, incentive measures should be proposed in accordance with the characteristics of different types of employees.

### 6.1. Overall Improvement Measures

Organizational environment, personal growth, job achievement and autonomy play an important role in the non-material incentives of the post-90s employees. A good organizational environment can increase employees' loyalty. Enrichment of job content and autonomy can enhance employees' job satisfaction, while the sense of accomplishment and personal growth brought by work can meet the needs of employees' self-realization.

First, when assigning tasks for employees, organizations should consider the challenges of work, so as to make the work have an important incentive effect and improve the working status of employees. Of course, the challenges must be based on the rationality of tasks, so that the efforts of employees can be rewarded.

Second, when employees are competent for their work, they should be given greater autonomy within their professional scope as much as possible. However, decentralization is not unlimited decentralization. Organizations should also make employees clear their rights boundaries and make employees responsible for what they do. At the same time, the organization should give employees the right to participate in decision-making as much as possible, so that employees can form a good sense of ownership.

Third, enterprises should create a relaxed and pleasant atmosphere. It is increasingly difficult for small and medium-sized enterprises to survive under the attack of large enterprises. Therefore, high pressure and

overtime have become the norm of small and medium-sized enterprises. The employees of them are faced with great pressure of life and work. The relaxed and pleasant environment can bring happy feelings to employees and reduce the anxiety they feel, thus improving their creativity and innovation ability and promoting enterprises to drive knowledge production for the purpose of innovation.

Fourth, enterprises should establish a learning organization. The motive force of enterprise development is the high performance of employees, and continuous learning ability is essential to achieve high performance. Therefore, enterprises must create an atmosphere that encourages independent learning and continuous innovation, and establish a learning organization.

### 6.2. Measures for Different Groups

#### 6.2.1. Genders

Compared with female employees, male employees pay more attention to personal growth and job achievement, while female employees pay more attention to organizational environment. Therefore, enterprises should take the following incentive measures. First, establish a reasonable promotion system and pay enough attention to the personal development of male employees. Employees not only contribute to the present development of the enterprise, but also are the reserve power for the future development of the enterprise. Therefore, enterprises should make clear the career planning of employees, so that they can see their future path. Second, when assigning jobs to employees, we can tilt more challenging jobs to male employees, and provide them with training opportunities, so as to stimulate their own potential. At the same time, because female employees pay more attention to the organizational environment and they are sensitive to interpersonal communication, superior leaders should make full use of the art of leadership when communicating with female employees and establish deep feelings with them.

### 6.2.2. Academic Qualifications

In terms of autonomy, the post-90s employees with graduate degree or above are in greater demand than the junior college and undergraduate employees. Undergraduate and junior college students pay more attention to personal growth. The undergraduate and graduate employees in enterprises are the core strength of enterprises, so enterprises should take the following measures. Firstly, fully decentralize and give graduate students higher autonomy. The relationship between centralization and decentralization in an enterprise will affect the relationship between superior and subordinate. Since graduate students generally have better professional knowledge, enterprises can appropriately increase the rights of graduate students, pay attention to their opinions and give them more decision-making opportunities, so as to improve the satisfaction of graduate students. Secondly, reasonable training should be given to undergraduate employees to increase training opportunities. Enterprises should establish a sound training mechanism to improve the level of employees to gather strength for the development of enterprises. At the same time, they should also be responsible for employees in enterprises, consider their career planning in advance, and strengthen the training of employees.

### 6.2.3. Positions

According to the analysis, technicians and managers have higher requirements for autonomy. Therefore, enterprises should pay attention to giving technical personnel decision-making power within the scope of their duties. At the same time, because technical work requires higher innovation ability, enterprises should pay attention to give full play to the creativity of employees, communication with employees, and inspire everyone to speak freely. In addition, in the four dimensions of non-material incentives, the highest demand for technicians is personal growth, so enterprises should set clear goals for employees and training employees regularly to improve the incentive effect on technicians.

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