High-tech Companies' Work Overtime Culture and Employee Satisfaction in China

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Abstract: Overtime in China is getting worse and more and more employees are re-quired to work overtime every day. Many sudden deaths and suicides have been reported as a result of the constant overtime work. However, research on overtime has not been extensively studied in China. This research has significant implications for the design of overtime mechanisms in companies. It also strongly identifies the negative effects of overtime on employ-ees. This paper will focus on the relationship between overtime and employ-ee satisfaction in Chinese companies. The research methodology is carried out using questionnaire analysis and interviews. The results show that there is an inverse relationship between the length of overtime work and satisfaction, while the older the age, the more overtime work increases. Half of the re-spondents were forced to work overtime due to unexpected hours.

Keywords: employee satisfaction, overtime, high-tech company in China

1.   Introduction

Overtime is common in China. According to the data from China's National Bu-reau of Statistics and OECD, China's average working hours rank first in the world. In 2018, China's average working hours reached 9.2 hours, ranking among the top ones in the world. In recent years, this number has only increased under the tide of "996". A report published by the World Health Organization shows that more than 55 hours of work per week leads to a much higher risk of death from IHD (Ischemic heart disease) [1].

There are two main types of overtime, compulsory overtime for companies and voluntary overtime for employees [2]. The overtime work is mainly caused by three factors: society, enterprises, and individuals [3]. The traditional values of Chinese society and the diligent part of the culture may cause employees to work overtime. Some enterprises' unreasonable systems, for example, the brutal last-place elimination system, may also lead to the phenomenon of employees work-ing overtime.

In 2019, an Internet enterprise employee established a website with the domain name "996. ICU". 996 means working six days a week. From 9 a.m. to 9 p.m., the "ICU waiting" programmer made a project called "996 ICU" on GitHub, in order to expose the "996 ICU" and "Internet companies" and resist the 996 working systems of Internet companies, more than 100 enterprises in the project imple-mented 996 working systems. Half a month later, Chinese Internet entrepreneurs Ma Yun and Liu Qiangdong spoke in support of the 996-working system. "Peo-ples news" reported that Ma Yun, chairman of the board of directors of Alibaba group, said that "996 work is a blessing". Finally,

China's most authoritative me-dia "People's Daily" issued a document against the 996-working system [4]. In 2021, the government issued a new version of the labor law, which stipulated the overtime wage limit of enterprises.

However, some suicides or sudden deaths of Internet enterprises have aroused widespread concern again. A 25-year-old Chinese video website auditor died suddenly after working for 24 hours over several days during the 2022 Lunar New Year [5]. In November 2021, one of China's best game programmers com-mitted suicide by jumping from a building due to work-related stress [6]. China Youth Daily interviewed 1,641 respondents in August 2021 about the culture of overtime work, of which 55.7% thought their companies had a culture of over-time work, 25.1% felt they did not, and the rest said they were not sure. In the interviews, 49.8% of respondents felt that it would reduce efficiency, 48.4% felt that normal work would be affected in the long run, and 43.4% felt that it was the result of companies chasing profits and squeezing employees [1].

This paper will focus on investigating the phenomenon of overtime work in Chinese Internet companies and the impact of this on employee satisfaction. The paper is organized as follows: firstly, the literature review about Chinese working culture will be summarized first. Then the methodology will be detailed present-ed. It used primary research including the questionnaire and interviews and sec-ondary research. Then the results and discussion will be presented.

2. Literature Review

2.1. Consequences Caused by Excessive Working Culture in Chinese Internet Enterprises

There are positive consequences of working overtime. From managers' perspective, Wright and McMahan based on human capital theory suggest that overtime can motivate employees to make the best use of available resources and thus increase their level of innovation [7]. Wu states that moderate overtime has a positive impact on knowledge sharing has a positive impact [8]. And after a Chinese Internet company announced the abolition of the "small and big week" system, a report indicated that employees generally took a 10-20% pay cut [9].

While overtime can bring better pay and other benefits to employees, the toll it can take on their health cannot be ignored. Male employees who work more than 50 hours a week are more likely to have mental problems such as stress and lack of sleep than male employees who work shorter hours [10]. Too long working hours will reduce the living time of workers, cause work and life conflicts, and make workers affected by more stressors such as interpersonal, chemical, and physical environment at work, thus increasing health risks [11]. According to chinanews.com, two employees died suddenly during the Spring Festival. Both incidents were caused by employees working overtime for an average of more than 12 hours a day, exceeding the four hours stipulated in the labor law.

2.2. Employee Satisfaction

The measurement of job satisfaction of the new generation of employees can be divided into four parts: working conditions, working income, working prospects, and working atmosphere [12]. High employee satisfaction can actively mobilize the enthusiasm and innovation of employees and enhance the innovation ability of enterprises; Form an innovative atmosphere and increase the output and quan-tity of patented inventions; It has greatly accelerated the development speed of enterprises [13]. This paper will focus on the research of overtime on employee satisfaction, and investigate the relationship between overtime and satisfaction. If the conditions for overtime work are appropriate, will employees be willing to work overtime?

2.3. Current Research on Overtime Culture in China and the Research Value

Many people in China have now taken notice of this wave of overtime. However, the relevant research is not well developed, and only Cui Jingyi et al [14]. and Nie Wei and Feng Xiaotian scholars have studied the effects of overtime on em-ployees' happiness, access, and security at work [15]. However, these studies do not focus on a type of company, but only investigate employee overtime at a broad level. The internet is inevitably one of the companies most affected by the growing wave of overtime. It is also the Internet companies that tend to have the highest wave of overtime known to the masses, and the Internet companies can be studied as a typical case study. From exploring the industries where overtime is most serious, we can learn about the serious impact overtime has on employees. This article focuses on the attitudes of employees in internet companies towards overtime, with a more detailed study group.

3. Methodology

The questionnaire was conducted to collect data and quantitative data was col-lected using a questionnaire. In order to get a more detailed understanding of the overtime culture in companies, an anonymous interview was conducted with an employee of a well-known Chinese Internet company to complete the qualitative analysis.

3.1. Quantitative Analysis

3.1.1. Questionnaire Design

This survey includes 15 single choices and 1 multiple-choice task. The first three items of the questionnaire are gender, age, and length of service, which are used to set variables.

In the questionnaire, eight questions were asked about overtime work. This in-cluded the length and number of overtime hours worked per shift. This part of the survey mainly collected information about employees' attitudes towards overtime and the frequency of overtime work. Then questions about employee satisfaction were asked, which consisted of five questions. The five questions were used to collect information on whether the employees were satisfied with their current company.

The questionnaire was answered anonymously and there was no requirement on the filling time.

3.1.2. Sampling Method

The questionnaire was sent to a discussion board of a well-known Internet Forum in China (https://www.v2ex.com/). Quota sampling allows the proportional distribution of the respondent sample on these attribute charac-teristics to be closer to the study population and more in line with research needs. In the web survey, quota sampling was used because probability sampling was difficult to achieve.

3.1.3. Sample Size and Data Analysis

Excluding employees who did not work over-time and some samples that were filled out too quickly, a total of 100 question-naires were collected, and SPSS reliability analysis software was used for relia-bility and validity analysis. Before analysis, the gathered data was prepared. The dataset was checked for missing data and outliers. In order to compare the rela-tionship between overtime and employee satisfaction, correlation analysis and regression analysis are used. At the same time, find out its action mechanism and action boundary. The data was then analyzed using statistical software SPSS28.0.

3.2. Qualitative Analysis

In order to better understand the internal structure of these enterprises, I inter-viewed an employee who worked for the same company as the employee who died suddenly in early 2022. This company is one of the largest online video sites in China and is widely popular among young people. The purpose of this inter-view is to gain a deeper understanding of the overtime culture in internet compa-nies and to compare the results received in the questionnaire. The author pre-pared questions about the length of overtime work, the reasons for overtime work, and the experience of overtime work. In order to compare the results of the questionnaire, these questions were similar to the questions in the questionnaire. The employee previously worked in an Internet company and transferred to the company under report one year ago. An online telephone interview was conduct-ed due to the epidemic, which lasted about 15 minutes. The answers were record-ed in notes and recorded with the consent of the respondents. The interview re-sults are transcribed into written results and then classified according to ques-tions. Employees of a company cannot reflect the situation of all enterprises. The result of this time is likely to be one-sided but can have a deeper understanding of participants' views, motives and emotions.

4. Result

A total of 100 questionnaires were collected in this questionnaire.

4.1. Analysis of Basic Data (Age, length of service, gender)

There were 45 male respondents and 55 female respondents. The current sample is about evenly split between men and women. Most of the respondents (65%) are between 20-31 years old, with 65 people in total. There are 28 people aged 31-40 and 7 people aged 41-50.

For the working age, except for the employees with 2-3 years and employees with more than 10 years, the other ages are evenly distributed. There are 28 respondents with 2-3 years of service and 24 employees with more than 10 years of service.
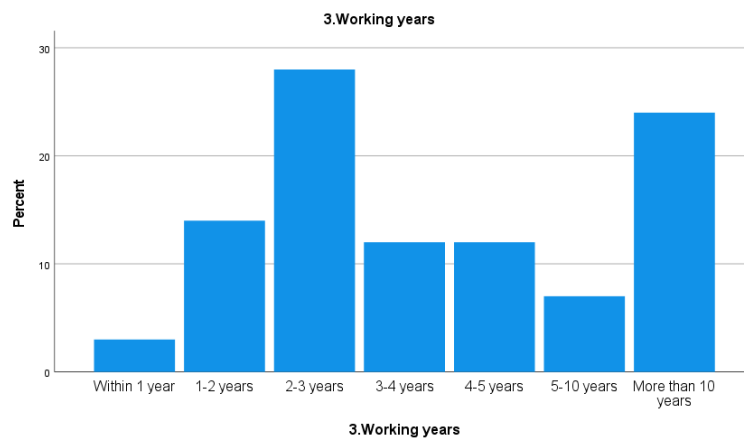

Figure 1: The working years of questionnaire respondents.

The reliability analysis was used to analyze these two topics, α the coefficient result is 0.660(see figure 1), with high reliability.

Table 1: The correlation between questionnaire respondents' age and working years.

Correlations		2. Age (year)	3. Working years
2. Age (year)	Person Correlation	1	.831**
	Sig. (2-tailed)		<.001
	N	100	100
3. Working years	Person Correlation	.831**	1
	Sig. (2-tailed)	<.001	
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

The measure used here is the Pearson correlation coefficient. After the correla-tion analysis of the two data, the result is greater than 0.8(see table 1), which means that the two groups of data are highly correlated. The conclusion is the older the age is, the longer the working age is.

4.2. Analysis of Overwork and Satisfaction

After the basic analysis, the correlation between satisfaction and overtime hours of employees was conducted. The number of overtime days and overtime hours per week was analyzed and obtained a weak correlation - the longer the length of overtime, the more overtime days will rise at the same time.

Table 2: The correlation of overtime hour per hour and overtime hour per time of questionnaire respondents.

Correlations		4. The overtime hours per week	5. The overtime hours per time
4. The overtime hours per week	Person Correlation	1	.302**
	Sig. (2-tailed)		.002
	N	100	100
5. The overtime hours per time	Person Correlation	.302**	1
	Sig. (2-tailed)	.002	
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

The Pearson Correlation is 0.302(see table 2). The control variable overtime hourly salary is introduced. The Pearson Correlation increases to 0.333(see table 3), and the correlation is stronger than before.

Table 3: The correlation between overtime per week and over time per time of question-naire respondents.

Correlations			
Control Variables		4. The overtime hours per week	5. The overtime hours per time

Table 3:(continued).

6. The hourly salary of overtime	4. The overtime hours per week	Correlation	1.000	.333
		Significance (2-tailed)		<.001
		df	0	97
	5. The overtime hours per time	Correlation	.333	1.000
		Significance (2-tailed)	<.001	
		df	97	0

The overtime phenomenon of colleagues around can explain 11.7% (see table 4) of the overtime phenomenon.

Table 4: The model summary of time hours per week and overtime hours per time.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.342ª	.117	.099	1.296

a. Predictors: (Constant), 4. The overtime hours per week, 5. The overtime hours per time

Through the analysis of overtime hours and employee satisfaction, we get the following results. All satisfaction and working hours are related, and they are positively correlated. As a result, the longer the working hours, the less satisfied they are (see table 5,6,7,8).

Table 5: The reliability Statistic analysis.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.660	.908	2

Table 6: The overtime hours per time and the belonging of employee.

Correlations			
		5. The overtime hours per time	16. Whether they have a sense of belonging to the enterprise.
5. The overtime hours per time	Person Correlation	1	.627**
	Sig. (2-tailed)		<.001
	N	101	101

Table 6: (continued).

16. Whether they have a sense of belonging to the enterprise.	Person Correlation	.627**	1
	Sig. (2-tailed)	<.001	
	N	101	101

**. Correlation is significant at the 0.01 level (2-tailed).

Table 7: The overtime hours per time and whether employee feel care and attention.

Correlations		5. The overtime hours per time	13. Whether they feel care and attention?
5. The overtime hours per time	Person Correlation	1	.676**
	Sig. (2-tailed)		<.001
	N	101	101
13. Whether they feel care and attention?	Person Correlation	.676**	1
	Sig. (2-tailed)	<.001	
	N	101	101

**. Correlation is significant at the 0.01 level (2-tailed).

Table 8: The overtime hours per tome and whether employee often praised and encourage.

Correlations		5. The overtime hours per time	14. Whether they are often praised and encouraged?
5. The overtime hours per time	Person Correlation	1	.654**
	Sig. (2-tailed)		<.001
	N	101	101
14. Whether they are often praised and encouraged?	Person Correlation	.654**	1
	Sig. (2-tailed)	<.001	
	N	101	101

**. Correlation is significant at the 0.01 level (2-tailed).

4.3. The Impact of Overtime on Employees

Employees working overtime have a variety of impacts, most of which choose more than 2 options (see table 9).

Table 9: The impact of overtime.

Option	Number	Percentage	
A. The work efficiency decreased significantly after 8 hours of continuous work	43		43%
B. High mental pressure	46		46%
C. Physical health is affected	73		73%
D. Decreased satisfaction with the current job	38		38%
E. Often due to busy work, I don't have time to accompany and take care of my lover (or family)	67		67%
F.They often give up their hobbies because they are busy with their work	31		31%
G. Often have the idea of leaving	20		20%
H. Others	2		2%

4.4. Various Reasons for Overtime Work

The reason why employees work overtime is mainly due to emergency tasks, which is consistent with the statement in the interview (see figure 2).
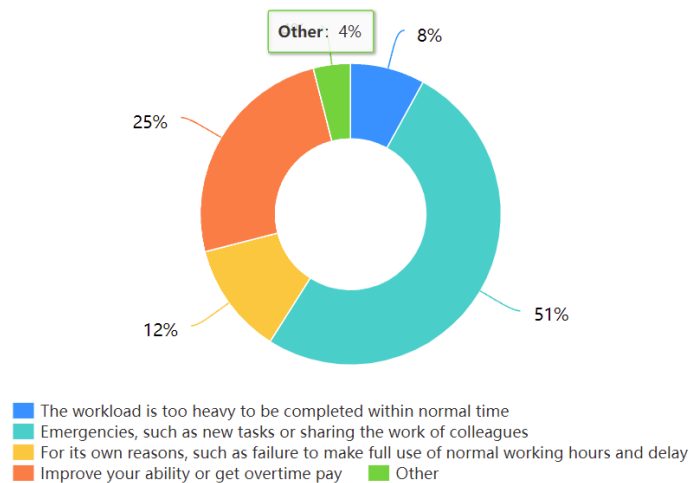

Figure 2: The various reasons for overtime.

The following is the result from the interview, which will be used as an aid to the questionnaire.

4.4.1. "Overtime" form has been Changed

As the interviewee reported, the working overtime form has been changed. For example, he needs to work every day per day but can work more flexibly. He mentioned that "I set my own working hours. I can go as long as I have something to do, and I can go if I have nothing to do." As he signed the agreement that was not billed by working hours, so he still works overtime in a more flexible way. "The Company gives you a task arrange-ment and if you finish then you can be flexible because if you do a good job and you create value for the company, you don't have to work long hours. Your value is not reflected by how long you have been doing, but by how much performance you have achieved for the company."

4.4.2. The Reasons of Work Overtime.

In the previous company, overtime was mainly used to deal with urgent matters. Programmers work overtime for a variety of reasons. Software problems, changes requested by the A-side, urgent projects, etc. can all lead to overtime. Overtime is a group phenomenon and many of the overtime projects are mainly for the completion of team projects. Interviewees mentioned in the interview, "Now overtime is mainly to deal with some emergen-cies. For example, if the quality of the factory is not up to the standard, now you have to work overtime to deal with it, work out an emergency plan and let the factory implement it, so as to do the things that are not up to the standard. This is an emergency because normally, it shouldn't be of poor quality. For example, you are doing development and your project has not been completed. If you don't work overtime, the whole project can't keep up."

4.4.3. Sometimes Forced to Work Overtime.

people work overtime sometimes out of necessity and potentially without compensation. "Of course, if you work for a top company," he said, "Everyone is willing to work overtime, so there's nothing you can do about it. Everyone works overtime to keep the job. But in reality, the overall impression is that it's not particularly good for the company as a whole."

5. Discussion

People who work overtime are affected by a number of factors, according to this study.

The amount of overtime worked increases year-over-year as one gets older, a correlation that indicates a positive correlation between age and overtime work. With a Pearson Index of 0.908, there is a huge correlation between the two. When an employee's age starts to rise, so does the amount of overtime he works. This can be a side effect of the permeation of the company's overtime culture to its employees. From the time employees first start working overtime, when the idea of overtime is embedded in their bones, they will subconsciously work overtime in the future. Another possible reason is that when age rises, the efficiency of employees may also decline. The physical effects of long hours of overtime make it impossible for them to continue to perform their tasks efficiently. There is a saying on the Internet in China that when an employee in an Internet company has not been promoted to management at the age of 35, they have almost lost the chance to continue working. It is highly unlikely that companies will continue to sign contracts with these "old" employees.

The overtime time and frequency per week is an interesting part. The more overtime, the longer the overtime. According to common sense, the longer the overtime, the fewer overtimes will be required. Colleague overtime only explains about 10% of overtime and is not strongly correlated. Why does this happen? I think it may be the attitude of managers mentioned in the interview. Even if you complete the task, you will still be asked to stay in the company for a specific time. As a result of this unreasonable system, a large number of unnecessary overtime hours are generated. On the other hand, the influence of colleagues is not so serious. According to the reasons for overtime, this may be caused by emergencies. As mentioned in the interview, if your task is not completed, it may affect the whole project, so you are forced to work overtime at night.

In terms of satisfaction statistics, we can clearly see that overtime will signifi-cantly reduce employees' satisfaction. In the correlation statistics of the five problems, the overtime hours are positively correlated with the problems, that is, the longer the overtime, the lower the satisfaction. It is whether employees feel cared for by the organization that has the greatest impact on overtime. The rele-vant index of this problem reached 0.676 Working overtime for a long time will make employees feel no care from the company. Although long working hours can ensure a certain degree of progress, they can have a potentially negative im-pact on employees' physical and mental health, and a

reasonable work schedule is conducive to optimal performance during overtime, which would otherwise only be counterproductive [16].

The second most important satisfaction issue is that excessive overtime makes employees feel less encouraged by the company, with a Pearson correlation of 0.654. The correlation is strong, meaning that excessive overtime makes employ-ees feel less encouraged by the company. The correlation coefficient is 0.627. Excessive overtime makes employees not feel a sense of belonging to the compa-ny. Koys confirms that there is a positive association between employee satisfac-tion and customer satisfaction [17]. If employee satisfaction rises, customer satis-faction will also rise.

Overtime has the greatest impact on health. Excessive working hours can have a great adverse impact on employees' health [11]. Such enterprises are not re-sponsible for employees. In the process of guiding employees to devote them-selves to work, these enterprises fail to reasonably control the length of overtime and ignore the importance of employees' physical and mental health. Hannerz and Albertsen point out that employees who work excessive overtime may suffer from poor mental health [18], which in turn increases their frequency of taking psychotropic drugs.

The second major impact on employees is the lack of company with their fami-lies or loved ones. If employees spend too much time at work, they will have no time to communicate or entertain with their families when they go home. If a per-son comes home in the middle of the night, who else can he chat or entertain with? Excessive fatigue can also lead to a lack of energy and time for leisure.

The flexible work mentioned in the interview is an effective working system. Employees only need to complete the specified tasks. I think this system may be very effective for creative occupations, rather than illustrators. You may not be able to draw an interesting work in your seat for a day, but if the painter can go out and get materials, he is likely to find inspiration and draw the work easily. However, this system is not applicable to some posts. Not sitting in the office may lead to some communication problems. For example, employees cannot re-ply to the company's information in time. This is a test of the enterprise manage-ment system. Only a sufficiently efficient management system can enable this flexible system.

This study has many limitations. In terms of this questionnaire, the scale is not unified. This directly leads to the invalidation of the data on whether senior ex-ecutives work overtime because it uses a non-uniform scale. These data from employees may not be very reliable, and someone may fill in the questionnaire casually in order to obtain the reward of the questionnaire. Among these data, there may be some similar data. These employees may come from the same com-pany or the same management system. This may lead to duplication and unrelia-bility of data. The survey of hourly salary does not use percentage measurement, which may cause some respondents to be unable to fill in the amount accurately. The questionnaire did not use the Likert scale for the survey of satisfaction, which directly led to the monotonicity of the data. The number of samples is not enough to summarize the population.

For future studies, improvements can be made in the sample size and the scale of the questionnaire. If the 5 or 7-scale system can be used, the data will be clear-er. For the question of employee satisfaction, the data shows its relevance. The data provided by 100 questionnaires is not enough to build a model enough to analyze group behavior. If more than 1000 questionnaires can be collected, a complete model will be established. There are too few interviewees. An inter-viewee can't provide enough information. The position of the interviewee may also affect the results of the interview.

6. Conclusion

This study shows that there is a negative correlation between Chinese Internet employee satisfaction and overtime hours. Employee satisfaction will be reduced by the increase in overtime hours. Half of the employees work overtime due to emergencies. The impact of overtime on employees is mainly related to the ina-bility to accompany their families or loved ones and the impact on health. The

interview provides a deeper understanding of the reasons for employees' over-time, which is consistent with the results of the questionnaire.

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