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## **Do Mental Health and Environmental Factors Mediate the Relationship Between Job Satisfaction Performance Efficiency? A Study in The Microchip Market**

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### **Abstract**

Hoppock began researching employee job satisfaction back in 1937. At the same time, under the influence of Western human rights culture, employee satisfaction with work has also been regarded as an essential assessment indicator for enterprise management. Job satisfaction profoundly impacts the company's improvement of work efficiency and better development. In this paper, we hope that companies can improve employee job satisfaction by researching the factors that affect employee job satisfaction. This paper discusses three parts, including social interactions, organizational perception, and perturbing factors. This paper will use the microchip manufacturing industry in Sichuan Province, China, and use PLS-SEM to assess the structure model. A questionnaire is adopted and further modified to suit the objective of this study.

**Keywords:** Job satisfaction, Social interactions, Organization perception, Perturbing factors

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### **Introduction**

Many businesses now aim to increase the value and quality of their offerings in response to the challenges posed by globalization, increasing competition in the marketplace, and the unpredictable nature of the market (Yee, 2018). The importance of human resources in this respect has recently come to the fore. Since the beginning of the 20th century, there has been a raging debate between academics and industry professionals about human resources' impact on Productivity. Human resources are a company's assets to achieve success (Fahlevi, 2021). In today's society, employees' job satisfaction is getting more and more attention, especially in large companies. Employees' job satisfaction can significantly affect employees' work enthusiasm and work efficiency at the subjective level. At the same time, employees who are satisfied with their jobs are challenged to leave, which reduces the company's training costs for new employees. In developed countries in the Western world, surveys on employees' mental health are not uncommon. However, due to China's

large population and meager cost of high-quality labor, many Chinese companies waste human resources, ignore employees' mental health, and do not care about employees' job satisfaction. However, in recent years, due to China's family planning policy implemented in the 1980s and 1990s, China has rapidly entered an aging society. The working-age population is declining rapidly, and human resource costs are soaring. Significant companies in China have begun to pay attention to the impact of employees on job satisfaction and want to confirm which factors affect employee job satisfaction through different social practice surveys and questionnaires for specific industries. From an economic point of view, job satisfaction is a result of the labor market. In theory, it is related to socioeconomic status or economic income are very similar. Like financial returns, high job satisfaction is constantly Yearning; however, it differs from financial reward's immateriality: the same job features and rewards for different labor. Individuals may have completely different evaluations of job satisfaction. The reasoning for this is based on the idea that factors inside a company, such as the contentment of its workers, directly impact the success and longevity of the business as a whole.

Most people would agree that if work dissatisfaction could be mitigated, Productivity would rise. In other words, happy staff are more likely to go the extra mile for their customers and provide superior service. Izverciana, Potraa, and Ivascu (2016) claim that "performance does not always follow from employee satisfaction in a direct functional connection, even though the research supports a positive association between employee satisfaction and performance." This is because a wide range of factors influence employee happiness and Productivity. The opposite claim is supported by data, however. The research found No correlation between employee job satisfaction and service quality. The variables that influence employee happiness, the connection between satisfaction and performance on the job, and the effects of these factors on the overall success of organizations have been the subject of extensive study in a wide range of situations across the world."

Workers in Oman reported higher levels of satisfaction with their jobs when they had access to resources, were encouraged to be creative on the job, worked in a diverse environment, had clear objectives, felt like they were making progress toward those objectives, enjoyed their workplace, and had the chance to advance in their careers (Pauceanu et al., 2016). In addition, researchers found that Pakistan's banking industry workers were more satisfied with their jobs when they implemented human resource management strategies such as teamwork, job autonomy, and leadership style. According to the results, the levels of job satisfaction experienced by male and female employees are also very different.

Also, Kumari, Joshi, and Pandey (2014) researched what makes public and private sector workers in India happy in their jobs. Incentives, management style, work prestige, job future possibilities, job content, interests, availability of alternative options, and job complexity were all shown to directly impact employees' levels of job satisfaction. Gender differences, economic sector, and geographic location were all shown to be significant sources of variance. Salary, efficiency in work, fringe supervision, and coworker interaction were found to be the most significant elements leading to job satisfaction in research conducted by Parvin and Kabir (2021) in the pharmaceutical industry in Bangladesh.

Among the factors contributing to workers' happiness at the Postal Corporation of Kenya, 2016 research by Otieno found that psychological contract was the most important, followed by job motivation and employee welfare. In addition, some researchers found that, at the Energy Regulatory Commission of Kenya, workers rated their work environment, training, and growth as the most significant perceived elements impacting job satisfaction, followed by their salary and chances of advancement. It is clear from the available research that a consensus on the factors that contribute to workers' overall sense of contentment in their jobs has yet to be created. In addition, studies and surveys have shown that work satisfaction is affected by a wide range of variables. It is also apparent that the impact is mostly situation-dependent. In addition, the empirical data demonstrates that this research has used varying models to assess the elements that affect workers' happiness on the job.

However, because employee happiness has been linked to both individual and company success, this is a central point for the company to research the factors of employee job satisfaction.

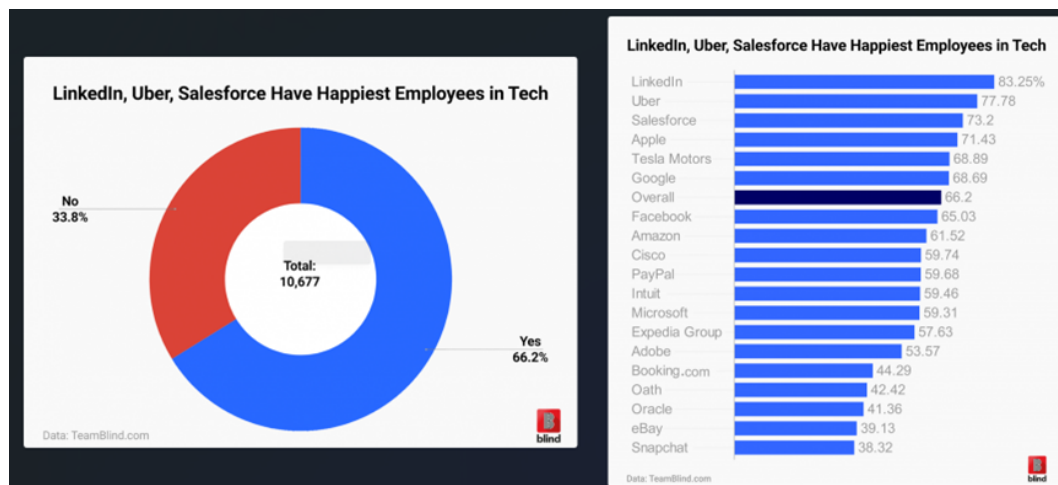
The model for work satisfaction developed by Izverciana, Potraa, and Ivascu will be used in this investigation (2016). Six primary factors in the model affect satisfaction in one's employment. Disruptive elements, employee motivation, social interactions, individual and organizational traits, the nature of the workplace environment, and employees' perspectives all play a role. Each independent variable consists of six components from the classes.

### Problem Statement

While several studies have shown a favorable correlation between happy workers and productive companies, other research challenges the idea that contentment is a necessary precondition for Productivity. Since employee happiness has been linked to individual and organizational success, businesses must identify the variables most responsible for shaping it (Yee, 2018).

The empirical evidence suggests that in their quest to identify the elements that impact employee happiness, researchers use a wide variety of models and methods (Parvin & Kabir, 2021; Pauceanu et al., 2016). Results cannot be extrapolated from this data. The model of work satisfaction by Izverciana, Potraa, and Ivascu will be used in this research (2016). The foundation of the concept is a set of six factors thought to affect employees' contentment in the workplace. Disruptive variables, employee motivation and social interactions, company climate, and employee perceptions are all examples.

Worldwide, Businesses have been discussing perturbing factors and job satisfaction. It is a crucial topic of study because it impacts how well employees perform at work, influencing how well the company operates and how well customers are treated. According to Cheng, Liou, Tsai, & Chang (2018), job satisfaction is inversely correlated with employment stress and vice versa, and employee perturbing factors have been linked to lower levels of physical and mental well, lower levels of job satisfaction, higher rates of employee turnover, and lower levels of commitment to the profession. Staff motivation, the office environment, and individual employee traits were the primary areas of investigation. Disturbing, social, and organizational perception aspects were not investigated. Therefore, this creates a gap in the existing literature. Therefore, this research aims to fill this knowledge gap by examining the role of perturbing, social interaction, and organizational perception factors in the microchip market.



**Figure1: LinkedIn, Uber, Salesforce Have Happiest Employees in Tech**

Blind asked users from tech companies a simple question: "Are you happy in your current job?" In order to allow employees to work and live happily, technology companies spare no effort to provide employees with free food and massage services, allow employees to bring pets to work, and other various benefits. Therefore, employers may also be curious to know the answer to this question. More than 10,000 users participated in the survey from January 15 to January 25, 2019, and 66.2% of them answered "yes." This online survey shows that many large companies are serious about

improving employee happiness and attach great importance to employee satisfaction. High employee happiness can improve employee satisfaction, and employee satisfaction can improve the work efficiency of the enterprise and create more excellent value for the enterprise.

### **Research Objectives**

1. To assess the influence of Social Interactions on employee job satisfaction in the microchip manufacturing industry, China
2. To examine the influence of organizational perception on employee job satisfaction in the microchip manufacturing industry, China
3. To assess the influence of perturbing factors on employee job satisfaction in the microchip manufacturing industry, China

### **Significance of Research**

China's economy has significantly progressed after over 20 years of reform and opening up. At the same time, China's companies have also had significant qualitative changes. Under the planned economic system, the companies' customers are the government. However, plans and needs are determined by the government for the companies, and the task of government-run companies is to enable all employees to survive, thereby leading to stable jobs for corporate employees, as well as passive work attitudes and other phenomena. However, Western management thinking shows up, and the inflow of capital and the transformation of the country's economic system from a planned financial system to a market economic system have prompted companies to think about the actual market demand. What are the needs of employees? Especially in Western management, the inflow of ideal ideas has brought about significant changes in the internal management mechanism of the companies. The salary, welfare, the assessment system has undergone corresponding changes, and these changes have more or less caused difficulties for employees to adapt. One of the most influential parts is the job satisfaction of employees.

Employees are the most critical assets of an enterprise, especially under the current conditions of globalization and fierce market competition. This will especially prompt managers to pay more attention to employees' working experience and formulate relevant incentives and measures to improve employees' work enthusiasm and job satisfaction to achieve long-term and sustainable benefits for the enterprise. How can we determine where the employees are dissatisfied with the work? Satisfaction surveys can enable business managers to clarify the problems in the company's management, provide employees with specific feedback on the development of leadership, and enhance management measures to meet the needs of employees.

Research in the field of job satisfaction has achieved some significant results, but most of the existing research and models are based on the country's cultural background. Since management itself is influenced by the Western environment, Western local culture has a decisive influence on the formation and development of employee satisfaction theory. Cultural differences often make workers with different backgrounds have unique beliefs, morals, and values, which are unique and different from others' cultural behavior and life attitude; in different cultural backgrounds, employees will consider from different angles in relationship with the enterprise. Therefore, different cultural backgrounds determine the key factors that affect job satisfaction. The difference is that the models proved by similar studies may not be applicable in our country, so we look for Western models. The cultural background will affect the key factors that the job questionnaire produces with the corresponding value.

In addition, as a high-tech industry, the industry specificity of the microchip industry has also led to differences between practitioners and other sectors. Compared with ordinary employees in the industry, they show a certain uniqueness. According to statistics, in the microchip industry, those with a bachelor's degree or above professionals account for 58%, of which 10% are masters and 1% are doctors, which can be described as a gathering of talents—general higher education. Education level makes microchip employees exhibit some of the expectations of typical knowledge workers, and their work purpose is not only In order to survive; they pay more attention to career

development, pursue a sense of accomplishment, have independent values, and strong self-awareness, a strong willingness to flow, do not like to be controlled by others. This pursuit of self-worth weakens Microchip employees' perceptions of the group's organizational loyalty.

Based on the current status of the microchip industry, combined with domestic and foreign employee job satisfaction theory and practice. This paper focuses on the factors influencing employees' job satisfaction in enterprises in our country. Comparative analysis of employee job satisfaction with personal attributes and provide management improvement for the surveyed sample companies' opinion.

## **Literature Review**

### **Job Satisfaction**

Hoppock was the first scientist to research employee job satisfaction. In 1937, he published the first paper on which factors would affect employee job satisfaction, which opened the way for studying employee job satisfaction. In subsequent studies, the two-factor theory proposed by Herzberg (1959) is also a popular theory consisting of incentive and hygiene factors. In modern times, Vroom (2010) points out that personnel structure, promotion opportunities, and management may influence employee job satisfaction. Patwary & Azam (2023) found that social recognition, social status, and employee benefits can also affect job satisfaction.

### **Employee Job Satisfaction**

When it comes to a particular company, employees play a vital role when to setting the organizational vision and mission. Job satisfaction is one of the critical factors when it comes to a workplace. Job satisfaction can be defined as awareness of personnel successes and accomplishments. There was no positive and significant partial effect of Employee Performance on Job Satisfaction (Susanto, Sawitri & Suroso, 2023). Most people agree that it has a direct impact on both personal and professional performance as well as efficiency. To be happy at work, one must enjoy their work, perform well, and receive recognition for their efforts. Some findings mentioned that to come up with the entity's standards, it should provide a working environment for their employees where they can work freely and without any problems, as it helps to give their full potential to the organization (Raziq & Maulabakhsh, 2015). As mentioned above, the criteria used to measure job satisfaction may differ from one entity to another. Job satisfaction is generally measured according to the management's style, payment methods, working hours, other benefits, etc. Job satisfaction will directly impact Productivity, motivation, and work performance (Hayajneh et al., 2021). Employee satisfaction is essential for the employees and the entire organization (Mohammadi et al., 2021). The organization can achieve excellent results from the work of satisfied employees because they are generally happy and motivated to do so.

**Table 1: Significant research findings on employee job satisfaction**

<b>Time and researcher</b>	<b>Influencing factors</b>
Hoppock, 1937	Fatigue, work monotony, working conditions, leadership style
Herzberg, 1959	Two-factor theory (Motivation Factors and Hygiene Factors)
Porter, 1961	Security, independence, self-esteem, self-actualization
Alderfer, 1972	ERG theory
Voydanoff, 1980	Salary income, working environment, working level, age, length of working
Zeitz, 1990	Opportunities for promotion, job content, income
Landy, 1989	Challenging work, physical environment, biological needs, benefits, hobbies, the influence of others
Robbins, (1997).	Reward and punishment systems, personality traits, coworker relationships
Price, 2001	Work integration, communication, corporate centralization
Vroom, 2010	Personnel structure, promotion opportunities, manage
Hwang & Park, 2022	emotional intelligence, job stress, self-efficacy, and job autonomy
Pan & Li, 2022	Job competition, compensation, work environment
Patwary & Azam, 2023	Social recognition, social status, employee benefits
Demircioglu, 2023	Work stability, salary, and promotion opportunities
Ariani, 2023	Communication, compensation, manage

### Social Interactions

In this study, the researcher tries to identify the factors influencing employee job satisfaction. Under that, job satisfaction is the dependent variable, while social interaction, Organizational Perception, and Perturbing Factors are the independent variables. Each independent variable contains three sub-factors. Social interaction is how people decide how to behave and respond to others in social organizations. Social interaction plays a huge role in the workplace as it helps the well-being and performance of the employee. This can be considered a job resource (Lia, 2022). According to some findings, in high-pressure job demands, having many job resources may lessen adverse effects like fatigue and cynicism and help keep positive effects like vigor and dedication. Social interaction has three subcategories, including communication, collaboration, and knowledge sharing (Tingfeng et al., 2022). When considering communication, organizations can only survive with effective communication. Understanding how companies operate is primarily based on communication. Communication plays a key role when it comes to job satisfaction. Authentic happiness is linked to positive attitudes, not supervision. Some studies found that communication, both up and down, will have an impact on work satisfaction.

The other factor that comes under social interaction is collaboration. Collaboration is described as a cooperative process where individuals with a common objective, similar interests, and a strong commitment jointly explore novel concepts to find a solution (Naim & Lenka, 2017). The term collaboration lies in communication, building relationships, and sharing knowledge. Creating genuine consensus, ownership, and alignment across all aspects of the company is a principle-based method of working together that fosters trust, integrity, and breakthrough results. Transparency and flexibility are bestowed when participants can discuss various topics without restriction.



Collaboration is built on commercial value, relationship building, and communication in modern organizations (Rank, 2008).

The third subunit represents knowledge sharing. Knowledge sharing has been considered the most critical aspect of knowledge management. It can be defined as workers' readiness to share their invaluable knowledge with others and how they communicate and share essential data with peers throughout the companies. Organizational members are encouraged to share and build tacit knowledge related to their jobs through knowledge sharing (Sun et al., 2022). Specifically, knowledge sharing may refer to people's knowledge, perceptions, and work experience that are connected to current tasks, such as daily routines, counting services provided, interpersonal relation techniques, communication skills, standard operating procedures, decision-making, creativity and problem-solving skills, employee behaviors, and customer interaction skills (Trivellas et al., 2015).

### **Organizational Perception**

Organizational spokespersons organize and carry out actions to affect audiences' views of the organizations through organizational perception management. According to this definition, organizational images are unique, often temporary perceptions of an organization and may exist in multiple forms simultaneously. These characteristics set organizational images apart from corporate identities and reputations, which are more likely to be determined by status-oriented categorizations of the organization and tend to be more lasting. Organizational identities and prestige are more likely to be long-lasting and to be determined by status-oriented categorizations of the organization (Elsbach, 2020).

Competition can be defined as when two or more groups compete; they are in a rivalry to pursue an unattainable objective. It is a critical point for the company to manage human resources in the most recent years. Future organizational performance would be determined by competition between employees within the organization and competitors outside the organization. Who would enjoy healthy competition among their coworkers within the workplace, who have a favorable view of their career development, and who typically have high levels of job satisfaction and motivation to support the accomplishment of set goals (Patro et al., 2013; Song et al., 2023).

Employees' perception of their work stability is called job security. Job security is essential to a person's commitment to a company, which can adversely affect their dedication (Babatunde, 2021). Some findings depict the following. One factor that can affect job satisfaction among staff in a company is the regular calculation of the alleged likelihood of future job loss (Artz & Kaya, 2014). The other sub-topic is bureaucracy. It can be defined as a collection of non-elected leaders and an administrative policy-making body called bureaucracy. Modern reinvention reforms sought to improve the bureaucratic work environment at all levels of the American government by reducing "bureaucratic pathologies," increasing job happiness, and enhancing organizational Productivity (Langer et al., 2019).

### **Perturbing Factors**

Under this independent variable, three sub-factors will be considered. Namely, they are frustration, conflicts, and stress. Recent studies have demonstrated that mindfulness can lessen the experience of need frustration in workers who claim that their executive does not support their fundamental psychological needs (Schultz et al., 2015). A collaborative conflict management approach positively impacts job satisfaction. These factors are relative advantage, complexity, compatibility, top management support, company size, technology readiness, competitive pressure, and trading partner pressure. (Younyoung, 2013). The relationship between stress and work satisfaction has been investigated in several studies. Various stressors will have effects on the tension itself. Role conflict is one of many vital factors that contribute to stress. It directly impacts job satisfaction considerably (Ahsan et al., 2009). According to a study of certified public accountants, role conflict was linked to low work satisfaction and a high likelihood of leaving one's employment.

### **Performance Efficiency**

Performance efficiency refers to the descriptive work behavior and measurable work results of an individual (group) in an organization within a specific period. The organization combines the quality and ability of the individual (group) in the past work to guide its improvement and perfection, so that the individual (group) is expected to (group) The sum of the work results that employee can achieve within a particular time in the future.

Performance efficiency refers to how an organization, team, or individual completes a task under specific resources, conditions, and circumstances. The main factors affecting performance efficiency are the external environment, internal needs, and incentive effects. For example, employee skills refer to the core competencies possessed by employees, which are internal factors that employees can improve after training and development; external environment refers to factors faced by organizations and individuals that do not influence by the organization, which are objective factors and are It is completely uncontrollable; internal conditions refer to the various resources needed by organizations and individuals to carry out their work, and are also objective factors. To a certain extent, human beings can change the constraints of internal conditions; the incentive effect refers to the organization and individuals working to achieve goals. The initiative, enthusiasm, and incentive effect are subjective factors.

Among the four factors that affect performance, only the incentive effect is the most active and active factor. When people's initiative and enthusiasm are improved, the organization and employees will try their best to fight for the support of internal resources. At the same time, the skill level of the organization and employees will gradually increase. Get improved. Therefore, performance management stimulates people's initiative and enthusiasm through appropriate incentive mechanisms, encouraging organizations and employees to strive to improve internal conditions, improve skill levels, and improve individual and organizational performance.

### **Maslow's hierarchy of need theory**

Maslow's hierarchy of needs is depicted as a pyramid to demonstrate how satisfying people's more basic needs encourages them to meet their higher-level needs. From the bottom of the hierarchy upwards, the needs are physiological (food and clothing), safety (job security), social needs (friendship), esteem, and self-actualization. This five-stage model can be divided into deficiency needs and growth needs. The first four levels are often called defect requirements (D requirements), while the highest level is known as growth requirements (B requirements). In 1943, Maslow pointed out that people need the motivation to fulfill specific needs; some needs take precedence over others. The primary responsibility of managers is to inspire employees to work at their very best. This means the employer must ensure that the employees work consistently and positively contribute to the company's mission. Motivated staff members will be satisfied with their work and perform their duties as effectively as possible. Job happiness is crucial for retaining and attracting effective workers (Hashemi & Razehipour, 2019). Significant correlations exist between life and job satisfaction and some desirable outcomes. For instance, life satisfaction has been linked to higher career satisfaction, organizational commitment, and job satisfaction, while job satisfaction has been linked to lower absenteeism and turnover intentions. Life satisfaction has also been linked to higher job performance, organizational citizenship behavior, and life satisfaction (Rahimi et al., 2016).

### **Herzberg's motivation-hygiene theory**

The two-factor theory divides the relevant factors in the enterprise into two types, namely, satisfaction factors and dissatisfaction factors. Satisfaction factors refer to factors that can satisfy and motivate people. Dissatisfaction factors refer to factors that are prone to opinions and negative behaviors, that is, hygiene factors. He believes that these two factors are the main factors affecting employee performance. Hygiene factors include company policy and management, supervision, wages, coworker relations, and working conditions. These factors are all factors other than work. If these factors are satisfied, dissatisfaction can be eliminated, and the original work efficiency can be maintained, but it cannot motivate people to behave more positively. Motivation factors are related



to the work itself or the content of the work, including achievement, appreciation, meaning, and challenge of the work itself, sense of responsibility, promotion, development, etc. If these factors are met, they can be highly motivating; if not, they will not generate dissatisfaction like the hygiene factors. According to Herzberg's two-factor theory, humans are motivated by motivators and hygiene elements. Both elements are essential to motivation: motivators promote work satisfaction, and hygiene elements guard against job dissatisfaction.

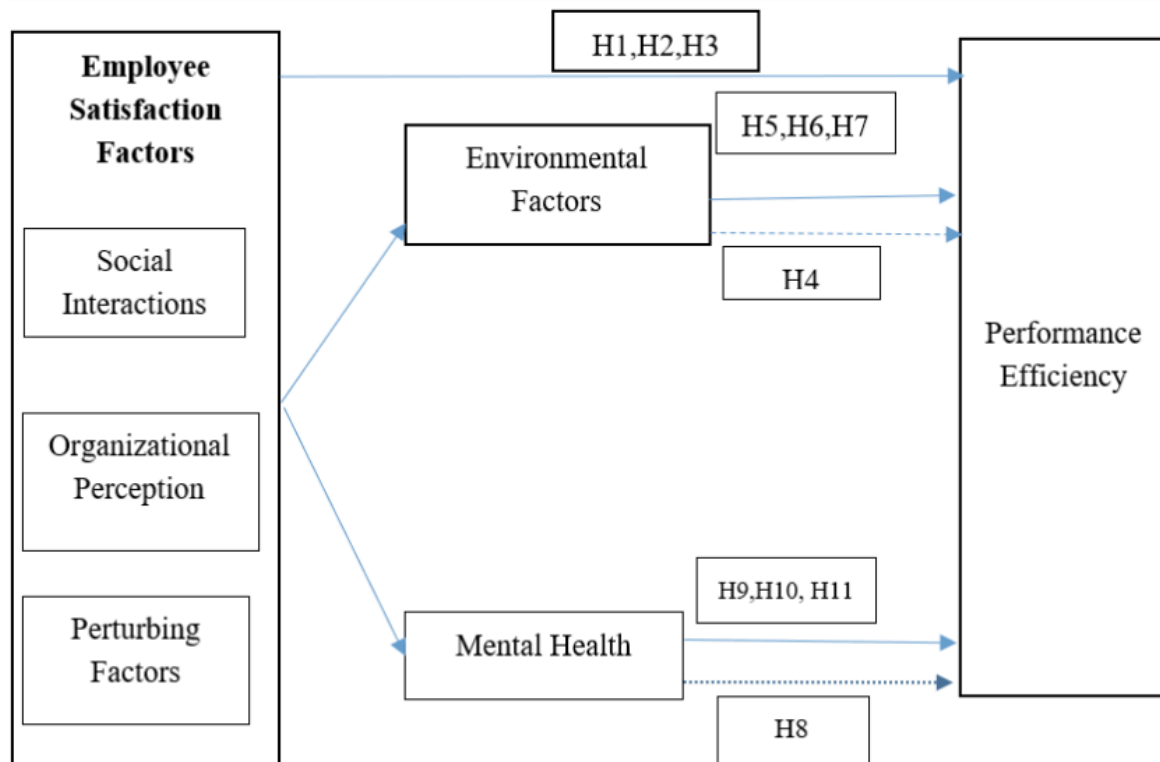
Once managers and supervisors enhance employees' happiness and address their concerns and requirements, the employees talk about how great their job is and how satisfied they are. This increases job satisfaction directly and helps to increase the company's success (Hong & Waheed, 2011). The core of Herzberg's two-factor theory lies in the assertion that "only motivating factors can bring people satisfaction, while hygiene factors can only eliminate people's dissatisfaction, but will not bring satisfaction," how to identify and analyze motivators and hygiene factors and "policing according to their aptitude" is critical. For example, in terms of salary design for sales staff, according to the two-factor theory, it should be divided into two parts: basic salary and sales commission. The basic salary should belong to the health care factor, and the sales commission should be an incentive factor. It is low wages and high commissions, so salespeople can be encouraged to do as much business as possible. Therefore, to apply Herzberg's two-factor theory to management, first of all, it is to analyze and divide the existing factors qualitatively and to clarify or create two parts: health care and incentive factors; secondly, to analyze and separate quantitatively, both Guarantee the essential satisfaction of health care factors and increase the components of incentive factors as much as possible, to finally stimulate the enthusiasm of employees to the greatest extent.

### **Hypotheses and Research Framework**

In reference to the above literature discussion and research framework, the following hypotheses are developed:

- H1: There is a significant relationship between social interactions and performance efficiency.
- H2: There is a significant relationship between organization perception and performance efficiency.
- H3: There is a significant relationship between perturbing factors and performance efficiency.
- H4: There is a significant relationship between environmental factors and performance efficiency.
- H5: Environmental factors mediate the relationship between social interactions and performance efficiency.
- H6: Environmental factors mediate the relationship between organizational perception and performance efficiency.
- H7: Environmental factors mediate the relationship between perturbing factors and performance efficiency.
- H8: There is a significant relationship between mental health and performance efficiency.
- H9: Mental health mediates the relationship between social interactions and performance efficiency.
- H10: Mental health mediates the relationship between organizational perception and performance efficiency.
- H11: Mental health mediates the relationship between perturbing factors and performance efficiency.

**Figure 2: Research Framework**



## Methodology

### Research design

A research design is a plan mainly constructed to answer the study question and to control variation. The research design is structured in such a way that the researcher obtains answers to the research questions (Amin, 2022). Therefore, the study design assists in testing the research hypothesis. The design employed in the study will be a descriptive research design. Literature gives numerous definitions for this research design; however, the most suitable description for this study is supplied by (Babatunde, 2021). The author defines descriptive research design as precisely and methodically characterizing a population's facts and features. The descriptive study design was the most suited because it enables generalizing the results to a bigger group. Based on these criteria, the research method will be able to characterize the characteristics that influence workers' happiness on the job. Employee work satisfaction will be the dependent variable, with social interactions, organizational, and perturbing factors as the independent variables in this research. This study aimed to determine how the many independent factors affected the dependent one.

The research design outlines the specific plan and procedures to address the research objectives. A cross-sectional survey design is chosen for this study to collect data at a specific point in time, providing insights into the factors influencing employee job satisfaction. The cross-sectional design examines relationships between variables and provides a snapshot of the employees' perceptions and satisfaction levels (Bowling, 2005). This section examines the basic aspects of research design. Specifically, it discusses the research design, data collection methods, population, sampling technique, and sample size. Moreover, the questionnaire's design and the data analysis methods are indicated under the methodology."

### Research Population and Sampling Techniques

The sample design section explains the process of selecting participants for the study and the rationale behind the sampling decisions. The target population for this study is the employees of the microchips industry in Sichuan province of China. The selection of this specific population is

justified based on the research objectives and the availability of access to the employees. The findings of the study will be generalized to this target population. The sampling technique employed in this study will be stratified random sampling. Stratified random sampling, also known as type random sampling, first divides the overall units into various types (or layers) according to specific standards and the number of units; finally, a sample is drawn from each type randomly. The advantage of this method is that it is suitable for surveying objects with a large number of overall units and significant internal differences. Compared with simple random sampling and equidistant random sampling, when the sample size is the same, its sampling error is minor; when the sampling error requirements are the same, it requires fewer samples. The disadvantage of type random sampling is that it is necessary to have a good understanding of the overall situation of each unit. Otherwise, it is impossible to make a scientific classification. Moreover, this is often easier to do after the actual investigation. This technique ensures that participants from various departments and organizational job roles are represented in the sample.

### Sample Size

Selecting the number of target samples is a critical step in the research process. The sample size must be more extensive to be meaningful and representative. If the sample size is too large, it will lead to excessive workload and long research time. Therefore, this paper uses the Krejcie & Morgan table as the standard for determining the sample size selection in the study.

The formula for determining sample size:

$$S = X^2 NP(1-P) + d^2(N-1) + X^2 P(1-P)$$

Where:

S = required sample size.

$X^2$  = the table value of chi-square for 1 degree of freedom at the desired confidence level(3.841).

N = the population size.

P = the population proportion (Assumed to be 50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion.

The research population is N=35,000 people, applying in the above formula, the sample size for the present study is 380.

### Scale Measurement of Variables

The research instrument for data collection will be a structured questionnaire. The questionnaire will be developed based on established scales and items used in previous research on job satisfaction (Cheng et al., 2014; Herzberg, 1966). The use of validated scales and items ensures the reliability and validity of the data collected.

The questionnaire will capture data on employee job satisfaction and its influencing factors. It will include closed-ended questions, Likert-type items, and rating scales. The selection of specific questions and scales will be based on their relevance and validity in measuring the constructs of interest. The questionnaire design will be reviewed and validated by experts in the field to ensure its effectiveness in capturing the desired information.

**Table 2: Table of questionnaire**

Variable	Scale measurement
<b>Social Interactions</b> <ul style="list-style-type: none"> <li>• Communication</li> <li>• Collaboration</li> <li>• Knowledge Sharing</li> </ul>	<b>5-point Likert scale</b> <b>1- Strongly Disagree</b> <b>2- Disagree</b> <b>3- Neither Agree nor Disagree</b> <b>4- Agree</b> <b>5- Strongly Agree</b>
<b>Organizational Perception</b> <ul style="list-style-type: none"> <li>• Competition</li> <li>• Job Security</li> <li>• Bureaucracy</li> </ul>	
<b>Perturbing Factors</b>	

<ul style="list-style-type: none"> <li>• Frustrations</li> <li>• Conflicts</li> <li>• Stress</li> </ul>	
<b>Employee Job Satisfaction</b>	

### Data Analysis

The data collection method involves the use of primary data sources. The data sources, such as literature reviews and industry reports, are essential for gaining insights into existing knowledge on employee job satisfaction and the factors that influence it. Previous research and industry reports have identified relevant factors influencing job satisfaction (Cheng et al., 2014; Herzberg, 1966). Primary data collection will be conducted through structured questionnaires to gather specific data directly from the participants. With regard to Joseph F. et al., (2021); Mohammadi, (2019), the present study closely follows the recommended steps of data analysis and interpretation of the results. The following is the overview of the data analysis procedure for the present study:

1. First, conduct a fundamental frequency analysis of the collected data, such as statistics on the distribution of gender, age, and education.
2. If the characteristics of the samples are involved in the research, such as basic behaviors, or the correlation of cognitive attitudes, frequency analysis can also be used to summarize the samples' characteristics to understand the samples' characteristics further.
3. The questionnaire usually involves many scale questions when researching the impact relationship. It is still being determined if the scale questions should be divided into specific dimensions. At this time, factor analysis can condense and obtain several dimensions and find the corresponding relationship between dimensions and items. Since the data collected by the scale is a continuous variable, various advanced statistics can be done, such as independent sample t-test, variance analysis, and regression analysis.
4. The reliability of the data, whether there is reliability, is the most basic. It is generally placed after the background of the essential characteristics of the sample. The reason is that it is first necessary to know what sample population is answering the question. At the same time, reliability is only studied for scale data and cannot be analyzed for background information such as gender and age.
5. Besides the credible data, the items of the research scale also need to be reliable. It is typical to have reliable data and then analyze it effectively. Validity analysis and reliability analysis can also be interchanged.
6. After the data is reliable and the research scale is practical, it is necessary to descriptively analyze the specific dimensions (scale items, etc.) to study the basic attitudes of the sample population towards the scale items.
7. After completing each dimension's scale items and descriptive analysis, use correlation analysis to study the relationship and prepare for regression analysis.
8. It is meaningful to study the regression influence relationship based on the premise that the data are related. Therefore, regression analysis needs to be placed after correlation analysis. Moreover, usually, regression analysis is needed to test the hypothesis.
9. It may also be necessary to compare different groups of people, such as gender, age, etc., and their attitudes toward the scale items. Therefore, analysis of variance or T-test can generally be used for analysis. To study the differences in behavior between groups with different characteristics (such as gender and age), it is recommended to use cross-chi square analysis, etc. The same method is recommended for when cross-analysis of multiple-choice questions is involved.

Primary data will be collected through structured questionnaires administered to the employees of the A.B.C. Company. This method allows for the direct collection of data from the target population. Questionnaires are widely used in research on employee job satisfaction because they can gather standardized responses from many participants (Creswell, 2013). The structured questionnaire will capture data on employee job satisfaction and the specific factors that influence it. The data analysis methods section outlines the statistical techniques employed to analyze the collected data. Reliability and validity analysis will be conducted to assess the consistency and accuracy of the research instrument. Reliability analysis, such as Cronbach's alpha coefficient, will be used to evaluate the internal consistency of the questionnaire items (i.e., Cut-off value for Cronbach alpha). Validity analysis, including content validity and construct validity, will be conducted to ensure that the questionnaire measures what it intends to measure. Exploratory factor analysis or confirmatory factor analysis may be employed to establish construct validity. A normality test will determine whether the collected data follow a normal distribution. This is important for selecting appropriate statistical tests and ensuring the accuracy of the results. The Shapiro-Wilk test or visual inspection of histograms may be used to assess normality."

### **Correlations and Regression Analysis (PLS-SEM)**

Correlation analysis will be employed to examine the relationships between variables. Pearson's correlation coefficient or Spearman's rank correlation coefficient may be used to determine the strength and direction of associations between variables (Hair et al., 2019). Correlation analysis is the analysis of two or more correlated variable elements to measure the closeness of the two variable factors. There needs to be a particular connection or probability between the correlation elements before correlation analysis can be performed. Correlation is not equal to causation, nor is it simple individuation. The scope and fields covered by correlation cover almost all aspects of what we have seen. The definition of correlation in different disciplines is also very different. The calculation process of the correlation coefficient can be expressed as converting each variable into a standard unit, and the average of the products is the correlation coefficient. A scatter plot can visually represent the relationship between two variables. When they are closely clustered around a straight line, there is a strong correlation between the variables.

Regression analysis will be conducted to determine the extent to which independent variables predict employee job satisfaction. Multiple or hierarchical regression analysis may be employed to assess the predictive power of the independent variables (Hair et al., 2017). Regression analysis is a mathematical, statistical analysis and processing of causal factors (independent variables) and predictors (dependent variables). The established regression equation is meaningful only when there is some relationship between the independent and dependent variables. Therefore, whether the factor as an independent variable is related to the predicting object as a dependent variable, what is the degree of correlation, and how sure the degree of correlation has become problems that must be solved in regression analysis. Correlation analysis generally requires a correlation relationship, and the size of the correlation coefficient judges the degree of correlation between the independent and dependent variables. Whether the regression prediction model can be used for actual prediction depends on the test of the regression prediction model and the calculation of the prediction error. Only when the regression equation passes various tests, and the prediction error is small can the regression equation be used as a prediction model for prediction. Use the regression prediction model to calculate the predicted value and conduct a comprehensive analysis of the predicted value to determine the final predicted value. The following research determines the specific regression analysis model according to the actual data collection.

By incorporating relevant literature and citations, this methodology chapter justifies the selection of methods and procedures based on established research and theoretical frameworks. It ensures that the study is conducted systematically and rigorously, providing reliable and valid findings on the factors influencing employee job satisfaction at the A.B.C. Company of China.

## Conclusion & Future Recommendation

In this article, through the introduction of the research background and the discussion of the significance of the research, we can know the importance of this research to improve the work efficiency of the company's employees and protect their mental health. Through this study, the essential factors that affect employees' job satisfaction can be found. We will conclude the data analysis and investigate social interaction, organizational perception, and interference factors. At the same time, to ensure the stability and reliability of data sources, we will select companies in the microchip industry in Sichuan Province, China, to conduct the questionnaire survey. We use the Krejcie & Morgan table as our sample size standard, and we will also use PLS-SEM to analyze the data and draw relevant conclusions. There are areas for improvement in every study designed by people. Because the sample scope of this paper is the microchip industry in Sichuan Province, China, it cannot fully represent the survey results of employee satisfaction factors worldwide and other industries. At the same time, in the subsequent research, we will do an excellent job in data analysis and comparison, earnestly complete the summary of the questionnaire survey, and analyze various data needed for the research on time.

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