The Impact of Digital Transformation on Employee Satisfaction at Zhanjiang Cigarette Factory

Li Liang* and Chatcharawan Meesubthong
Faculty of Business Administrantion, Huachiew Chalermprokiet University.
18/18 Thepparat Road, Bangchalong, Samuthprakarn 105400
E-mail: 1451552946@qq.com

Abstract

The purpose of study is to determine the impact of enterprise digital transformation on employee job satisfaction. Based on the quantitative research method, the appropriate factors of digital transformation and job satisfaction were used to set up the appropriate factors and test them to seek the relationship. The sampling group were 260 employees of Zhanjiang Cigarette Factory in China surveyed by online questionnaire. The multiple linear regression analysis to analyze the relationship between digital transformation and various factors of employee job satisfaction were investigated and tested the hypothesis. Our results show that the digital transformation of top management and technological innovation have significant positive effects on all factors of employee job satisfaction. In addition, the “marital status” and “age” showed a significant impact on employees' work environment and employees' work-life balance, respectively. These finding indicated that enterprise digital transformation has a correlation to the employee job satisfaction.

Keywords : Digital transformation, Employee job satisfaction, Cigarette Factory, Digital Economy

Introduction

Since the globalization of the economy, economies around the world have soared with the development of technology. Digitalization becomes a hot topic in people's eyes. Manufacturing is an important pillar of national development and a core driver of economic growth, and with the development of digital technologies, traditional manufacturing industries

Received Revised Accepted
26 ธันวาคม 2565 / 16 มีนาคม 2566 / 11 พฤษภาคม 2566
26 December 2022 / 16 March 2023 / 11 May 2023

around the world were caught up in the wave of digital transformation. The benefits are so attractive to countries around the world that Germany has launched its "Industry 4.0" strategy and the U.S. has launched its "Industrial Internet" strategy to help the country's digital transformation of manufacturing. The China State Council (2022) is also aware of the importance of digital transformation to the development of various industries. The digital economy brought about by digital transformation is driving changes in production methods, lifestyles and governance, becoming a key force in reorganizing global factor resources, reshaping the global economic structure and changing the global competitive landscape. As of 2019, China's total digital economy has accounted for 34.8% of GDP, and the average annual growth rate of companies that have implemented digital transformation are over 150%. The impact of this digital economy has even led to the employment of about 191 million people in China, which is a very impressive result (Peng& Tao, 2022).

As the company wants to strengthen the digital infrastructure of the enterprise, improve the digital economy governance system and promote the development of digital industrialization then they must have strong value from human resources. Employee job satisfaction is an important aspect of human resource management. Job satisfaction dates back to the 1930s and is an important concept in the study of employee responses to work (Jędrzejczak– Gas & Wyrwa, 2020). Satisfied employees created more value for the organization, which leads to greater motivation and potential, aiming to build a better organizational future. Nowadays, the Chinese working population is generally more educated, more concerned about their own working conditions, and therefore more focused on their job satisfaction (Zhu et al., 2015). This is confirmed in a survey of Chinese workers by Jiang et al. (2019), who found that employees' job satisfaction directly influences their career identity and willingness to leave. This is a double-edged sword, satisfied employees can create higher benefits for the enterprise, on the contrary, the enterprise will suffer huge losses, Chinese enterprises have to pay attention to this issue. However although many scholars have done a lot of research on employee job satisfaction, there is no research to show whether the digital transformation of enterprises will affect employees' job satisfaction.

This study selects the Zhanjiang Cigarette Factory (ZCF), from the perspective of Chinese state-owned enterprises, as the object to explore the impact of enterprises' digital transformation

on employee job satisfaction. As a Chinese state-owned manufacturing enterprise, Zhanjiang Cigarette Factory (ZCF) is bound to respond to the national call for digital transformation, with the primary goal of deep integration of digital technology with the real economy. Over the past 40 years, China's state-owned enterprises (SOEs) have helped the Chinese economy grow by leaps and bounds (Lin et al., 2020), which is evidence of the importance of SOEs to China's market economy. According to the Chinese government's Tobacco Monopoly Law of the People's Republic of China, the China Tobacco Control Board is authorized to operate all aspects of China's tobacco industry, including tobacco cultivation, tobacco leaf purchase and distribution, the production and distribution of cigarettes, cigars and other tobacco products, and the import and export business of China's tobacco industry. Thus, all business activities in the tobacco industry are delegated by the Chinese government to the China National Tobacco Corporation (He et al., 2013). Consequently, tobacco resources are completely monopolized by the Chinese government, and this centrally planned model is more conducive to managing China's huge tobacco industry. In brief, ZCF is representative of China's tobacco manufacturing industry.

The results of this study can help reduce unnecessary barriers in the digital transformation process for companies and even cigarette manufacturing. By maintaining or improving employee job satisfaction, it can enhance employee loyalty to the company and control the company's labor costs, thus reducing the burden on the company. For employees, higher job satisfaction is more likely to motivate them to work better for the company and create greater economic benefits.

Research Objectives

1. Identify factors related to digital transformation and job satisfaction.

2. Examine the correlation between factors of digital transformation and employee job satisfaction.

Literature review

Digital Transformation

In order to understand digital transformations (DT), it is necessary to define them. The definition of digital transformation is currently understood differently by different scholars after an in-depth study of it. In the understanding of Bond et al., (2018) digital transformation is a change in which digital technology affects various aspects of people's lives. For companies, the changes brought about by digital technologies will relate to business operations and delivery of value to customers, which will then go further to impact all aspects of business work, corporate culture, and human relationships (Mićić, 2017). Fundamentally, digital transformation is the process of using technology to improve overall business performance (Westerman et al., 2014). In this process, even though the technologies adopted by companies may not necessarily be the latest, them can achieve significant business improvements by enhancing customer experience, streamlining operations, etc. (Liere-Netheler et al., 2018). In order to better facilitate the smooth digital transformation, many scholars have analyzed the influencing factors in this process from various aspects. All these influencing factors of digital transformation can be very helpful for us in the following research. Liere-Netheler et al. (2018) identified 12 drivers in their study for digital transformation of manufacturing, including: 1) Process Improvement; 2) Workplace Improvement; 3) Vertical Integration; 4) Management Support; 5) Horizontal Integration; 6) Cost Reduction; 7) Customer Demands; 8) Supply Chain; 9) Innovation Push; 10) Market Pressure; 11) Laws/Government; 12) Employee Support. Similarly, Zhang et al. (2022) validated their impact on digital transformation of enterprises in three dimensions: 1) Technology: IT infrastructure and IT management capabilities; 2) Organization: Digital transformation strategy, Top management, and Employee skills; 3) Environment: Government support and Partnerships. They also noted that technology and environment can ultimately lead to successful digital transformation by facilitating the improvement of organizational capabilities. Moreover, Ahmad et al. (2021) also suggest six keys metrics involved in digital transformation from the organizational side: 1) Organizational agility; 2) Operational flexibility; 3) Customer focus measures; 4) Digital resources; 5) Value proposition of product and services; 6) Transition management. Based on the above overview we can clearly find that digital transformation is the process by which companies continuously change their business models as well as business processes in order to help them achieve a competitive

advantage (Davenport & Westerman, 2018). Although the processes and approaches used in the transformation process are not necessarily the same across different companies. However, they all have the ultimate goal of redesigning the company's business through the use of digital technologies to achieve a range of benefits. (Aguiar et al., 2019; Ulas, 2019).

Employee job satisfaction

Job satisfaction is a concept developed from organizational theory that is a complex phenomenon consisting of many influencing factors (Ravari et al., 2012). Although different definitions of job satisfaction exist under the understanding of different scholars, the most commonly used one stems from the definition given by Locke in 1976, who considered job satisfaction as a positive emotional state resulting from one's evaluation of a job or work experience (Tsounis & Sarafis, 2018). Similarly, Hackman and Oldham's (1975) study on Job Diagnostic Survey (JDS) also implies a relevant definition of job satisfaction as an employee's emotional response to the job. In brief, job satisfaction is the extent to which employees like their jobs (Kökalan, 2019). If he feels that the job is good, it means that he is satisfied with the job, otherwise he is not satisfied with the job (Jalagat, 2016). The high or low level of employee job satisfaction can reflect to some extent the state of employees in all aspects of their work, for example, higher job satisfaction can lead to higher job performance results, while lower job satisfaction can influence employees to produce higher probability of leaving, etc. (Fahr, 2011). In their study, Waqas et al. (2014) found that employees' job satisfaction and job loyalty there is a positive and strong correlation between job satisfaction and job loyalty, which means that employees with higher job satisfaction are more likely to want to maintain a long-term stable relationship with the organization. All of the above evidence shows the importance of employee job satisfaction for organizations, which can practically affect factors such as employee performance, probability of leaving, and job loyalty. However, as mentioned earlier, job satisfaction is a complex phenomenon consisting of many influencing factors, because different employees have different needs, and these needs more or less affect employee satisfaction. In order to maintain or improve employee job satisfaction, is necessary to figure out the relevant factors influencing job satisfaction. In Sowmya and Panchanatham (2011) study, pay and promotion are indispensable factors that influence employees' job satisfaction, followed by factors such as job suitability, working conditions and employee relations are also important for

maintaining the level of job satisfaction. In addition to salary factors, factors such as supervisor support, good working environment, high job security levels, work-life balance, career opportunities and promotions, employee training and development opportunities are all important influences on job satisfaction (Neog & Barua, 2014). To facilitate the study of job satisfaction, other scholars have divided employees' job satisfaction into two dimensions: intrinsic and extrinsic. The intrinsic dimension is how employees feel about their jobs, such as their sense of accomplishment at work or their own job identity. While the extrinsic dimension is how employees feel about the external environment of their jobs, such as pay, benefits, work environment and coworker relationships, and other external emotional stimuli (Shim et al., 2002).

Hypothesis

H_1: Differences in employee sample characteristics has impact their job satisfaction.

H_2: Digital transformation has a positive impact on employee job satisfaction.

Framework

According to the literature review and the current situation of the research enterprise, this study uses four factors on digital transformation: digital resources, employee skills, top management and technological innovation. Factors in job satisfaction include: Employee Training & Development, Employee Loyalty, Working Environment, Job Performance and Work-Life Balance. And demographic factors are gender, age, marital status, education, working hours. The corresponding framework are shown in Figure 1.

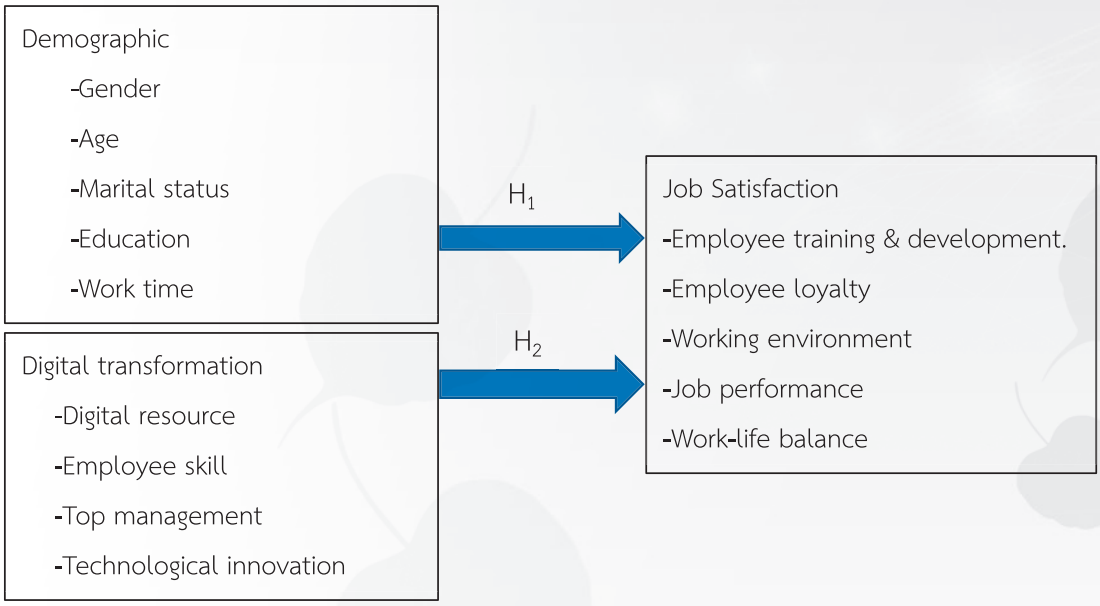


Figure 1 The framework of this study.

Research design and Methodology

Population and sampling Method

The population of this study is all employees working in ZCF 2022, totaling 616 people, which can be divided into four categories according to job function: managers, technical workers, administrative clerks and logisticians. There are about 86 managers, 300 technical workers, 80 administrative clerks and 150 logisticians. In terms of sample data, we used an online questionnaire to collect ZCF employees based on a self-selected method. As a non-probability sampling technique, the self-selection method is a very inexpensive and widely available way to obtain sample data in online surveys (Bhardwaj, 2019; Lehdonvirta et al., 2021).

Data analysis

We designed a questionnaire for ZCF's digital transformation and employee job satisfaction, followed by a validity check of the questionnaire by senior experts in HRM research. The questionnaire contains 41 question items covering 10 topics. After data collection, 30 samples were tested for reliability using the Cronbach Alpha.

We used the Statistics Software to organize and summarized the sample data and performed a series of analyses such as frequency, mean, and regression. Regression analysis can

be divided into univariate linear regression analysis and multiple linear regression analysis according to the number of dependent variables and independent variables. Univariate linear regression analysis only includes one independent variable and one dependent variable, and the relationship between the two can be approximated by a straight line, while multiple linear regression analysis includes two or more independent variables (Lin et al., 2021; Nataraja, 2018). As can be found in the literature review, the variables involved in this study are more than two, so we will choose to use multiple linear regression analysis to find the relationship between digital transformation and employee satisfaction.

Results and Discussions

Reliability of Questionnaire

Clonbach's alpha generally varies between 0 and 1. When the alpha value is within the interval value of 0.6 to 1, it indicates that the questionnaire has high reliability, but if the alpha value is below the minimum value of 0.6, it indicates that the data reliability is relatively low and therefore cannot be used (Yap et al., 2018). After testing with Cronbach's alpha, the result is 0.985, which is greater than 0.6.This means that this questionnaire has a high reliability.

Participant Demographic Content

Table 1 shows the demographic data of the participants in the survey (n=260), which includes gender, marital status, age, education, and working age. From the table, we can learn that 81.2% of the participants were male with 211 participants, while there were only 49 female participants, which means that the results of this survey will be more in favor of male employees. In terms of marital status, there are 188 married people, accounting for 72.3%, followed by 69 unmarried employees, and only a few employees are in divorced status. In terms of age structure, the majority of employees are between 41-50 years old, followed by 51 years old or above. In terms of educational background, the majority of employees are college and bachelor degree holders, 49.6% and 39.2% respectively, with only a few employees with high education. Finally, the age of the employees, it can be found that more than half of them have been working in ZCF for 16 years or more, here we can initially judge the loyalty of the employees is relatively high.

Table 1 Description Statistics of Demographics

	Items	Frequency	Percent
Gender	Male	211	81.2
	Female	49	18.8
Marital status	Unmarried	69	26.5
	Married	188	72.3
	Divorced	3	1.2
Age	21-30	57	21.9
	31-40	48	18.5
	41-50	96	36.9
	51 and above	59	22.7
Education	Junior college	129	49.6
	Bachelor	102	39.2
	Master	18	6.9
	PhD	11	4.2
Work years	Less than 5	38	14.6
	50-100	47	18.1
	110-150	31	11.9
	16 and above	144	55.4

Multiple Linear Regression Analysis

Demographics and Employee Job Satisfaction

In the multiple linear regression analysis of demographics and employee job satisfaction, we selected various demographic factors as independent variables. The dependent variable is employee job satisfaction.

Generally, researchers choose significance levels at 0.0001, 0.001, 0.01, 0.05, and 0.1 (O'Brien et al., 2018). To make the results more convenient, we chose a significance level of 0.1 in this study. In other words, when the significance is lower than 0.1, there is a significant effect. Table 2, Table 3 and Table 4 are the results of regression analysis of these variables.

Table 2 Model Summary of Demographics and Employee Job Satisfaction

	Employee Training & Development	Employee Loyalty	Working Environment	Job Performance	Work-Life Balance
R	0.22	0.18	0.19	0.22	0.22
R Square	0.05	0.03	0.04	0.05	0.05
Adjusted R Square	0.03	0.01	0.02	0.03	0.03
Std. Error of the Estimate	1.00	1.02	1.01	0.99	0.99
Durbin-Watson	1.95	2.04	1.88	1.89	2.07

Table 3 Significant values of Demographics and Employee Job Satisfaction

	Employee Training & Development	Employee Loyalty	Working Environment	Job Performance	Work-Life Balance
Gender	0.85	0.62	0.86	0.34	0.55
Marital status	0.20	0.17	0.08	0.20	0.13
Age	0.23	0.27	0.23	0.10	0.07
Education	0.31	0.36	0.43	0.38	0.24
Work years	0.18	0.34	0.24	0.53	0.60

Table 4 Unstandardized Coefficients of Demographics and Employee Job Satisfaction

	Employee Training & Development		Employee Loyalty		Working Environment		Job Performance		Work-Life Balance	
	B	Std. Error	B	Std. Error	B	Std. Error	B	Std. Error	B	Std. Error
(Constant)	4.01	0.41	3.84	0.42	3.87	0.41	3.76	0.40	3.74	0.41
Gender	0.03	0.17	0.08	0.17	0.03	0.17	0.16	0.16	0.10	0.16
Marital status	0.24	0.18	0.26	0.19	0.32	0.19	0.23	0.18	0.28	0.18
Age	-0.12	0.10	-0.11	0.10	-0.12	0.10	-0.16	0.10	-0.18	0.10
Education	0.09	0.09	0.08	0.09	0.07	0.09	0.08	0.08	0.10	0.08
Work years	-0.12	0.09	-0.09	0.09	-0.11	0.09	-0.06	0.09	-0.05	0.09

The significant value of marital status shown in Table 3 is 0.08 less than 0.1, and the unstandardized coefficient of marital status was 0.32, which means that marital status has a positive relationship with work environment.

Equation of regression: Working Environment = 0.32* Marital status+ 3.87.

In addition, significant values met less than 0.1 for the variables of age and work-life balance, which was 0.07. The unstandardized coefficient of age was -0.18, which means that age has a negative relationship with work-life balance.

Equation of regression: Work-Life Balance = - 0.18* Age+ 3.74.

Digital Transformation and Employee Job Satisfaction

Keep the dependent variable unchanged and replace the independent variable with digital transformation. Then, the multiple linear regression analysis was re-run, with the results shown by Table 5, Table 6, and Table 7.

Table 5 Model Summary of Digital Transformation and Employee Job Satisfaction

	Employee Training & Development	Employee Loyalty	Working Environment	Job Performance	Work-Life Balance
R	0.89	0.89	0.85	0.87	0.85
R Square	0.80	0.79	0.73	0.75	0.72
Adjusted R Square	0.80	0.78	0.72	0.74	0.71
Std. Error of the Estimate	0.46	0.48	0.54	0.51	0.54
Durbin-Watson	2.02	2.03	2.06	1.96	2.07

Table 6 Unstandardized Coefficients of Digital Transformation and Employee Job Satisfaction

	Employee Training & Development		Employee Loyalty		Working Environment		Job Performance		Work-Life Balance	
	B	Std. Error	B	Std. Error	B	Std. Error	B	Std. Error	B	Std. Error
(Constant)	0.40	0.12	0.47	0.12	0.55	0.14	0.53	0.13	0.62	0.14
Digital Resources	0.00	0.05	-0.07	0.05	0.01	0.06	0.00	0.06	-0.02	0.06
Employee Skills	0.09	0.07	0.11	0.07	0.04	0.08	0.07	0.08	-0.03	0.08
Top Management	0.40	0.07	0.31	0.07	0.41	0.08	0.40	0.07	0.47	0.08
Technological Innovation	0.43	0.06	0.56	0.06	0.42	0.07	0.41	0.06	0.42	0.07

Table 7 Significant values of Digital Transformation and Employee Job Satisfaction

	Employee Training & Development	Employee Loyalty	Working Environment	Job Performance	Work-Life Balance
Digital Resources	0.93	0.17	0.88	0.95	0.77
Employee Skills	0.22	0.14	0.59	0.37	0.69
Top Management	0.00	0.00	0.00	0.00	0.00
Technological Innovation	0.00	0.00	0.00	0.00	0.00

In table 7, we can find that among the four factors influencing the digital transformation of enterprises, there Top Management and Technological Innovation can have a significant impact on all factors of employee job satisfaction .While the variables of digital resources and employee skills do not have a significant effect on employee job satisfaction. Combining with Table 6 we can extract the following equation:

Employee Training & Development =0.40* Top Management+ 0.43* Technological Innovation+ 0.40.

Employee Loyalty =0.31* Top Management+ 0.56* Technological Innovation+ 0.47.

Working Environment =0.41* Top Management+ 0.42* Technological Innovation+ 0.55.

Job Performance =0.40* Top Management+ 0.41* Technological Innovation+ 0.53.

Work-Life Balance =0.47* Top Management+ 0.42* Technological Innovation+ 0.62.

Conclusion

The research purpose of this study is firstly determine the influencing factors of digital transformation and employee job satisfaction. Secondly, to examine the correlation between ZCF's digital transformation and employee job satisfaction. This study uses four factors on digital transformation: digital resources, employee skills, top management and technological innovation. Factors in job satisfaction are: Employee Training & Development, Employee Loyalty, Working Environment, Job Performance and Work-Life Balance. Based on quantitative research methods,

an online questionnaire was conducted among 260 ZCF employees. Through multiple linear regression analysis, only top management and technological innovation have significant effects on job satisfaction. The greatest impact is Employee Training & Development, followed by employee loyalty, and Work-Life Balance has the least impact. In terms of demographics, marital status has a positive and significant effect on work environment and age has a negative and significant effect on work-life balance. In brief, the digital transformation of enterprises has a positive impact on employees' job satisfaction, while demographic factors also affect employees' job satisfaction. There are various indications that ZCF is now in the "Change" stage of digital transformation. Employees and managers are aware of the importance and urgency of this change, which can bring huge benefits to the enterprise. By using digital technology to realize a series of benefits such as productivity improvement, cost reduction and innovation, as can compete more effectively in an increasingly digital world (Aguiar et al., 2019; Ulas, 2019). We found that ZCF's top management maintains a positive attitude in the work of digital transformation, especially in terms of providing various digital facilities and employee training. The staff expressed high satisfaction with this aspect. This can play a good role in the improvement of employees and the optimization of work. Digital transformation is a multi-faceted change process that is unlikely to produce significant results in the short term. Although it can bring many positive changes to the enterprise, it also faces many unknown challenges. The purpose of this study is to better promote the motivation of employees in transformational work by studying the relationship between digital transformation and job satisfaction which is a win-win situation.

Discussion

In China, married employees face greater job pressure. These pressures stem from their own mortgage, child support, and elderly care. These all require a lot of money. Therefore, they will try their best to maintain the stability of their work, which includes the relationship with colleagues or superiors. On the other hand, the changes in the working environment brought about by the digital transformation of enterprises will further promote the coordination of work among employees. Therefore, the influence of marital status on the working environment in this study is mainly generated from the working atmosphere and relationship of employees.

In terms of work-life balance, as employees get older, their balance declines instead. The first reason is that their personal energy is becoming more limited. Personal aging is accompanied by various diseases, which can cause them to allocate extra energy to treatment and maintenance. In this process, a lot of time and costs are bound to be spent. Secondly, life also requires facing trivial matters such as car loans and mortgages as mentioned earlier, which invariably increases the pressure of individuals in life. Therefore, the negative impact of age on work-life balance comes from the rising proportion of employees' life demands. In conclusion, we found a positive and significant effect of marital status on work environment and a negative and significant effect of age on work-life balance. No significant effects existed between other factors. Thus, demographics can have an impact on employees' job satisfaction, H_1 accepted.

In terms of digital resources, data is undoubtedly the basis for digital transformation of companies. However, data integration is often a very difficult task, and this is usually left to specialized teams, whether for forecasting, analysis, etc. of data (Ahmad et al., 2021). As a cigarette production company, most of the employees at ZFC are engaged in production-type work. Therefore, the average employee is rarely exposed to this aspect in their work activities, resulting in a non-significant effect of the variable of digital resources on their job satisfaction. In terms of employee skills, many participants agreed that digital skills can help improve the performance of the team. However, digital skills are only a stock of skills for the employees themselves, and the skills and knowledge they possess influence more on the executive level on the job (Zhang et al., 2022). This has a greater weight on the digital strategy or management of the company than on the employees themselves. Thus, employee skills, while a very important factor for digital transformation, are not significant in terms of the degree of impact on employee job satisfaction.

In top management, besides being responsible for setting and planning the strategic goals of the company, an important role is to support employees, help them solve various problems at work, and coordinate conflicts between different job functions (Hsu et al., 2018). ZCF supports its employees more in terms of optimizing the various production facilities. With a large number of employees in the company focused on the operational side of production, this type of support is certainly very effective. With a lot of support from the top, employees will be less hindered in the execution of their work, which will naturally have a direct impact on their job satisfaction. In the case of technological innovation, the degree of adoption of the innovated technology is

influenced by the behavior of individuals, organizations and the environment in which they live (Liere-Netheler et al., 2018). The innovation and adoption of technology must take into account the relationship between the needs of the organization and its intrinsic economy. In other words, when this need is met in the organization, it will inevitably produce emotional fluctuations for the people in the organization. New technology optimizes the workflow, or the difficulty of the work, or whatever. In general, it ultimately leads to a better work experience for the employees.

In conclusion, ZCF's digital transformation has a positive impact on employee job satisfaction, which H_2 is acceptable. According to their respective R-square values, Employee Training & Development is 0.8, Employee Loyalty is 0.79, Working Environment is 0.73, Job Performance is 0.75, and Work-Life Balance is 0.72. In descending order, they are Employee Training& Development, Employee Loyalty, Job Performance, Working Environment, and Work Life Balance. Thus, digital transformation mainly affects employees' job satisfaction from two aspects, namely Top Management and Technological Innovation, and the biggest impact is on Employee Training & Development, followed by Employee Loyalty, and the smallest impact is on Work-Life Balance.

The final result of hypothesis test are shown in Table 8. In terms of demography and employee job satisfaction, marital status has a positive and significant impact on the work environment, and age has a negative and significant impact on work life balance. In terms of digital transformation and employee job satisfaction, senior management and technological innovation can have a significant impact on all factors of employee job satisfaction

Table 8 Test Results for the Hypotheses

Hypotheses	Outcome
H_1: Differences in employee sample characteristics can affect their job satisfaction.	Accepted
H_2: Digital transformation has a positive effect on employee job satisfaction.	Accepted

Recommendations

This study makes up for a certain research gap, and provides a theoretical basis for subsequent scholars who are interested in this field. Although the results confirm the relationship between digital transformation and employee job satisfaction, there are still some limitations. First is the region, the selection of the enterprises and samples studied are all from China. Secondly, the selection of influencing factors of digital transformation and employee job satisfaction still can be studied in many aspects. Therefore, the future research should take other regions as the research target and explore the relationship between other factors.

References

Aguiar, T., Gomes, S. B., da Cunha, P. R., & da Silva, M. M. (2019, October). Digital transformation capability maturity model framework. In *2019 IEEE 23rd International Enterprise Distributed Object Computing Conference (EDOC)* (pp. 51-57). IEEE.

Ahmad, A., Alshurideh, M., Al Kurdi, B., Aburayya, A., & Hamadneh, S. (2021). Digital transformation metrics: a conceptual view. *Journal of management Information and Decision Sciences*, *24*(7), 1-18.

Bhardwaj, P. (2019). Types of sampling in research. *Journal of the Practice of Cardiovascular Sciences*, *5*(3), 157.

Bond, M., Marín, V. I., Dolch, C., Bedenlier, S., & Zawacki-Richter, O. (2018). Digital transformation in German higher education: student and teacher perceptions and usage of digital media. *International journal of educational technology in higher education*, *15*(1), 1-20.

China State Council. (2022). *The State Council on the issuance of the "14th Five-Year Plan" for the development of the digital economy notice*. Retrieved June 15, 2022, from Government of the People's Republic of China website: http://www.gov.cn/zhengce/zhengceku/2022-01/12/content_5667817.htm

Davenport, T. H., & Westerman, G. (2018). Why so many high-profile digital transformations fail. *Harvard Business Review*, *9*(4), 15.

Fahr, R. (2011). Job design and job satisfaction—empirical evidence for Germany?. *Management revue*, 28-46.

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied psychology*, *60*(2), 159.

He, P., Takeuchi, T., & Yano, E. (2013). An overview of the China national tobacco corporation and state tobacco monopoly administration. *Environmental health and preventive medicine*, *18*, 85-90.

Hsu, H. Y., Liu, F. H., Tsou, H. T., & Chen, L. J. (2019). Openness of technology adoption, top management support and service innovation: a social innovation perspective. *Journal of Business & Industrial Marketing*, *34*(3), 575-590.

Jalagat, R. (2016). Job performance, job satisfaction, and motivation: A critical review of their relationship. *International Journal of Advances in Management and Economics*, *5*(6), 36-42.

Jędrzejczak-Gas, J., & Wyrwa, J. (2020). Determinants of job satisfaction in a transport company: a Polish case study. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, *15*(3), 565-593.

Jiang, H., Wang, Y., Chui, E., & Xu, Y. (2019). Professional identity and turnover intentions of social workers in Beijing, China: The roles of job satisfaction and agency type. *International Social Work*, *62*(1), 146-160.

Kökalan, Ö. (2019). The effect of organizational cynicism on job satisfaction: Testing the mediational role of perceived organizational spirituality. *Management Research Review,* 42(5), 625-640.

Lehdonvirta, V., Oksanen, A., Räsänen, P., & Blank, G. (2021). Social media, web, and panel surveys: using non‐probability samples in social and policy research. *Policy & internet*, *13*(1), 134-155.

Liere-Netheler, K., Packmohr, S., & Vogelsang, K. (2018). Drivers of digital transformation in manufacturing. *Hawaii International Conference on System Sciences, 51*, 3926-3935.

Lin, H., Gaosheng, R., Ning, M., Li, C., Bo, H., & Xiaofan, G. (2021). Combination forecasting model of equipment and material prices for power grid production technological transformation projects based on unary linear regression and grey theory. *Earth and Environmental Science,* 827(1), 012-019.

Lin, K. J., Lu, X., Zhang, J., & Zheng, Y. (2020). State-owned enterprises in China: A review of 40 years of research and practice. *China Journal of Accounting Research*, *13*(1), 31-55.

Mićić, L. (2017). Digital transformation and its influence on GDP. *Economics*, *5*(2), 135-147.

Nataraja, N. S., Chilale, N. R., & Ganesh, L. (2018). Financial performance of private commercial banks in India: multiple regression analysis. *Academy of Accounting and Financial Studies Journal*, *22*(2), 1-12.

Neog, B. B., & Barua, M. (2014). Factors influencing employee's job satisfaction: An empirical study among employees of automobile service workshops in Assam. *The SIJ Transactions on Industrial, Financial & Business Management (IFBM)*, *2*(7), 305-316.

O'Brien, S. M., Feng, L., He, X., Xian, Y., Jacobs, J. P., Badhwar, V., Kurlansky, P. A., Furnary, A. P., Cleveland Jr, J. C., Lobdell, K. W., Vassileva, C., Ballmoos, M. C. W., Thourani, V. H., Rankin, J. S., Edgerton, J. R., D'Agostino, R. S., Desai, N. D., Edwards, F. H., & Shahian, D. M. (2018). The Society of Thoracic Surgeons 2018 adult cardiac surgery risk models: part 2—statistical methods and results. *The Annals of thoracic surgery*, *105*(5), 1419-1428.

Peng, Y., & Tao, C. (2022). Can digital transformation promote enterprise performance?—From the perspective of public policy and innovation. *Journal of Innovation & Knowledge*, *7*(3), 25-32.

Ravari, A., Mirzaei, T., Kazemi, M., & Jamalizadeh, A. (2012). Job satisfaction as a multidimensional concept: A systematic review study. *Journal of Occupational Health and Epidemiology*, *1*(2), 95-102.

Shim, S., Lusch, R., & O'Brien, M. (2002). A hierarchical model of values, leadership, job satisfaction and commitment: Human resources management implications for the retail industry. *Journal of Marketing Channels*, *10*(1), 65-87.

Sowmya, K. R., & Panchanatham, N. (2011). Factors influencing job satisfaction of banking sector employees in Chennai, India. *Journal of law and conflict Resolution*, *3*(5), 76-79.

Tsounis, A., & Sarafis, P. (2018). Validity and reliability of the Greek translation of the Job Satisfaction Survey (JSS). *BMC psychology*, *6*(1), 1-6.

Ulas, D. (2019). Digital transformation process and SMEs. *Procedia Computer Science*, *158*, 662-671.

Waqas, A., Bashir, U., Sattar, M. F., Abdullah, H. M., Hussain, I., Anjum, W., & Arshad, R. (2014). Factors influencing job satisfaction and its impact on job loyalty. *International Journal of Learning and Development*, *4*(2), 141-161.

Westerman, G., Bonnet, D., & McAfee, A. (2014). The nine elements of digital transformation. *MIT Sloan Management Review*, *55*(3), 1-6.

Yap, R. J. C., Komalasari, F., & Hadiansah, I. (2018). The effect of financial literacy and attitude on financial management behavior and satisfaction. *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi*, *23*(3), 140-146.

Zhang, X., Xu, Y., & Ma, L. (2022). Research on successful factors and influencing mechanism of the digital transformation in SMEs. *Sustainability*, *14*(5), 2549.

Zhu, Y., Xie, Y., Warner, M., & Guo, Y. (2015). Employee participation and the influence on job satisfaction of the 'new generation'of Chinese employees. *The International Journal of Human Resource Management*, *26*(19), 2395-2411.