

# IMPACT OF DIGITAL TRANSFORMATION ON EMPLOYEE JOB SATISFACTION

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**Abstract:** Amid the global wave of digitalization, enterprises enhanced their competitiveness through digital transformation. This study aimed to explore the impact of digital transformation on employee job satisfaction. A sampling survey was conducted with 10,000 employees of a manufacturing enterprise (Chongqing Changan Automobile Co., Ltd.), selecting 406 employees as the sample data for empirical analysis.

The research objectives were to: 1) analyze the impact of digital transformation on job satisfaction; and 2) analyze the differences in job satisfaction among different employee groups due to digital transformation. The research results showed that digital resources, employee skills, senior management, and technological innovation had a significant positive impact on employee job satisfaction, particularly in improving employee training and development and job performance.

Meanwhile, educational background and position significantly impacted work-life balance, while gender, age, and department of employment did not reach a significant level. The research demonstrated that companies should pay attention to the needs of employees with different educational backgrounds and positions, and provide equal training and support to comprehensively improve employee job satisfaction and overall performance.

**Keywords:** Digital Transformation, Employee Job satisfaction, Digital Resources, Technological Innovation

## Introduction

Digital transformation refers to the comprehensive integration of digital technologies into business processes and operational models to enhance a company's competitiveness and adaptability to market changes (Li, 2023). This process includes not only the application of information technology and the restructuring of business processes but also the creation of new business models. For example, the application of technologies such as the Internet of Things (IoT), big data analytics, cloud computing, and artificial intelligence can significantly improve a company's operational efficiency and flexibility, helping it maintain a competitive advantage in a rapidly changing market environment (Blichfeldt and Faullant, 2021).

However, during the transformation and innovation of technologies and business processes,

changes in organizational culture and work methods affect employees' perceptions and attitudes towards digital transformation (DiPietro, 2020). Research by scholars such as DiPietro (2020) and Sun (2021) has shown that positive employee attitudes and high acceptance levels can facilitate effective implementation of technologies, improving work efficiency and innovation capabilities. Conversely, employee resistance to new technologies and poor adaptation can lead to decreased job satisfaction, thereby affecting the overall performance and market competitiveness of the company (Farivar and Richardson, 2021). Ilies (2009) noted that employee job satisfaction is closely related to their perceptions and attitudes towards digital technologies. Employees with higher satisfaction are more likely to actively participate in the company's transformation process, promoting technological innovation and business improvement. Zhu and Kraemer (2005) similarly pointed out that higher employee satisfaction can significantly enhance a company's innovation capability and market responsiveness, thus maintaining a leading position in a competitive market environment.

Therefore, understanding the impact of digital transformation on employee job satisfaction not only helps improve employee work experience but also provides important insights for corporate strategic decision-making. In summary, during digital transformation, companies should highly value employees' perceptions and attitudes towards new technologies, using effective training and support measures to enhance employee job satisfaction. This not only ensures a smooth transition but also promotes digital innovation and sustainable development. In this context, in-depth research on the impact of digital transformation on employee job satisfaction has significant theoretical and practical implications.

### **Research Objectives**

- 1) To Analyze the impact of digital transformation on job satisfaction.
- 2) To Analyze the differences in job satisfaction among different employee groups due to digital transformation.

### **Literature Review**

#### *Digital Transformation*

Digital transformation is the process of leveraging technology to enhance overall business performance (Li, 2023). The intentions of a company's digital transformation can be divided into two categories: gaining a competitive advantage through the digitalization of production information and the establishment of digital infrastructure, and enhancing customer interaction by digitalizing sales and communication channels (Andrašec et al., 2021). Stolterman and Fors (2004) defined digital transformation as the transformative impact of digital technology on various aspects of people's lives, significantly affecting individuals, businesses, and society. For businesses, this transformation involves the operations and delivery of customer value, influencing corporate culture and interpersonal

relationships (Mičić, 2017).

To better facilitate digital transformation, various scholars have analyzed the factors influencing this process. For instance, Liere-Netheler (2018) identified twelve driving factors in the digital transformation of the manufacturing industry: process improvement, workplace enhancement, vertical integration, management support, horizontal integration, cost reduction, customer demand, supply chain, innovation drive, market pressure, legal/government, and employee support.

Zhang (2022) and other scholars have highlighted the impact of digital transformation on enterprises from three aspects: technology, organization, and environment. They emphasized that technology and the work environment can improve organizational capabilities and promote successful digital transformation. Ahmad (2021) and other scholars proposed six key indicators: organizational agility, operational flexibility, customer-centric measures, digital resources, value propositions of products and services, and transition management.

Building on this research, to determine how digital transformation affects employee satisfaction, this study references Li's (2023) key factors regarding the impact of digital transformation on employee job satisfaction. Four key indicators were selected as the basis for measuring digital transformation, as detailed below:

**Table 1:** Selection of Key Factors for Digital Transformation

Factors	Define
Digital Resources	Digital resources refer to any sources of information that can be utilized on a computer, typically containing valuable information and presented in forms such as text, images, simulations, videos, or other interactive formats (Songer, 2007). Possessing sufficient digital resources forms the foundation for enterprises to swiftly complete digital transformation.
Employee skills	Skills are abilities acquired through specialized training, enabling individuals to perform specific tasks and achieve particular objectives. Highly skilled employees can handle complex work tasks and quickly adapt to ever-changing environments, which is crucial for an organization's digital transformation (Prezioso et al., 2020).
Top management	Top management includes the highest-level executives responsible for the long-term planning, policy-making, and major decision-making of an enterprise. An efficient top management team can formulate effective strategies, ensuring that the enterprise stays on track during the digital transformation process (Mojambo, 2020).
Technological innovation	Technological innovation refers to innovations in production technology, including the development of new technologies, the application of existing technologies, and re-innovation (Li, 2023). Technological innovation can differentiate products, helping enterprises gain a competitive advantage in the market.

**Source:** This Study Summarized

### *Employee Job Satisfaction*

Job satisfaction is a complex phenomenon developed from organizational theory and comprises many factors. High employee job satisfaction can lead to better job performance outcomes and reduce

the likelihood of employee turnover (Waqas, 2014). Scholars such as Kamal and Hanif (2009) and Sowmya and Panchanatham (2011) suggested that factors such as salary, promotion opportunities, compensation, and relationships with supervisors and colleagues also influence job satisfaction. Neog and Barua (2014) further pointed out that supervisory support, a good working environment, a high level of job security, work-life balance, career opportunities and promotions, and opportunities for employee training and development are important factors influencing job satisfaction. Based on Maslow's hierarchy of needs theory, this study selected the following four key factors affecting employee job satisfaction as key indicators for measuring employee job satisfaction, as detailed below:

**Table 2:** Selection of Key Factors for Employee Job Satisfaction

Factors	Define	Maslow's hierarchy of needs
Employee Training & Development	Employee training and development are defined as the process of enhancing employees' abilities through learning or attitude changes, thereby increasing their skills and knowledge to improve work efficiency (Tahsildari & Shahnaei, 2015).	Self-actualization needs
Working Environment	The working environment includes the manner in which work is executed and completed, as well as the physical and social conditions of the workplace (Raziq & Maulabakhsh, 2015).	Esteem needs
Job Performance	Job performance is directly related to employee productivity, and digital transformation can help improve job performance (Malkanthi & Ali, 2016).	Safety needs
Work-life Balance	Work-life balance refers to employees' engagement and satisfaction with their work roles and family roles (Brough et al., 2020).	Physiological and social needs

**Source:** This Study Summarized

### *Demographic Characteristics*

The impact of digital transformation on job satisfaction among different employee groups: Previous studies have shown that gender, age, educational level, job position, and department are important factors affecting job satisfaction. For instance, gender is a relatively significant factor. Men and women have different family demands, work motivations, and work behaviors, which can lead to varying levels of job satisfaction (Emmanuel & Agaha, 2021). Compared to older employees, younger employees are generally more adaptable and flexible, and more likely to accept new technologies and work methods (Ng & Feldman, 2010). Additionally, employees with different educational levels, job positions, and departments are exposed to varying degrees of digital transformation and technology application. For example, lower-level employees might feel increased pressure and uncertainty as their workflows and responsibilities undergo significant changes due to digital transformation, resulting in decreased job satisfaction (Li, 2023).

## Methodology

This study employed a quantitative research method to explore the impact of digital transformation on the job satisfaction of employees in a manufacturing enterprise (Chongqing Changan Automobile Co., Ltd.). The target population consisted of 10,000 employees, with a sample size of 385 determined using the Yamane formula, ensuring a 95% confidence level and a 5% margin of error. To ensure that the sample data met the minimum requirement of 385 responses, the sample size was increased to 406. Data were collected through structured questionnaires distributed via the "Wen Juanxing" platform. The questionnaire comprised three parts: 1) Basic information, 2) A digital transformation measurement scale, designed with reference to Li (2023); 3) An employee job satisfaction measurement scale. Both the second and third parts were scored using a 5-point Likert scale. Additionally, in this study, the reliability of the scales, indicated by the overall Cronbach's alpha value, was 0.919, with each dimension exceeding 0.8.

## Results

### 1). Descriptive Statistical Analysis

**Table 3:** Descriptive statistical analysis of variables related to personal traits

Attitude	classification indicators	Frequency	Percent
Gender	Male	207	51.0
	Female	199	49.0
Age	Under 20 years old	54	13.3
	21-30 years old	105	25.9
	31-40 years old	168	41.4
	Over 41 years old	56	13.8
Education	Associate degree or below	141	34.7
	Bachelor's degree	193	47.5
	Master's degree or above	72	17.7
Job	Senior Management	13	3.2
	Middle Management	99	24.4
	General Staff	294	72.4
Department	Front Office	42	10.3
	Production Process	132	32.5
	Supply Chain	95	23.4
	Entire HR, Finance, and Materials Departments	79	19.5
	Entire Business Operations	58	14.3

**Source:** This Study Summarized

In the sample's gender distribution, males accounted for 51.0%, and females accounted for 49.0%, making it nearly equal. The majority of respondents were aged between 31-40 years (41.4%), followed by those aged 21-30 years (25.9%). A smaller portion of respondents were under 20 years old (13.3%) and over 41 years old (13.8%). In terms of education level, most respondents held a bachelor's

degree (47.5%), 34.7% had an associate degree or below, and 17.7% had a master's degree or above. Regarding job positions, the majority were ordinary employees (72.4%), while middle management accounted for 24.4% and top management only 3.2%. The departments were mainly concentrated in production processes (32.5%) and supply chain (23.4%), with others including human resources, finance, and materials (19.5%), business operations (14.3%), and the front office (10.3%). Therefore, the respondents in this study were primarily employees aged 31-40 years, holding a bachelor's degree, and working in the production processes and supply chain departments.

### 2). ANOVA

To standardize the criteria for the variance analysis in this study, ANOVA (Analysis of Variance) was used for all independent variables.

**Table 4:** Differential Analysis of Job Satisfaction among Different Employee Groups

Variable	Employee Training & Development		Working environment		Job performance		Work-life balance	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Gender	1.465	0.115	0.635	0.856	1.163	0.296	0.741	0.752
Age	1.217	0.255	0.627	0.862	0.914	0.553	1.335	0.172
Education	1.571	0.079	1.303	0.192	1.515	0.091	1.894	0.020
Job	1.284	0.209	0.806	0.679	1.165	0.293	1.734	0.039
Department	1.130	0.327	1.498	0.097	0.991	0.466	1.251	0.226

**Source:** This Study Summarized

The analysis showed that education level ( $F = 1.894$ ,  $Sig. = 0.020$ ) and job position ( $F = 1.734$ ,  $Sig. = 0.039$ ) significantly impact work-life balance satisfaction. Higher-educated employees likely manage their time better, and varying job intensities and responsibilities also affect satisfaction.

In contrast, gender, age, and department did not show significant differences in job satisfaction (all  $Sig.$  values  $> 0.05$ ), likely due to equal working conditions and opportunities. Employees received appropriate training and support across age groups and departments, reducing differences. This suggests that enterprises should focus on the needs of employees with different education levels and job positions while maintaining equal training and support to enhance overall job satisfaction during digital transformation.

### 3). Correlation analysis

Table 5 presents the correlations among the research variables, all of which are significant at the 0.01 level (two-tailed). Digital resources are significantly positively correlated with employee training and development ( $r = 0.288$ ), working environment ( $r = 0.284$ ), job performance ( $r = 0.436$ ), and work-life balance ( $r = 0.295$ ). The correlations between employee skills and these variables are  $r = 0.348$ ,  $r = 0.286$ ,  $r = 0.420$ , and  $r = 0.302$ , respectively.

The correlations between top management and these variables are  $r = 0.399$ ,  $r = 0.309$ ,  $r =$

0.414, and  $r = 0.358$ , respectively. The correlations between technological innovation and these variables are  $r = 0.314$ ,  $r = 0.277$ ,  $r = 0.360$ , and  $r = 0.304$ , respectively. This indicates that digital resources, employee skills, top management, and technological innovation all have a significant positive impact on employee training and development, working environment, work-life balance, and job performance.

**Table 5:** Correlation analysis between research variables

		Employee Training & Development	Working environment	Job performance	Work-life balance
Digital Resources	Pearson	0.288**	0.284**	0.436**	0.295**
	Sig.	0.000	0.000	0.000	0.000
Employee skills	Pearson	0.348**	0.286**	0.420**	0.302**
	Sig.	0.000	0.000	0.000	0.000
Top management	Pearson	0.399**	0.309**	0.414**	0.358**
	Sig.	0.000	0.000	0.000	0.000
Technological innovation	Pearson	0.314**	0.277**	0.360**	0.304**
	Sig.	0.000	0.000	0.000	0.000

\*\* . At the 0.01 level (two-tailed), the correlation is significant

**Table 6:** Regression Analysis of the Impact of Digital Transformation on Employee Job Satisfaction

	Model 1	Model 2	Model 3	Model 4
Gender	0.052	-0.032	0.076	0.004
Age	0.035	0.043	0.007	-0.008
Education	0.023	0.021	0.029	0.039
Job	0.032	-0.003	-0.041	-0.067
Department	0.088	0.065	0.031	0.097*
Digital Resources	0.115*	0.151**	0.268**	0.135**
Employee skills	0.143**	0.125*	0.203**	0.102
Top management	0.228**	0.136*	0.157**	0.187**
Technological innovation	0.126*	0.120*	0.110*	0.131*
F value	13.288**	8.678**	21.756**	11.213**
R Square	0.232	0.165	0.331	0.203
Adjusted R Square	0.214	0.146	0.316	0.185
D-W	2.118	1.990	2.077	1.969

Model 1 (Dependent Variable: Employee Training & Development)

Model 2 (Dependent Variable: Working environment)

Model 3 (Dependent Variable: Job performance)

Model 4 (Dependent Variable: Work-life balance)

\* level of significance 0.05

\*\* level of significance 0.01

This study conducted a regression analysis on four main research variables—digital resources, employee skills, top management, and technological innovation—and their impact on various dimensions of job performance (employee training and development, working environment, job

performance, and work-life balance). The analysis revealed that these variables have a significant positive impact on all dimensions. Specifically, digital resources, employee skills, top management, and technological innovation significantly enhanced employee satisfaction and performance in employee training and development ( $\beta = 0.115^*$  to  $0.228^{**}$ ), working environment ( $\beta = 0.120^*$  to  $0.151^{**}$ ), job performance ( $\beta = 0.110^*$  to  $0.268^{**}$ ), and work-life balance ( $\beta = 0.097^*$  to  $0.187^{**}$ ). These findings indicate that during the digital transformation process, enterprises should particularly emphasize these factors to comprehensively improve employee job satisfaction and overall performance.

### **Discussion**

The study reveals that digital resources, employee skills, top management, and technological innovation significantly enhance employee job satisfaction. This aligns with DiPietro (2020) and Sun (2021), who emphasized the role of training and support in improving work satisfaction and performance. Regression analysis identified top management ( $\beta = 0.228^{**}$ ) as crucial for employee training and development, echoing Mojambo (2020). Digital resources ( $\beta = 0.268^{**}$ ) were key to job performance, supporting Zhu & Kraemer (2005).

Analysis of variance shows that there are significant differences in work-life balance due to education level ( $F = 1.894$ , Sig. = 0.020) and job position ( $F = 1.734$ , Sig. = 0.039), indicating that higher education and different job roles affect satisfaction. These findings are consistent with Emmanuel and Agaha (2021) and Ng & Feldman (2010). Riza (2018) and Li (2023) pointed out that there were no significant differences in job satisfaction among gender, age, and department (Sig. > 0.05), which may be due to gender equality and modern practices of unified training and support.

### **Conclusions**

This study examined the impact of digital transformation on employee job satisfaction at Chongqing Changan Automobile Co., Ltd. The findings show that digital resources, employee skills, top management, and technological innovation significantly boost job satisfaction, especially in training and development and job performance. Top management and digital resources were particularly crucial, aligning with Mojambo (2020) and Zhu & Kraemer (2005).

ANOVA analysis revealed that education level and job position significantly affect work-life balance. Higher-educated employees likely have better time management, and job intensity and responsibilities vary by position. Gender, age, and department did not show significant differences. In summary, companies should enhance digital resources, employee skills, top management, and technological innovation, providing adequate training and support to improve job satisfaction and performance. Understanding and enhancing job satisfaction during digital transformation is essential for successful and sustainable growth, helping companies implement effective measures and maintain



a competitive edge.

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