

RESEARCH

# Innovative insights into job satisfaction among construction professionals in Tamil Nadu: a data driven approach

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Job satisfaction is very important in determining employee performance, productivity, and retention—dynamic factors in a heavy-stress, construction work-related environment. This study aims at establishing factors influencing job satisfaction amongst construction professionals in Tamil Nadu, namely, remuneration, work environment, organizational culture, and the opportunities for career advancement. A standard survey was conducted with respect to the information to be gathered; depending on industry-validated measures like the Minnesota Satisfaction Questionnaire, this was a standardized survey. Where standard tools were absent, pre-testing was conducted, and the survey instrument was modified accordingly for data collection purposes. The analysis employed the advanced statistical techniques of structural equation modeling (SEM) and hierarchical regression modeling to go beyond mere descriptives. The study identified that working conditions did not contribute much to employee satisfaction when remuneration is present in the prospect. Therefore, this study's findings relate to motivating employees to improve satisfaction and, hence, organizational effectiveness.

**Keywords:** construction professionals, factor for job satisfaction, Job satisfaction, variables, Structural equation modeling (SEM)

## Introduction

With regard to the great abstraction of economic development in India towards building an economic base, skilled workers are a necessity. Working under such tremendous duress, amidst myriad safety concerns, and scant opportunities for upward mobility generates dynamics with the potential for dissatisfaction. Understanding the science of job satisfaction is of enormous importance in giving a boost to productivity and curbing turnover. This study will identify and analyze the key determinants affecting job satisfaction among construction professionals in Tamil Nadu.

The construction industry is playing a major role in India's economic development. The construction sector is expanding quickly as a result of industrialization and globalization. Due to their high labor intensity, all construction industries must have access to a skilled labor force. Every sector's strength can be determined by the performance of its employees. The paper explores and evaluates the variables influencing the rapport between

subordinates and construction professionals in Tamil Nadu. In today's world, employees in the construction industry greatly depend on their managers for assignment distribution, direction, and assistance. This will encourage a positive attitude and improve the construction industry's efficacy and production. Communication and interactions between executive managers and their subordinates can help to achieve common goals (1). A successful organization needs a satisfactory relationship because it reduces the distance between supervisors and employees by raising their levels of support, trust, and interaction frequency (2). This research has classified the job satisfaction rewards toward characteristics of relationships with superiors as those that include those relationships. In order to analyze the regression that shows how satisfied employees are with their jobs in Tamil Nadu based on all variables from every factor, including their relationships with their superiors, during working hours.

In today's competitive market environment, to be able to reach the goals and objectives of the business, employee work satisfaction is important. Effective staff

management is becoming an important concern for all companies. Rewarding positive employee attitudes such as increased output, job satisfaction, and organizational social responsibility behavior and penalizing negative attitudes such as high employee turnover, absenteeism, and unusual behavior at work accomplishes the following goals (3). Employee work satisfaction is a helpful tool for enhancing an organization's performance over time and accomplishing its strategic goals. Work satisfaction, which refers to a mix of employees' good and negative feelings about their work, is a secret indicator of an organization's success. Every business organization's main objective is to use creative approaches to motivate staff to complete tasks more effectively and to increase organizational efficiency (4). In organizational management, job satisfaction has always been a significant challenge. The manner in which employees do their jobs is referred to as their job success. An employee's performance is evaluated at work during work performance reviews (5). A profitable service business has invested in increasing employee satisfaction. Turnover intentions are the extent to which employees intend to depart the firm. It also represented abandoning the organization or division. When an employee acts as though they really believe they are contributing to reaching the organization's mission and goals, it shows in their performance (6). They continued by stating that policies for performance evaluation, employee advancement methods, and compensation practices are indicators of an employee's performance (7). Research has indicated that work-life balance significantly affects job satisfaction but not performance, mental workload significantly affects both job satisfaction and performance, and satisfaction with work significantly affects the performance of construction workers. To enhance job satisfaction, construction companies could plan to promote employees more frequently, shorten workweeks to attain a better work-life balance, and increase worker numbers to lower workloads (8). In government organizations, job satisfaction is important because it encourages and facilitates each worker's achievement of their professional objectives. In order to achieve its objectives, the organization needs to regularly monitor its employees to make sure they are performing successfully and efficiently. In the entire industry, the level of job satisfaction is a critical component of overall productivity. The importance of job satisfaction is recognized by both employers and employees. This may be because of the many studies that indicated how much employers gain from satisfied employees since they are more productive. The purpose of this study is to examine how important job satisfaction is to the construction sector.

## Review of literature

According to earlier studies, factors contributing towards job satisfaction are multiple—job security, pay, work-life balance, and relationship with supervisors. The study

done in Indonesia, for instance, found rewards to have a significant effect on employee satisfaction. Other studies have highlighted the second workplace environment and career growth in improving job satisfaction. The present study builds on these lines with the structured survey along with advanced statistical analysis such as structural equation modeling (SEM) and multivariate regression applied over job satisfaction in Tamil Nadu's construction industry (9). Examined the effects of job characteristics, incentives, relationships with supervisors and colleagues, and fulfilling higher-order requirements on the job satisfaction of employees in Indonesian construction firms. Indonesia's main city of Jakarta and one of its larger cities, Bandung, participated in a questionnaire study. The findings showed that various occupational groups and managerial positions had distinct perspectives on the aspects of the job and that various worker categories have varying degrees of job satisfaction. According to this research, employees are concerned about the caliber of their work and the success of the firm, and these factors have a big impact on how satisfied they are with their jobs. It is also shown that rewards have a significant impact on employees' satisfaction at work.

Aiyewalehinmi (10) mentioned the factor analysis (FA) of the questionnaire responses from the four main construction parties is discussed in this study. Management, the employer's association, the workers, and the Construction Trade Union are all involved. The factors that support the four parties' responses data are compared, and the results were discussed. In addition, examined about the different contextual factors are some of these understandings and relationships among the identified construction parties. The identification of several key workplace variable factors offers a base for the development of the conceptual and research models. An important comprehension of the group's opinions on industrial relations (IR) and workplace communication is achieved. Developing factors that identify the primary dimensional differences within the data set is the aim of FA. Lastly, the study looks at the sample data's statistical reliability; a reliability scale evaluation shows that the statistical analysis's conclusions are legitimate.

Solis et al. (11) stated that work is a hard and demanding activity; ability and attitude, along with a suitable working environment, are required to accomplish productive activities well. A commonly used method to determine the extent to which these characteristics are fulfilled from the viewpoint of the employee is through job satisfaction surveys. The term "job satisfaction" refers to a favorable emotional state that arises from an individual's evaluation of their job or experiences at work. Numerous studies have been carried out to gauge workers' job satisfaction in the construction sector, with the majority concentrating on laborers. This study set out to investigate the degree of job satisfaction among construction industry experts employed by Eastern Mexican construction companies. The Minnesota Satisfaction Questionnaire, designed for use in a variety of goods and professions, including engineering, was

the tool utilized for evaluating employee satisfaction. This instrument's model, which includes twenty factors to account for job satisfaction, can be used in a variety of geographical locations. In this instance, the findings indicated that, on the whole, the professionals in the research were not satisfied, but the executive and supervisory subgroups were satisfied. Other parts of the world may be able to use the results analysis procedure. Therefore, it was determined that there is a great deal of space for development in the construction sector to professionalize human resource management and offer healthier working conditions to employees.

Genc (12) states that the purpose of this study is to determine the level of job satisfaction among construction workers by looking at a variety of characteristics, including gender, educational attainment, social status variations and effects, and fair wage levels. The following conclusions are drawn from the data: personal traits like language, religion, race, creed, color, sex, political opinion, philosophical beliefs, etc. do not lead to discrimination among employees; female employees increase productivity, albeit unfairly; employers and employees agree that their companies provide financial and moral support in the event of an occupational accident; and their businesses engage with the opinions of their employees in a somewhat outside capacity. Workers think that while they may not have the same rights as other employees in their organization, there are variances in employee education levels that lead to problems with grouping. Their employers routinely provide occupational trainings and seminars to improve job efficiency, and they pay fair rates that fulfill their employees' expectations. They are relatively satisfied with occupational health and safety safeguards. Employers argue that workers who fall into different categories within the organization have the same rights.

Lingard and Francis (13) state that a worker's professional identity is just one of many roles that they play in life; a job is just one part of life. However, it can be challenging for construction professionals to reconcile family life because of the project-based nature of their work and uncertain employment ties, which could lead to role conflict. Thus, the conflict between work and family has long been one of the main problems in the construction industry. More specifically, job satisfaction among construction workers is impacted by a poor work-family balance. Additionally, they noted in their study that the primary reason for employee discontent on the job is work-family conflict brought on by long work hours. This means that young workers need to learn how to properly balance work and family obligations.

According to the authors (14), there are two methods that are most frequently used to evaluate job satisfaction: (1) a global rating is comprised of an individual's response to a single question regarding their level of job satisfaction, ranging from highly satisfied to highly dissatisfied; (2) a summation score is created by identifying the essential components of a job and asking an employee about their feelings regarding each component. An overall job

satisfaction score is derived by adding the ratings of the responses, which are based on a standardized scale. A comparative analysis of the two approaches shows that they are nearly equal in validity.

Goodrum (15) indicated that over the same time period, the importance of pay, job security, work hours, potential for advancement, and job importance and accomplishment were the factors impacting the job satisfaction of construction workers. According to the study, craft workers in the building industry preferred job security much more than managers surveyed. Compared to craft workers, respondents in management occupations strongly advised important and meaningful employment. In the meantime, the most desired jobs were those that involved significant and meaningful work, according to both management staff and construction workers.

## Research methodology

A quantitative approach, using data collected by a standardized online questionnaire, was used. The survey instrument was validated with a pilot study—for cases where there was no standardized version of the survey instrument—using a small sample for reliability and clarity. The final survey was deployed among professionals working in four major construction companies in Chennai: Wipro, Lanco Infra, HCC Limited, and L&T. The total number of responses of 84 were analyzed using hierarchical regression modeling and SEM to derive deeper insights into job satisfaction determinants.

This study has used both primary data and secondary data. Additionally, a quantitative approach was used in the study to gather the primary data. Employees from four construction companies in Chennai chose data collection.

Questionnaire online surveys were used to collect the primary data in different companies in Chennai. These companies were Wipro, Lanco Infra, HCC Limited, and L & T. An online survey was emailed to the respondents' email addresses. These responders were chosen at random from the organizations' HR lists. These responders' profiles included team leaders, supervisors, project managers, assistant managers, business analysts, and managers. There are 84 responders in the research sample. The percentage approach was used to analyze the data, and the results of the questionnaire survey were converted to percentages. Rank correlation and multiple regression were used to retrieve the result in the SPSS package (Figure 1).

## Objectives

- To understand the level of job satisfaction among the construction professionals in the construction industry in Chennai.
- To analyze the factors influencing job satisfaction in the construction industry of Chennai.



FIGURE 1 | Likert scale employed for survey.

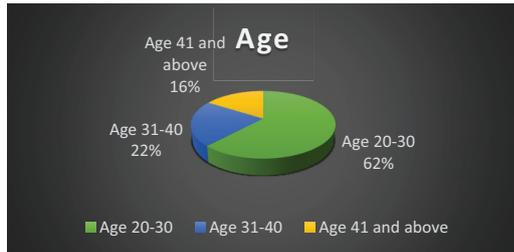


FIGURE 2 | Age specification of construction professionals.

- To offer suggestions to improve the satisfaction level of employees.

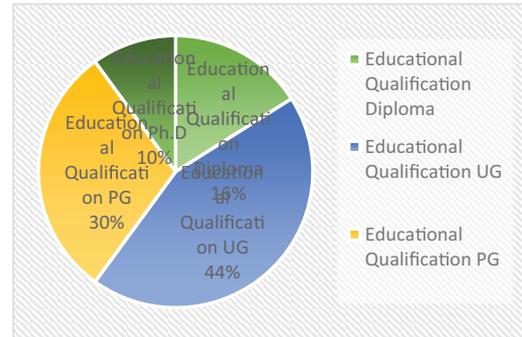


FIGURE 3 | Educational qualification of construction professionals.

### Research hypothesis

H0: There is no significant relationship between job satisfaction among construction professionals.

H0: There is no significant association between job satisfaction towards remuneration and benefits and constructional professionals.

### Results and discussion

From the respondents of the collected data, it was observed that 62% of respondents fall in the age group of 20–30 years of age (Figure 2). 22% of respondents fall in the age group of 31–40 of employees. Another 16% of professionals fall in the age group of above 41 years of age. The above chart represents that the majority of the construction professionals are young; they were satisfied with their job, provided they need more remuneration at their age (Figure 3).

From the above analysis of data collected, it was observed that the majority of the construction professionals are educated; at least they completed their diploma in civil to survive in the industry. In this study we have taken only educated employees. 74% of employees have completed undergraduate and postgraduate degrees for their profession. The above chart represents the level of educational qualification of the professionals selected for the study (Figure 4).

The data was collected and analyzed from survey questionnaires among construction professionals. A total

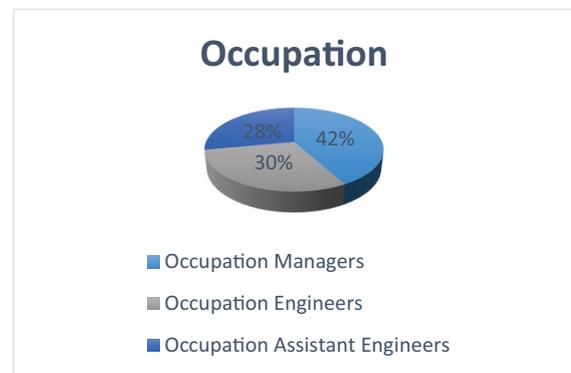


FIGURE 4 | Occupation of construction professionals.

number of 84 responses were selected for the analysis. The SPSS package was used to analyze the data. Results found from analysis are shown below in Table 1.

With regard to the above table, remuneration and benefits—which have a significance index value of 0.952—play a significant role in determining work satisfaction in the construction industry. Working environment follows in second, with a value of 0.911. Relationships with higher authorities, organizational culture, and job promotion are placed third, fourth, and fifth among the most significant elements influencing job satisfaction. The previous findings also indicate that every factor is important in determining job satisfaction, as shown by the importance index value of 0.76 for the final factor, working style, which indicates that every factor is important to construction professionals.

**TABLE 1** | Job satisfaction factor ranks.

S. no.	Job satisfaction factors	Occurrence level	Effectiveness level	Importance index	Rank
1.	Remuneration and Benefits	0.95	0.93	0.952	1
2.	Working environment	0.93	0.9	0.911	2
3.	Organization culture	0.89	0.86	0.9	3
4.	Relationship with superior and colleagues	0.9	0.85	0.881	4
5.	Promotion	0.84	0.95	0.802	5
6.	Training and development	0.9	0.94	0.846	6
7.	Decision making	0.86	0.96	0.806	7
8.	Working style	0.9	0.94	0.76	8

Source of Variation	Degrees of Freedom	Sum of Squares	Mean of Squares	F-Ratio
Regression	k	$SS_{reg} = \sum (\hat{Y}_i - \bar{Y})^2$	$MS_{reg} = SS_{reg} / k$	$MS_{reg}/MS_{res}$
Residual	n-k-1	$SS_{res} = \sum (Y_i - \hat{Y}_i)^2$	$MS_{res} = SS_{res} / n-k-1$	
Total	n-1	$SS_{tot} = \sum (Y_i - \bar{Y})^2$		

n ... number of observations  
 k ... number of independent variables

**FIGURE 5** | Formula for ANOVA calculation.

**TABLE 2** | ANOVA table.

ANOVA <sup>b</sup>					
Model	Sum of squares	df	Mean square	F	Sig.
1 Regression	2.85	2	2.85	15.85	0.000
Residual	8.80	82	0.18		
Total	11.65	84			

H0: There is no significant association between job satisfaction towards remuneration and benefits and constructional professionals (Table 2).

Job satisfaction is the dependent variable, and the ANOVA table indicates that the dependent variable is significantly predicted by the other variables promotion, remuneration, working environment, decision making, training and development, at a 99% confidence level (Figure 5 and Table 3).

The B-value of the regression coefficient indicated which variable was a highly influencing factor for job satisfaction. Among all the factors the t-value is 16.726 for remuneration and other benefits. The remaining factors for job satisfaction had coefficient values that were substantially lower than the remuneration. The regression table signifies that the significant value is greater than 0.05, which means the dependent variable, which is job satisfaction towards remuneration and benefits, is significantly not predicted by the independent variable at a 95% confidence level. The

coefficient represents that there is a significant association between job satisfaction towards remuneration and benefits and constructional professionals.

## Conclusion and suggestions

The opportunities for improving job satisfaction for construction personnel should include a competitive pay strategy by the respective companies, ensuring compensation levels are standard in the industry and provide performance-based incentives. Further, improved work environment conditions in terms of safety, on-site facilities, and flexible work hours will ensure more facilitative working conditions. Enabling career advancement for the employee through structured promotion routes, mentoring programs, and skill enhancement pushes the morale of employees and increases retention. Use of advanced HR analytics-catapulted technologies such as AI-based sentiment analysis tools aims at close monitoring of job satisfaction trends and taking proactive measures concerning workforce concerns and is another route within a good working strategy framework. This will create a more facilitating work atmosphere conducive to better performance and high employee retention within the construction industry.

According to this research, the job satisfaction of construction professionals in Tamil Nadu is greatly impacted by several job characteristics: remuneration and benefits, communication with higher authority, promotion, and

**TABLE 3 |** Coefficients.

		Coefficients <sup>a</sup>				
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	912.61	696.21		1.574	0.176
	Remuneration	1.56	0.77	0.832	16.726	0.000
	Working environment	-278.46	86.602	-0.235	14.474	0.000
	Decision making	-102.63	125.33	-0.041	-0.570	0.263
	Training and development	-289.36	236.8	-0.072	-1.175	0.569
	Organization culture	8.11	0.698	0.482	13.092	0.000
	Working style	-75.869	56.89	-0.081	-1.316	0.271

<sup>a</sup>Dependent variable: job satisfaction

working environment. These are the variables affecting the employee satisfaction. Although job satisfaction can have a direct impact on performance, management in a construction company may use it as feedback to encourage the professionals to produce high-quality job. When rewarding employees for their performance, greater consideration should be given. This study indicates that respondents found the real reward condition to be unsatisfactory. From this study we can understand that most of the people in the construction sector are generally satisfied with their jobs. In this study of this survey, it was identified that employees were not satisfied mainly with the remuneration and benefits provided by the construction companies, the working environment and promotion provided by the construction industry, and most of all, the support received from the management of company.

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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