

STRUCTURAL EQUATION MODEL (SEM) PREDICTING JOB SATISFACTION ON JOB PERFORMANCE IN INFORMATION TECHNOLOGY INDUSTRY

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Abstract: This research article aims to “To study the impact of key attributes of job satisfaction on job performance of IT employees”. The paper applies data reduction using Confirmatory Factor Analysis (CFA) on a sample of 224 respondents drawn from IT companies in the Pune and condenses a set of 12 job satisfaction items converted into a four key attributes. The present study proposes a model of the impact of key attributes of job satisfaction on job performance. The study found that pay, supervision, work itself and promotion are impacting significantly the job performance. Therefore, IT companies should focus on the above factors to job performance of employees. The study investigated the impact of key attributes of job satisfaction on job performance of the IT employees concluded that pay had the highest impact on the job performance of the employees’ supervision, work itself followed by promotions.

INTRODUCTION

Job satisfaction has been characterized as a pleasurable passionate state coming about because of the evaluation of the person's work; an emotional response to person's work; and a mentality towards it. As job satisfaction is a generally investigated and complex marvel, it follows that there are various meanings of the idea. Job satisfaction can be characterized as a person's complete inclination about their work and the mentalities they have towards different viewpoints or aspects of their work, just as a disposition and discernment that could subsequently impact the level of fit between the individual and the association (Ivancevich and Matteson 2002; Spector 1997). An individual with high job satisfaction seems to hold commonly uplifting perspectives, and one who is disappointed to hold negative mentalities towards their work (Robbins 1993). Spector 1997) discloses that for scientists to comprehend these mentalities, they need to comprehend the perplexing and interrelated features of job satisfaction. An aspect of job satisfaction can be depicted as any piece of a task that produces sensations of satisfaction or dissatisfaction (Spector 1997). This viewpoint can be helpful to associations that wish to distinguish worker maintenance regions in which improvement is conceivable (Saari and Judge 2004; Westlund and Hannon 2008). Job satisfaction is an aftereffect of a person's insight and assessment of their work affected by their own exceptional requirements, qualities and assumptions, which they see as being critical to them (Sempane et al 2002). Consequently,

job satisfaction is a bunch of positive or negative sentiments and feelings with which employees see their work. Job satisfaction is an emotional disposition and a sensation of relative like or aversion towards something. An individual has job satisfaction in the event that he prefers his work. Such an individual, clearly, has an uplifting perspective. It is hard to distinguish the specific factor that gives an individual job satisfaction. Job satisfaction commonly alludes to the perspectives of a solitary employee. Truth be told, various elements impact job satisfaction like Pay, Nature of work, Decision making authority, Scope for drive, Opportunities for headway, Inter-individual connections, working conditions, and so on The principle objective of the investigation is to distinguish the key elements imagine job satisfaction among the employees of chose IT Company.

LITERATURE REVIEW

Job Satisfaction and Job Performance were the main factors discussed in this study, hence literature was emphasized on providing theoretical background for the study and it facilitates to conceptualize the research context.

Job Satisfaction is one of the primary mentalities that can impact human conduct in the work place. Job Satisfaction is how much people feel decidedly or contrarily about their positions (Woods and Weasmer, 2008) and it is by and large perceived as a multi-layered build that incorporates employee sentiments about an assortment of both natural and extraneous occupation components. Along these

lines, hierarchical conduct scientists are anxious to break down, comprehend and measure work satisfaction and its ramifications for individuals at work (Woods and Weasmer,2008). Job satisfaction might be influenced by feeling related character attributes since work satisfaction has been likened with a pleasurable enthusiastic state (Locke, 1976). Character attributes are important for work decision and for being chosen and advanced by the association (Hogan, 1971). Likewise work satisfaction results from an individual's perspective on their work. This depends on workplace conditions like the mindset of seniors/directors, organization arrangements and cycle, working conditions and extra advantages (Gibson et al, 1979). Laborers will have high job satisfaction when they have uplifting outlooks toward such occupation factors like the actual work, acknowledgment and opportunity for progression (DuBrin,1997). There are five occupation measurements addressing the main viewpoints that influence an employee job satisfaction. These incorporate the actual work, pay, advancement openings, oversight and collaborators (Luthans,2002). Along these lines Pay, Promotion, Supervision and Work Itself were taken as the components of job satisfaction of this exploration study.

Employees work satisfaction is emphatically connected to the organization's compensation framework (Greenberg and Baron, 1995). The general goal is to compensate individuals reasonably, impartially and reliably as per their worth to the association to additional the accomplishment of the associations vital objectives (Armstrong and Murlis,1998). A reasonable and equivalent compensation framework would support work satisfaction (Lawler, 1981). Further, he makes statements, for example, rewards and yearly compensation augmentations would more empower employee occupation satisfaction. With the end goal of this examination, pay is characterized as the worker pay, which is sufficient for their ordinary costs. Consequently, pay is the principle marker of the element of installment. Aside from that it covers reward and compensation augments moreover. The worker is happy with the compensation and pay is given by the functioning encounters and equivalent to the work done. A few useful examinations have tracked down a solid positive connection between employee installment and job performance (Baron and Armstrong, 1998; Robbins and Decenzo,2005).

Absence of advancements and other occupation improvements, like preparing, have a more antagonistic impact on work satisfaction than even extreme measures of work or low compensation (Shields and Ward, 2001). An employee's talent enlargement and status would urge them to search out advancements (Locke, 1976). Concerning that, advancements can be considered as a device by the board for expanding employees' inspiration and job satisfaction levels. Position progressions, producing positive good among employees and guaranteeing employer stability had an incredible capability of making worker work satisfaction (Gouws,1995). It ought to be noticed that the individuals who may get advancements in an unmerited way, maybe through realized associations are probably going to make fractures among the certified laborers. This thus can make work disappointment. With regards to this examination, advancement is characterized as the reasonable possibility for the worker to get advanced. Progression, resolve, worth and security were considered as the markers of the measurement advancement. Positive advancement perspectives hoist levels of job satisfaction and that will expand the employee job performance (Gouws,1995). Great management is the way to keeping up high job satisfaction levels. In examples where managers connect with workers in undertakings which include more elevated levels of duty, employees are probably going to feel more esteemed consequently acquiring an idea of accomplishment and achievement (Glicker,2005). As per Trempe et al, (1985) workers who get regard and thought from their seniors are more satisfied than employees who experience in any case. Aside from that employees, for example, specialized groups would anticipate specialized oversight of their work; persistent premise specialized management and backing could produce satisfaction particularly among information laborers in various kinds of associations. For the setting of this examination, oversight can be characterized as how the chief treats the representative as far as acclaim, the representative's acceptable work, looking for the exhortation from the representative, understanding the idea of the representative's work just as giving the representative enough management and simultaneously depicting great a guide to the labourers. In this manner, the management measurement under work satisfaction variable was tried utilizing the markers of oversight of human

relations and oversight of specialized relations. A successful boss gives help to staff workers in gathering their own and expert objectives inside the climate of the division and the foundation. This will create employee job satisfaction and result in elite. There are a few reasonable investigations that have tracked down a solid positive connection among management and job performance (Winston and Creamer, 1997).

The actual work alludes to the work space of the laborers and their discernment about the actual work that they are liable for. Oxford Advance Learner's Dictionary (1995), characterizes the actual work as "what is finished by someone". Additionally, the actual work likewise alludes to the work space of the specialists and their discernment about the actual work that they are answerable for. Cohen et al. (1999) distinguishes that capacity to use, accomplishment, action, authority, innovativeness, freedom, duty and assortment are simply the principle markers of worker work. And furthermore in his exploration, he referenced that work itself and it's anything but a positive relationship with worker work execution. The work or work will give the worker a pride and duty. The actual work alludes to the work space of the specialists and their discernment about the actual work that they are answerable for. The meaning of the actual work for this examination is the manner by which the representative sees their present work as fun, happy with, testing or regarded by others. Markers tried under the measurement work itself were capacity to usage, accomplishment, movement, authority, inventiveness, freedom, obligation, and assortment. A great deal of early examinations (Cohen, 1999; Randall and Cote, 1991) have discovered that work itself is a significant and persuasive easygoing variable, which has a positive relationship with hierarchical employees work performances.

Research Gap

The literature review reveals that numerous revisions have followed on the relation amongst employee satisfaction and employee performance. (Sailaja. A, 2017) There is research gap about the relation between job satisfaction and job performance. There is an enormous range to make study that investigates by using of structural equation model for predicting the impact of job satisfaction on job performance of employees in

Information Technology Industry. (Swetha. G, 2017) had mentioned the following area for further

research. They have designated only middle level employees to study the concept of job satisfaction and job performance. She was recommended creating a study covering all groups of employees predominantly in IT sector by making an allowance for a large sample of respondents.

Afterwards the identification of research gaps, researcher has nominated the topic on structural equation model for predicting the impact of job satisfaction on job performance of employees in Information Technology Industry

Research Problem

Organizations at this cutthroat time, is in a strong intention of hiring of and retaining the most suitable employees. In order to accomplish this purpose, performance evaluation has become a strong necessity for both the employees and employers in different senses. On evaluating employees in consonance with their professional and social aspects, numerous psychological and behavioral features are also to be accounted into. In a competitive business environment prevails all over the globe, this process of evaluation has emerged into a superior dimension of assisting and managing the performance of employees. This approach invariably estimates the worthy contributions of an employee on the whole and thereby acknowledges the imperative relationship of performance with employees' psychological factors like job satisfaction, emotional intelligence, organizational citizenship behavior, work motivation, professional integrity, etc.

This research tries to identify the impacts of job satisfaction dimensions on job performance of employees of the IT Industry. It investigates the relationship between the dimensions of job satisfaction and the job performance of the respondents and thereby to cross check whether the former influences the latter in a positive sense or not.

Research Objectives

1. To identify the key attributes of job satisfaction in IT industry
2. To measure the impact of key attributes of job satisfaction on job performance in IT industry

Research Hypothesis

Ho1: There is no significant relationship between employee opined job satisfaction on job performance.

Ho1.1: There is no significant relationship between employee opined payment on employee retention.

Ho1.2: There is no significant relationship between employee opined payment on employee retention.

Ho1.3: There is no significant relationship between employee opined payment on employee retention.

Ho1.4: There is no significant relationship between employee opined payment on employee retention

Statistical Tools

- Reliability Test
- Confirmatory Factor Analysis (CFA)
- Multiple Linear Regression

RESEARCH METHODOLOGY

Purpose of this study was hypothesis testing as this study was conduct to establish and explain the relationship between job satisfaction and job performance. The type of the investigation was correlational since the study has conducted in no contrived settings. The unit of study in this research was an individual. Specifically, IT professionals since the data were gathered from IT employees of a well-recognized global IT Companies in Pune city. The study was conducted with the help of self-administered questionnaires which prepared according to the measures of above mentioned dimensions. Five point likert scale was used to weight from strongly disagree to strongly agree and the questionnaires were distributed personally, mailed to the respondents, and electronically distributed. Total IT employees working in the mentioned company was the population of this

			Estimate	S.E.	C.R.	P
p1	<---	Payment	1.000			
p2	<---	Payment	.880	.048	18.162	0.000
p3	<---	Payment	.767	.052	14.727	0.000
w1	<---	Work Itself	1.000			
w2	<---	Work Itself	.908	.113	8.051	0.000
w3	<---	Work Itself	.881	.110	8.029	0.000
s1	<---	Supervision	1.000			
s2	<---	Supervision	1.035	.112	9.224	0.000
pr4	<---	Promotion	1.000			
pr3	<---	Promotion	1.149	.132	8.681	0.000
pr2	<---	Promotion	.892	.109	8.189	0.000
pr1	<---	Promotion	.641	.110	5.848	0.000

research study. There were 360 IT employees working in this organization and 224 employees were selected to the sample by using simple random sampling technique (lottery method). The questionnaire method was chosen for data collection purpose assuming anonymity of the respondents. The collected data was analyzed by statistical data analysis package, SPSS version 20.0

Data Synthesis

Reliability Test

Table: 2. Reliability Statistics

Cronbach's Alpha	N of Items
.912	22

The internal consistency of the items of 22 questions with a value of the Cronbach's Alpha is .912, which shows that data is 91.2 per cent reliable

AMOS output of the measurement model or CFA – Standardized

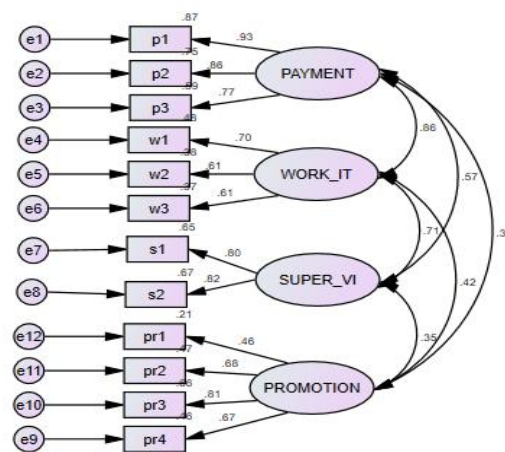


Figure: 1. AMOS output of the measurement model or CFA –Standardized

Selected Variables Expansion
 PAYMENT (Payment), WORK_IT (Work-Itself), SUPER_VI (Supervisor) and PROMOTION (Promotion).

Regression Weights: (Group number 1 - Default model)

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
p1	<---	Payment	.932
p2	<---	Payment	.863
p3	<---	Payment	.767
w1	<---	Work Itself	.695
w2	<---	Work Itself	.613
w3	<---	Work Itself	.611
s1	<---	Supervision	.804
s2	<---	Supervision	.819
pr4	<---	Promotion	.675
pr3	<---	Promotion	.812
pr2	<---	Promotion	.683
pr1	<---	Promotion	.458

Intercepts: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P
p1	2.594	.094	27.573	0.000
p2	2.808	.089	31.429	0.000
p3	3.045	.088	34.746	0.000
w1	3.147	.088	35.705	0.000
w2	3.326	.091	36.657	0.000
w3	3.496	.088	39.560	0.000
s1	3.527	.087	40.338	0.000
s2	3.496	.089	39.359	0.000
pr4	3.156	.097	32.555	0.000
pr3	3.250	.093	35.111	0.000
pr2	3.379	.085	39.548	0.000
pr1	3.228	.092	35.226	0.000

Covariances: (Group number 1 - Default model)

			Estimate		S.E.	C.R.	P
Payment	<-->	Work Itself	1.033	.138	7.463	0.000	
Payment	<-->	Promotion	.784	.129	6.081	0.000	
Promotion	<-->	Payment	.392	.109	3.608	0.000	
Work Itself	<-->	Supervision	.677	.113	5.993	0.000	
Promotion	<-->	Work Itself	.376	.093	4.040	0.000	
Promotion	<-->	Supervision	.356	.096	3.701	0.000	

Correlations: (Group number 1 - Default model)

			Estimate
Payment	<-->	Work Itself	.862
Payment	<-->	Supervision	.571
Promotion	<-->	Payment	.306
Work Itself	<-->	Supervision	.705
Promotion	<-->	Work Itself	.420
Promotion	<-->	Supervision	.347

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P
Payment	1.715	.193	8.885	0.000
Work Itself	.837	.156	5.367	0.000
Supervision	1.102	.181	6.077	0.000
Promotion	.955	.189	5.061	0.000
e1	.258	.060	4.328	0.000
e2	.453	.061	7.399	0.000

	Estimate	S.E.	C.R.	P
e3	.704	.077	9.190	0.000
e4	.895	.109	8.245	0.000
e5	1.146	.125	9.189	0.000
e6	1.091	.118	9.203	0.000
e7	.603	.116	5.215	0.000

	Estimate	S.E.	C.R.	P
e8	.578	.121	4.789	0.000
e9	1.142	.140	8.167	0.000
e10	.650	.124	5.231	0.000
e11	.869	.108	8.043	0.000
e12	1.480	.150	9.854	0.000

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
pr1	.210
pr2	.466
pr3	.660
pr4	.455
s2	.671
s1	.647
w3	.374
w2	.376
w1	.483
p3	.589
p2	.746
p1	.869

SEM Path

After complying with Reliability and Validity checks using Confirmatory Factor Analysis (CFA), estimation of overall Model fit was done using structural equation modelling. First, we need to construct the SEM path diagram based on the theoretical frame work. The structural model path

diagram is shown in figure 1 is a graphical representation of the mathematical equation (Byrne, 2010). It shows how the independent and dependent constructs are interrelated with each other in a structured mathematical manner. The one-way arrow which starts from the exogenous variable and ends to the endogenous denotes the regression weight. We can understand the level of impact of the exogenous variable on an endogenous variable by its unstandardized and standardized regression coefficients. The two-way arrow denotes the covariance or correlation. Totally there are 12 observed variables which are referred as predictors as it predicts the constructs or latent variables and there are totally 1 unobserved variable which can also be referred as latent variables or constructs as it is conceptually related with the observed variables. The exogenous Variables-Payment, Work-itself, Supervision and Promotion. Each and every observed variable have an error term and it is denoted with (e1 to e12). Few latent variables like; Payment, Work-itself, Supervision and Promotion are inter correlated by drawing the covariance curves in the model.

Once the structural equation model is drawn using AMOS, the sample data is imported from SPSS and we need to run the model. If the data meets all the assumptions of SEM as discussed in the previous topics, then we shall get the output without any error in both graphical and tabulated form.

Structural Model Path Analysis

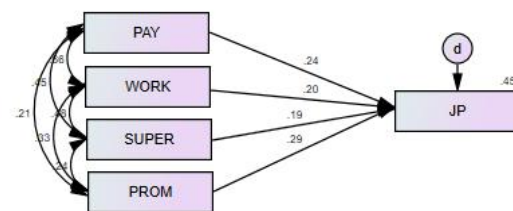


Figure: 2. Structural Model Path Analysis
 Structural Model Fit Estimation

Figure 2 indicates the standardized path regression coefficients and the relationship between unobserved and observed variables with respect to the path diagram. Structural model Fit Indices:

Indices	Recommended Value	Model Fit Indices
CMIN/Df	< 3	2.652
p-value	≥ 0.05	0.000

GFI	≥ 0.90	1.000
AGFI	≥ 0.80	0.932
NFI	≥ 0.90	1.000
CFI	≥ 0.90	1.000
RMSEA	≤ 0.08	0.063
P Close	≥ 0.05	0.000

dependent variables with respect to Hypothesis. By referring to the P value, each and every hypothesis has been specified whether it is significant or not significant. The result shows that the hypothesized model fits with the obtained sample data.

The summary and interpretation of the result are given below:

Estimated Standardized regression of the hypothesis

The structural model fit is checked based on CMIN/df, p-value, Goodness of Fit (GFI), Adjusted Goodness of Fit (AGFI), NFI, Comparative Fit Index (CFI), Root Mean square of approximation (RMSEA) and P Close. The Model fit indices for the constructs have been found and the summary of the result is shown in the above table where the obtained Model fit indices are compared with the recommended value. We have not considered the actual chi square value as the chances of model rejection will be high when the sample size increases. Hence we have divided the chi square value with the degrees of freedom so that we can overcome the sample size issue. The result of chi square value divided by the degrees of freedom is shown in the table as 2.652 which is below than the acceptable limit 3. The obtained p-value is 0.05 which is equal to the recommended value. The obtained GFI value is 1.000 which is above the recommended value of 0.9. The obtained AGFI value is 0.932 which is above the recommended value of 0.80. The obtained NFI value is 1.000 which is greater than the recommended value of 0.90. The obtained CFI value is 1.000 which is greater than the recommended value of 0.90. The obtained RMSEA value is 0.063 which is lesser than the recommended value of 0.08. The obtained P-close value is 0.000 which is lesser to the recommended value of 0.05. Hence we can find the overall model fit indices are within the acceptable recommended values as proposed by the researchers, so we can conclude that the hypothesized model fits with the sample data. All the 12 parameters have met all the other recommended value to verify fitness of the Model. Hence we can conclude that the Model is perfectly fit.

Testing Structural Relationships

To know whether the hypothesized paths are significant or not, the standardized regression weights of the output of the hypothesis path are compared against the p-value. The below table shows the relationship between Independent and

Hypothesis	Hypothesis Statements	Estimate	Standard Error	Critical Ratio	P	Result
Ho1.1	Employee opined payment on employee retention.	.196	.055	3.584	.000	Significant
Ho1.2	Employee opined work-itself on employee retention.	.170	.060	2.843	.000	Significant
Ho1.3	Employee opined supervision on employee retention.	.162	.050	3.250	.000	Significant
Ho1.4	Employee opined promotion on employee retention.	.273	.049	5.589	.000	Significant

Discussion

- The probability of getting a critical ratio as large as 3.584 in absolute value is less than 0.001. In other words, the regression weight for Payment in the prediction of Job Performance is significantly different from zero at the 0.001 level (two-tailed).
- The probability of getting a critical ratio as large as 2.843 in absolute value is .004. In other words, the regression weight for Work-Itself in the prediction of Job Performance is significantly different from zero at the 0.01 level (two-tailed).
- The probability of getting a critical ratio as large as 3.250 in absolute value is .001. In other words, the regression weight for Supervision in the prediction of Job Performance is significantly different from zero at the 0.001 level (two-tailed).
- The probability of getting a critical ratio as large as 5.589 in absolute value is less than 0.001. In other words, the regression weight for Promotion in the prediction of Job Performance is significantly different from zero at the 0.001 level (two-tailed).

Managerial Implications

- There was a positive concern from the higher officials of the organization for initiating the mentorship program which can take care of improving the satisfaction level of employees. It was also found that the confidence level of the employees who were subjected to the mentoring program was below expectation. More mentoring program can be put forwarded by the employer to up skill the employees, re-engineer their capabilities, efficiency and moral which will further help in building up a Healthy organization.
- When employees are engrossed in their work and they have an emotions attached with their organization, their work. Task or the work given should neither be burden nor get monotonous an individual should enjoy his / her work.
- It is always said when an employee is involved in decision making he feel motivated and start getting connected with the organization which future impact positively on his performances

Conclusion

This study discovered that the level of job satisfaction dimensions (pay, promotion, supervision and work itself) of the IT employees were satisfied with the job they performed and also there were positive correlations exist between the job performance and each of the four job satisfaction dimensions. There can be a lot of factors that can create a performance drop of the IT employees. Some of them can be organizational commitment, job involvement, work environment conditions, work ethics, proper skills set, hygiene and motivational factors, etc. Among those various factors that influence the job performance, the job satisfaction dimensions of this study (pay, promotion, supervision and work itself) affect the job performance of IT employees. Thus, it should pay considerable attention to the IT employees job satisfaction and a change in satisfaction dimension brings a significant change to the job performance.

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