AN INVESTIGATIVE STUDY ON JOB SATISFACTION LEVEL OF EMPLOYEES WORKING IN SOFTWARE INDUSTRY, A VIEW POINT OF EMPLOYEES IN PAKISTAN

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Abstract
The study aimed to examine the role of working environment, pay and promotion, job security, level of fairness, relationship with coworkers and relationship with supervisor on the job satisfaction of the employees. Survey based data was collected from 183 respondents working in the software sector. Regression analysis was used to test the impact of the independent variables of the study on the job satisfaction. The results of the research revealed that there is a positive and significant relationship between working environment, pay and promotion, job security, and level of fairness and the job satisfaction. This implies that employees who are having good working environment, have reasonable and equitable pay and promotion, have higher job security, and are treated fairly, will have higher level of job satisfaction and these employees
will contribute positively towards the success and overall productivity of the organization. Similarly, good and healthy relationship with coworkers and supervisor also leads to the job satisfaction. This implies that if employees coordinate well with each other and their supervisors they can have higher level of job satisfaction and they can contribute more towards the benefit of organization than the employees who do not coordinate well. In software sector if the management want to foster the job satisfaction of the employees they should provide good working environment, good pays and they should treat the employees fairly.

**Keywords**

Job Satisfaction, Job Security, Software Industry

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### 1. Introduction

In the highly competitive environment of the companies, it is very difficult for the company to maintain its position in the market. Organizations put their efforts to maximize sales and minimize the costs. One of the major assets of an organization is their employees. Employees are the backbone for the organization. Without employees satisfaction in their jobs can create serious issues for the company which resulted in bad performance and huge losses. Different organizations have varying human resources which have different level of performance and abilities (Arif & Chohan, 2012).

The issue of employee job satisfaction is much debated and discussed in literature and research, many of the researchers are agree on the different components and factors effecting employee’s job satisfaction, but they can't exactly calculate about the impact of each factors under the different conditions of environment and organization (Hunjra et al., 2010). Employees are considered one the most important assets of organization which drives the whole organization. (Ali and Wajidi, 2013).

According to Hoppock (1935), job satisfaction depends on which job employee holds and how much it fulfill the needs which he felt. The satisfaction is determined by the ratio between what he has and what he want to get. Many researchers have performed depth study and analysis to find out the major components of job satisfaction, measure the importance of each component, and how they effect on the employee performance. According to him, people are influenced by
two major factors which includes motivators factor (the nature, experience of doing work) includes recognition of work, achievement, work itself and responsibility assigned. And hygiene factors mainly cause dissatisfaction which includes company policies, admin staff, supervisors, salary and working area conditions. These hygiene factors which must be present to satisfy the people during their job. But a study in Software sector is very rare especially in the context of Pakistan, which creates a huge gap in literature. This has inspired the researcher to discover the factors impacting employee job satisfaction in Software industry

1.2 Problem Statement

In today’s competitive era satisfied employees are crucial for the successful operation of any organization. Job satisfaction in the software is really crucial as there is significant impact of job satisfaction on performance of employees in organizations. Low job satisfaction of the employees leads to lack of productivity, job stress, poor overall performance, and employee turnover rate (Bako, 2008). In the dynamic and highly growing nature of software sector it is almost impossible to survive with less satisfied employees. In this study the variables effecting the job satisfaction of employees are studied.

2. Literature Review

2.1 Job Satisfaction

It has been evidenced that the employees who remain loyal with their jobs in the companies used to get decent jobs and decent place to work. Muhl (2002) had defined the definition of the employee as a person who has been hired on prescribed terms and conditions as mutually agreed and formally accepted in which the employer will have the power to utilize the services of the employee as and when needed in any legal way. Kotulska (2006) states that satisfaction is a continuous feeling, whereas, Chappell and Schermerhorn Jr (1999) states that the satisfaction of job is the extent to which the employee perceives the degree of negativity or positivity regarding the job. Job satisfaction has multiple dimensions (Fisher et al., 2011).

A study was carried out among the Pharmaceuticals companies whose employees entangled from job satisfactory factors. They have pointed out that the management efficiency should be increased in order to increase the job satisfaction of the employees. They epitome up
with the context that he working conditions, salary artifacts, promotions, job security, fairness, relationships among co-workers and the supervisors are the main reasons that if managed optically shall render the employees with the job satisfaction (Parvin and Kabir, 2011).

2.2 Factors affecting Job Satisfaction level of Employees

Extrinsic Factors that Influence the Level of Employee Job Satisfaction in an Organization. Herzberg et al. (1959) states that the job influenced satisfactory elements can be the motivation and the hygiene. The motivation factors may include the achievements, advancement, responsibility etc. The hygiene factors includes the interpersonal skills at the work, security of jobs in perspective of the policy of the company etc. (Tietjen and Myers, 1998).

Job Environment and job Satisfaction: Hytter (2008) resolved that working conditions has truly been argued by employee from the industrial viewpoint, shows that the attention has mainly been on the physical aspects such as poisonous elements and their acquaintance, noise, heavy lifts, etc. Through research in Pharmaceutical industry in Bangladesh Parvin and Kabir (2011) discovered that working environment impacts a vital role on the job satisfaction level of employees. Taking into account the outcomes of prior studies, the present study hypothesized that:
H1: Working environment positively impacts job satisfaction level

Pay and Promotion and Job Satisfaction: Lane et al. (2010) conducted a research in automobile industry and results has shown that job satisfaction is also affected by salary. The outcomes clearly demonstrated that the most noticeable factor for job satisfaction was pay. Compensation is a very significant instrument for retention and turnover. It additionally motivates such employees who is focused on the organization and upgrades either retention or attraction (Zobal, 1998). Remembering the past studies, the present study theorized that

H2: Pay & promotion positively impacts job satisfaction level

Job Security and Job Satisfaction: It is obvious that if the employees are happy with job and they are satisfied with the job security they will inevitably become loyal to their organizations and will give their best. This hypothesis and idea can also found in Lane et al. (2010) and Denton, Z., (2005). This theory likewise discovers its roots in famous writing of Ruvio and Rosenblatt (1999). On the basis of previous studies, it can be hypothesized that:
H3: Job security positively impacts job satisfaction level

Level of Fairness and Job Satisfaction: According to Shoaib et al. (2009) insurance policies, working hours, fairness of work policies and job satisfaction have a good and positive relationship amongst each other. A job in light of work-life standard, a respond can wind up on a superior position to have the capacity to take into account the requests of clients for better administration availability said Ringim (2013), South (2013) and Nasir (2013). Through this, the organization can likewise achieve strategies to work with the altered ways that will wind up fulfilling both the employees and the employers (Champion-Hughes, 2001). On the foundation of previous studies, it can be hypothesized that:

H4: There is a positive relationship between level of fairness and job satisfaction level

Relationship with Co-workers and Job Satisfaction:History and experiments conclude that the association with co-workers is the 5th strong determining factor of job satisfaction. This outcome is in accordance with the surviving examination in collectivist societies where employees are accounted for to put a solid accentuation on cooperative and collegial work (Yang et al., 2008). Taking into account the outcomes of previous studies, the current study hypothesized that:

H5: There is a positive relationship between co-workers and job satisfaction level

Relationship with Supervisor and Job Satisfaction: According to Mahmoud (2008) employees feel satisfy in presence of a supervisors who have a friendly relation with them who respect, trust and show fairness. If the supervisor is strict, rude and abusive then the employee will be dissatisfied with their job. According to Willem et al. (2007) supervisors have such vital role in jobs that it is often said that employees leave their bosses, not their jobs. Taking into account the outcomes of previous studies, the current study hypothesized that:

H6: There is a positive relationship between supervisor’s supports and job satisfaction level
2.3 Research Model

![Research Model Diagram]

Figure 1: Research Model

3. Research Methodology

This research study is quantitative in nature which survey the effect of factors influencing the employee’s job satisfaction level in software industry of Pakistan, using a questionnaire. The employees under investigation includes software engineers, developer, programmers, designers, analysts, testers and managers. In our current study we used the rule of thumb of Kline (2005) and the sample size for this study will be 300. Total 300 questionnaires are distributed and after collection we received 183 valid responses. The sampling technique we are using in this study is convenience sampling. The questionnaire used in this study was adopted from existing literature. For measuring the dependent variable which is job satisfaction level of employees we have adopted questionnaire of Macdonald and MacIntyre (1997) which includes 10 questions on the scale of strongly disagree to strongly agree. For measuring our independent variables we have adopted the questionnaires of Parvin and Kabir (2011) and TRUONG (2014). Five point Likert scale is used to record responses from respondents. The data is collected using self-administered questionnaire. For statistical analysis SPSS software was used. Pearson correlation is used to measure correlation coefficients. To estimate the relationship between independent and dependent variable regression analysis is used.
4. Results

In this section, results are discussed like descriptive statistics and regression analysis.

4.1 Regression Analysis

Table 1: Regression Analysis Results

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.800a</td>
<td>.640</td>
<td>.628</td>
<td>.780</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), rs_avg6, worken_avg1, jsc_avg3, rc_avg5, pp_avg2, fr_avg4

R square is called coefficient of determination. It describes the data fit of a statistical model. It is in the form of single line or a curve. This R square value (.64) illustrates that the independent variables brings about 64% of change in the dependent variable.

4.2 ANOVA Analysis

Table 2: ANOVA Analysis Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>190.502</td>
<td>6</td>
<td>31.750</td>
<td>52.158</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>107.137</td>
<td>176</td>
<td>.609</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>297.639</td>
<td>182</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: JS_avg
b. Predictors: (Constant), rs_avg6, worken_avg1, jsc_avg3, rc_avg5, pp_avg2, fr_avg4

Regression analysis also gives F value which states that weather the independent variables in the model are jointly significant or not. The value is considered significant if it is below 0.05. As in our case significance value is 0.000 which clearly specifies that our independent variable are jointly significant because significance value is below 0.05.
### 4.3 Coefficients and Significance of Variables

**Table 3: Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.092</td>
<td>.202</td>
<td>.458</td>
<td>.647</td>
</tr>
<tr>
<td>wken_avg1</td>
<td>.211</td>
<td>.051</td>
<td>.234</td>
<td>4.144</td>
</tr>
<tr>
<td>pp_avg2</td>
<td>.161</td>
<td>.058</td>
<td>.169</td>
<td>2.755</td>
</tr>
<tr>
<td>jsc_avg3</td>
<td>.182</td>
<td>.055</td>
<td>.192</td>
<td>3.314</td>
</tr>
<tr>
<td>fr_avg4</td>
<td>.171</td>
<td>.064</td>
<td>.166</td>
<td>2.647</td>
</tr>
<tr>
<td>rc_avg5</td>
<td>.182</td>
<td>.063</td>
<td>.181</td>
<td>2.890</td>
</tr>
<tr>
<td>rs_avg6</td>
<td>.214</td>
<td>.056</td>
<td>.210</td>
<td>3.837</td>
</tr>
</tbody>
</table>

a. Dependent Variable: JS_avg

The beta coefficient of working environment (\(\beta=0.23\)) is significant and the “t” value (4.41) of working environment illustrates that it is significant and this denotes that working environment is independently significant in the model. The beta coefficient of pay and promotion (\(\beta=0.169\)) is significant and the “t” value (2.75) of pay and promotion illustrates that it is significant and this infers that pay and promotion is individually significant in the model. Similarly the beta coefficient of job security (\(\beta=0.192\)), level of fairness (\(\beta=0.166\)), relationship with co-workers (\(\beta=0.181\)), relationship with supervisor (\(\beta=0.210\)) and their “t” values are 3.31, 2.64, 2.89, 3.83 respectively. All these values are significant in the model.

### 4.4 Relative Importance Index

The RII was used to rank the relative importance index of the different factors. Each individual factors’RII, as perceived by all respondents, was used to assess an over all ranking in order to give an over all picture of different factors.

**Table 4: RII Values**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>N</th>
<th>RII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay &amp; Promotion</td>
<td>2</td>
<td>18</td>
<td>39</td>
<td>55</td>
<td>69</td>
<td>183</td>
<td>0.79</td>
</tr>
<tr>
<td>Working Environment</td>
<td>6</td>
<td>23</td>
<td>49</td>
<td>78</td>
<td>27</td>
<td>183</td>
<td>0.71</td>
</tr>
</tbody>
</table>
The payment and promotion was most important to respondents (RII 0.79). This is very important factor in order to satisfy the employees on job.

The relationship with supervisor is the second most important factor for employee’s job satisfaction according to the respondents (RII 0.76) as show in Figure that 53 respondent out of 183 rank it extremely important.
The relationship with co-workers is the third most important factor for employee’s job satisfaction according to the respondents (RII 0.75) as shown in Figure 4 that 47 respondent out of 183 rank it extremely important.

The job security is the third most important factor for employee’s job satisfaction according to the respondents (RII 0.74) as shown in Figure 5 that 43 respondent out of 183 rank it extremely important.
The level of fairness is the fifth most important factor for employee’s job satisfaction according to the respondents (RII 0.73) as shown in Figure 6 that 43 respondent out of 183 rank it extremely important.

The working environment is the least important factor for employee’s job satisfaction according to the respondents (RII 0.71) as shown in Figure 7 that only 27 respondent out of 183 rank it extremely important.

5. Discussion

It is epitome that the current research study had achieved all of its objectives and therefore the study is significant. Our first hypothesis is that working environment positively influences employees’ job satisfaction. Because the Beta value is statistically significant and positive therefore hypothesis is accepted (β=0.234, p<0.05). So our first objective of the study is
achieved. This is in line with the views of Kawada and Otsuka (2011). Our research result shows that working environment has positive relationship with job satisfaction, which are in line with previous research work of Hytter (2008), (Zeytinoglu and Denton, 2006) and Parvin and Kabir (2011).

The second hypothesis of the study is that pay and promotion has positive relationship with job satisfaction. Because the Beta value is statistical significant and positive therefore hypothesis is accepted ($\beta=0.169$, $p<0.05$). This is in agreement with views of Yaseen (2013) who argument that people always expect that if they work well at their workplace then their pay will automatically increase and this will also cause an increase in their job satisfaction level. The third hypothesis of the study is that job security has positive impact on job satisfaction level of employees. Because the Beta value is statistical significant and positive therefore hypothesis is accepted ($\beta=0.192$, $p<0.05$). This is in agreement with views of (Loi et al., 2012) who gave the argument that job security has positive relationship with job satisfaction and that job satisfaction is low in employees who come to realize job insecurity. The findings of this research are also consistent with (Grover and Wahee, 2013), (Lane et al., 2010), Denton, Z (2005), (Ruvio and Rosenblatt, 1999). Administration must make a situation of professional stability among workers. The occupation ought to give enough extension to the workers as far as advancement and exchange.

The fourth hypothesis of the study is that level of fairness has positive relationship with job satisfaction proved because the beta value is statistically significant and positive ($\beta=0.166$, $p<0.05$). The findings of this research are consistent with previous research results of (Shoaib et al., 2009), (Parvin and Kabir, 2011). The results propose that the elements had significantly clarified job satisfaction and that the managers and approach producers ought to concentrate on the components that influence employee job satisfaction, on the off chance that they need to improve their organizations.

The fifth hypothesis of the study is that there is a positive relationship between co-workers and job satisfaction level. Because the Beta value is statistical significant and positive therefore hypothesis is accepted ($\beta=0.181$, $p<0.05$). This is in agreement with views of (Ssegawa, 2014) and (Yang et al., 2008) they also said that relationship with co-workers
positively influences job satisfaction. The sixth hypothesis states that there is a positive relationship between supervisor’s supports and job satisfaction level. This is proved as the beta value is positive and statistically significant ($\beta=0.166$, p<0.05). So it can be said that job satisfaction is increased when employees and supervisor have good relations. Our research result shows that supervisor support has positive relationship with job satisfaction, which are in line with previous research work of (Parvin and Kabir, 2011), (Willem et al., 2007), (Chakrabarty et al., 2008) and (Ssegawa, 2014).

At the end we used relative importance index to rank our six variables. Pay and promotion have highest RII value of 0.79 so it is most top ranked factor for job satisfaction. Relationship with supervisor is at second number with RII value of 0.76 while relationship with co-workers, job security level of fairness and working environment are at number third, fourth, fifth and sixth in ranking with RII values of 0.75, 0.74, 0.73 and 0.71 respectively as shown in table 5 and figure 2.

6. Conclusion

Satisfaction of employees leads to improved service quality and job satisfaction. In such kind of condition it is good for managers and policy makers to turn their concentration towards employees, so that they are satisfied. The goal of this study was to test the important factors which can impact job satisfaction of employees in software industry of Pakistan. The results enlightened the factors that can impact job satisfaction level, on the basis of these results we can say that employees must be given great devotion and care in order to improve the business and enhance performance. The most important factors in this regard that can impact job satisfaction are pay and promotion, relationship with supervisor, relationship with co-workers and job security. All employees work for money so that they can fulfill their desires. By giving good salaries and promotion opportunities, the performance of the organization, service quality and job satisfaction among employees can be increased.

The main interest of every employee is to earn money. Sound workplace and relations propel the employees to do great, subsequently expanding the level of their performance. In information technology sector, fairness is anticipated from the supervisors of all employees.
Fairness is the key to success within the organization. Relative importance index statistical method confirmed that pay and promotion, relationship with supervisor and relationship with co-workers are top most ranked factors while remaining three variables are lower in ranking. The study concludes with the emphasis that better services and increased organization’s performance can only be achieved through satisfied employee.

6.1 Future Research Areas

Job satisfaction is a very critical component of performance in all industries. This study targeted only software industry so future research can be conducted by collecting data from other industries like telecom, textile, food industry etc. This study used small sample size so future research can be conducted by taking a bigger sample size. Due to shortage of time we have taken responses from only twin cities Rawalpindi and Islamabad the research results may be different from other parts of the country. This research study has not investigated intrinsic factors which can also have influence on job satisfaction of employees. So managers and researchers could also explore the impact of different intrinsic factors such as skill variety, level of training and development, work meaningfulness, responsibility at work and the extent to which employees believe that their work has a substantial impact towards the organization’s vision and mission. Although these factors have low impact but they cannot be neglected.

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