Impact of Job Satisfaction and Job Control on Organizational Commitment: A Case Study of Air Traffic Controllers of Pakistan Civil Aviation Authority
Muhammad Iqbal

Abstract
The aim of the study is to investigate the impact of job satisfaction and job control on organizational commitment in air traffic controllers of Civil Aviation Authority (CAA). The study is mainly based on review of existing literature and collection of data through an adopted questionnaire survey, conducted from selected sample of Air Traffic Controllers of CAA. Total 134 questionnaires were distributed among the sample using proportionate stratified random sampling technique. One hundred and twenty two (122) respondents returned the questionnaire, which are utilized for the analysis purpose. The results of the study indicate that there is a positive impact of job satisfaction and job control on organizational commitment. Those air traffic controllers who had high level of job satisfaction and job control had high level of organizational commitment. This research paper is based on a specific case of Air Traffic Controllers. So the results are applicable to Air Traffic Controllers of CAA. A quantitative methodology is used to investigate the problem. Future research can investigate the problem by using a mix of quantitative and qualitative research methodology. The practical implications of the paper include implementation of the results provided by the researcher to increase employees’ job satisfaction and job control and increasing organizational commitment level.

Keywords: Job satisfaction, Job control, Commitment, and Air traffic controller

Introduction
Workplace emphasizes various issues related to organizational psychology, for example, job satisfaction, job control, employees’ performance, and organizational commitment. Job satisfaction is considered as a central concept in the work and organizational

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psychology. Morris & Sherman (1981) define job satisfaction as an employee’s effect response to various aspects of work environment. Employees who are satisfied and happy with their jobs are more dedicated to doing a good job and taking care of customers that sustain the operation.

Control is a term in psychology that refers to a person’s belief about what causes the good or bad results in his life, either in general or in a specific area such as health or academics. It also refers to an individual’s generalized expectations concerning where control over subsequent events resides. According to many researchers the type of locus of control an individual carries has an effect on level of job satisfaction (Lakshman & Mali, 2011).

Meyer (1997) concludes that commitment is understood as an employee’s intention to continue working in the organization; while Mowday, et al., (1979) point out that the organizational commitment is an attitude in the form of an attachment that exists between the individual and the organization, and is reflected in the relative strength of an employee’s psychological identification and involvement with the organization.

Balfour and Wechsler (1996) pointed out that overall organizational commitment is an appropriate and significant aspect to focus for organizational productivity and performance. Judge and Bono (2011) found that there is a positive correlation between internal locus of control and job satisfaction. Salazar et al. (2002) found that internal/external locus of control impacts job satisfaction.

Melissa (2007) viewed that organizations often forgot how to keep employees happy and satisfied once they had worked in the company for a substantial amount of time. Employees are seeking to understand which “link” they are in the organizational chain and to understand how they make a worthwhile contribution (Roslyn, 2008). There is an unambiguous association between job satisfaction and increased productivity (Hackman et al., 1975).

**Literature Review**

The relationship between job satisfaction and organizational commitment is important because employees often do not prefer to stay with the same organization for long. It has become difficult for the organizations to exercise influence on the employees to retain them. The most used research definition of job satisfaction is by Locke (1976), which is as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences.” Air Traffic Controllers job is inherently stressful and demanding, and their performance directly affects the organizational commitment and its productivity.
Marilyn (2003) argues that dissatisfaction with the job can lead to stress in the workplace; and factors such as barriers to achievement, harassment, lack of control over work, lack of feedback, lack of promotion, losing status, low pay, high performance expectations, poor work organization, role ambiguity, role conflict, uncertain job expectations, and unpredictable demands on time are all stressors that lead to job dissatisfaction.

Loveman (1998) identifies that satisfied employees are more committed to serving customers, which have been supported by Silvestro (2000) and Yoon & Suh (2003). Babjide and Akintay (2011) indicate that the pressure emanated from the job has considerably influenced the perceived level of job satisfaction, commitment, and compliance of the workers. Homburge and Stock (2004) argue that service employees with a high level of job satisfaction will appear to the customer more balanced and pleased with their environment, leading to positive influence on the level of customer satisfaction. Job satisfaction is generally believed a higher job satisfaction is associated with increased productivity, lower absenteeism, and lower employee turnover (Hackman & Oldham, 1975).

Researchers have argued that satisfied employees are more committed to serving customers (Loveman, 1998; Silvestro, 2000; and Yoon & Suh, 2003). The study showed that satisfied employees are more likely to work harder and provide better services via organizational citizenship behaviours (Yoon & Suh, 2003). Employees who are satisfied with their jobs tend to be more involved in their employing organizations, and more dedicated to delivering services with a high level of quality.

The service quality is influenced by job satisfaction of employees (Hartline & Ferrel, 1996). Service employees with a high level of job satisfaction will appear to the customer more balanced and pleased with their environment, leading to positive influence on the level of customer satisfaction (Homburg & Stock, 2004). Studies have reported that employee participation in decision making is positively associated with employee motivation, job satisfaction, organizational commitment, and to a lesser extent, job performance (Cotton et al. 1988; and Ganster, 1989).

There is a strong relationship between job satisfaction and organizational commitment (Ayeni & Phopoola, 2007). Fernando, et al. (2005) found that the relationship between organizational commitment and job performance is positive and stronger.

Job control is defined as “having influence over the work environment, including ability to influence the execution and the planning of work tasks” (Mark et al., 2006). Task control was found to buffer the effects of workload on stress and of acute strains on
musculoskeletal symptoms; while rest breaks received less consistent support as a moderator variable (Burnfield, 2005).

Evidence is growing that enhanced control at work can be an important element in employees’ health and well-being (Paul, 2002). Employees with low control can become frustrated and feel under appreciated (Medibank, 2008). Judge and Bono (2011) found that there is a positive correlation between internal locus of control and job satisfaction. Managers consider the most important sources of work stress to be lack of control and work life balance (Gupta, Bindu, & Tyagi, 2009). The perception of high work control buffers the negative effects of a stressful work situation on an individual’s health and well-being. A great deal of evidence links perceptions of control to several different kinds of strains.

Control can be over any aspect of work, including location, scheduling, and how tasks are done. Evidence is growing that enhanced control at work can be an important element in employees’ health and well-being (Paul, 2002). Control over one’s work (deadlines, outputs etc) has a strong impact on perceived stress, affecting both an individual’s self esteem, as well as their ability to achieve work goals. Employees with low control can become frustrated and feel under appreciated (Medibank, 2008). Low job control is recognized as another important source of stress (European Risk Obsservation Report, 2009).

Costa (1995) mentioned that the participation of the air traffic controllers in decision making appeared to be necessary to increase perceived influence, motivation, job satisfaction and performance efficiency, as well as to decrease stress and relative negative consequences, not only for the individual, but also for the organization. Cotton, et al. (1988) claimed that employee participation in decision making was generally based on the assumption that employee participation was associated with more favourable work outcomes. Cotton, et al. (1988) inferred that several reviews of the literature had concluded that employee participation in decision making was positively associated with employee motivation, job satisfaction, organizational commitment, and to a lesser extent, job performance.

Roslyn (2008) revealed that by listening to employees and achieving buy-in on decisions involving major change in the organization and by incorporating employees’ ideas and opinions, managers would establish a participatory process which would lead to overall employee ownership of the issue or change taking place.

Lakshman and Mali (2011) conclude that the results indicate that there is a positive correlation between internal locus of control and job satisfaction as well as between external (other) locus of control and job satisfaction.
Organizational commitment has an important place in the study of organizational behaviour. This employee positively contributes to the organization because of its commitment to the organization. Balfour and Wechsler (1991) pointed out that overall organizational commitment is an appropriate and significant aspect to focus for organizational productivity and performance.

Meyer and Herscovitch (2001) defined commitment as: “a force that binds an individual to a course of action that is of relevance to a particular target”. When employees are sure that they will grow and learn with their current employers, their level of commitment to stay with that particular organization is higher (Okpara, 2004).

The research on commitment in the workplace dates back to the 1960s, and focused at first on the idea of organizational commitment (Cohen, et al., 2003). Meyer (1997) concludes that commitment is understood as an employee’s intention to continue working in the organization; while Mowday, et al., (1979) point out that the organizational commitment is an attitude in the form of an attachment that exists between the individual and the organization, and is reflected in the relative strength of an employee’s psychological identification and involvement with the organization. Committed and satisfied employees are normally high performers that contribute towards organizational productivity (Samad, 2007). Muhammad, et al. (2010) indicated that the satisfaction with work-itself, quality of supervision and pay satisfaction had significant positive influence on university teachers’ they had high degree of organizational commitment and satisfaction with work-itself, supervision, salary, coworkers and opportunities for promotion.

Khan, et al. (2011) indicated that commitment was more strongly related to performance when employees had more job experience. High job experience employees have high commitment within the organization and low job experience employees have low commitments. Job experience effect the organizational commitment and job performance Khan, et al. (2011). When employees are sure that they will grow and learn with their current employers, their level of commitment to stay with that particular organization is higher (Okpara, 2004). The research on commitment in the workplace dates back to the 1960s, and focused at first on the idea of organizational commitment (Cohen, et. al, 2003). Another study indicates that the satisfaction with work-itself, quality of supervision and pay satisfaction has significant positive influence on university teachers’ they have high degree of organizational commitment and satisfaction with work-itself, supervision, salary, coworkers and opportunities for promotion (Muhammad et al., 2010). Fernando, et al. (2005) found that the relationship between organizational commitment and job performance is positive and stronger.
There is a strong relationship between job satisfaction and organizational commitment (Ayeni & Phopoola, 2007).

**Conceptual Framework**

There are two major objectives to conduct this study, firstly, to classify two significant variables - job satisfaction and job control, which contribute to air traffic controllers’ commitment; and secondly to analyze their relation with organizational commitment keeping the scenario of Pakistan Civil Aviation Authority in view. So resultantly this research will provide a practical implication for the further insight as to what extent can the selected variables influence in the organizational commitment among air traffic controllers of Pakistan Civil Aviation Authority. Two main constructs are included in the proposed research model below encompassing job satisfaction and job control. The definitions of these variables are listed as follows:

- Hackman and Oldham (1975) argued that job satisfaction includes general elements and specific elements: the whole perception of job pleasure is considered as general elements; job security, pay, co-worker, supervision and personal growth and development are considered as specific elements.
- Mark et al. (2006) define the job control as “having influence over the work environment, including ability to influence the execution and the planning of work tasks.”

Keeping in view the reviewed literature of the variables, their relationships are illustrated in figure 1. Both the job satisfaction and job control positively affect organizational commitment:

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**Figure 1: Diagram of the Conceptual Framework**

The above framework can be hypothesized in the following null and alternative way:

**Hypothesis 1:**

H0: Job satisfaction does not affect organizational commitment
H1: Job satisfaction affects the organizational commitment

Hypothesis 2:
H0: Job control does not affect organizational commitment
H1: Job control affects the organizational commitment

Methodology

Population and Sampling
The population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate (Uma & Roger, 2009). Population for the current study includes air traffic controllers of Pakistan Civil Aviation Authority, as the target population working in four international airports – Karachi, Lahore, Islamabad, and Multan. These airports were randomly selected where 81% of total aircraft movements reported; 87% of total passengers travelled; and 95% of total cargo handled. Total population for the current study includes 670 air traffic controllers of Pakistan Civil Aviation Authority. 20% of the total population was selected as sample. Detail of drawing sample from the whole population is given in Table-1. Researcher distributed 134 questionnaires to the respondents randomly by making lists and then selecting blindly out of which one hundred and twenty-two (122) air traffic controllers completed the questionnaire and the rest did not return it for unknown reasons. The response rate was 91% which is very much acceptable in social sciences research (Fowler, 1988). The participants were 5% female and 95% male with mean age of 42 years. More than 90% of them were married (115 respondent or 94.3% and 7 single) and rest were single. The sample represented 39 belonged to lower level management, 43 from middle level management, and 36 from senior level management. The average experience of the participants in their present profession was 15.3 years.

Table 1: Population and Sample Statistics

<table>
<thead>
<tr>
<th>Name of Airport (Population)</th>
<th>Total Air Traffic Controllers (Element)</th>
<th>Proportionate Sampling (20% of the elements)</th>
<th>Questionnaire Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karachi</td>
<td>325</td>
<td>65</td>
<td>64</td>
</tr>
<tr>
<td>Lahore</td>
<td>280</td>
<td>56</td>
<td>51</td>
</tr>
<tr>
<td>Islamabad</td>
<td>30</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Multan</td>
<td>35</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>670</td>
<td>134</td>
<td>122</td>
</tr>
</tbody>
</table>
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Instrument Development
Researcher has adopted the questionnaire developed by University of Newcastle’s Engineering and Built Environment Research Ethics Committee (2005) for the current study with some changes after conducting pilot study and deliberation in the focus group’s meeting so that local values and traits could also be included for greater validation. Total 92 questions were included in the questionnaire having different sections. First section of the questionnaire is related to demographics of the respondents, consisting of 8 questions, which covered variables like age, gender, education, marital and job status, number of children, leave record and service record of respondents. For analyzing other 3 variables i.e. Job Satisfaction, Job Control, and Organizational Commitment 36 questions were included in the questionnaire (12 for each variable). A five-point Likert Scale, in which 1 indicated ‘strongly disagree’, 2 indicated ‘disagree’, 3 indicated neither agree nor disagree’, 4 indicated ‘agree’, and 5 indicated ‘strongly agree’ is used for measuring the response.

Data Analysis
Various statistical methods have been employed to compare the data collected from 122 respondents. These methods include cross-sectional analysis, descriptive analysis and regression analysis. Each method is used to analyze the relationship of the variables. The method of this study involved cross-sectional types of research methodology based on the guideline given by Hussey and Hussey (1997). The descriptive analysis was done to describe a set of factors in a situation that would make them easy to understand and interpret. According to Zikmund (2000), the regression analysis is an extension of bivariate regression analysis, which allows for the simultaneous investigation of the effect of two or more independent variables on a single interval scale dependent variable (Zikmund, 2000). For this study, there are two independent variables – Job Satisfaction and Job Control, a linear regression is fitted for these variables.

Reliability
Reliability of the items was verified by computing the Cronbach alpha. Nunnally (1978) suggested that a minimum alpha of 0.6 sufficed for early stage of research.

Table 1.1: Reliability Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach Alpha Based on Standardized Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment</td>
<td>0.944</td>
</tr>
</tbody>
</table>
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Since all the variables have the alpha values greater than 0.6 the constructs were therefore deemed to have adequate reliability.

After measuring the reliability a correlation analysis was performed to check the type of relationship among the Organizational Commitment, Job Control and Job Satisfaction. The results are shown in Table 1.2 which revealed that Job Satisfaction has a high 0.792 positive correlation with organizational commitment, while Job Control also has a positive correlation 0.745 but lower than Job Satisfaction, so as the Job Satisfaction and Job Control increase commitment may also increase.

To check how much change will occur in dependent variable i.e. Organizational Commitment due to change in Job Satisfaction and Job Control a multiple regression analysis was performed and reported in the Table 1.3.

The results show that Job Satisfaction and Job Control have a significant effect on organization commitment; since both the coefficient have a high t-value. The coefficient of Job control is 0.39 which means that if job control increases by one point organizational commitment will increase on average by 0.39 point, while the coefficient of Job Satisfaction shows that if it increases by one point organizational commitment will increase on average by 0.57 point more, the intercept term shows the average value in the absence of Job Control and Job Satisfaction which is quite low and statistically insignificant. Table 1.4 shows the overall significant of the model based on R2, the value of R2=0.69 shows that 69% variation in organization commitment occurs due to Job Control and Job Satisfaction. Table 1.5 shows the analysis of variance. Thus the statistical results prove that positive and strong linear relationships exist between dependent and independent variables.

<table>
<thead>
<tr>
<th>Table 1.2: Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Job Satisfaction</td>
</tr>
<tr>
<td>Organizational Commitment</td>
</tr>
<tr>
<td>Job Control</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
</tbody>
</table>
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** Table 1.3: Regression Analysis **

<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>1</td>
<td>(Constant) 0.07</td>
<td>0.12</td>
<td>0.57</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>Job Satisfaction 0.57</td>
<td>0.08</td>
<td>0.53</td>
<td>7.39</td>
</tr>
<tr>
<td></td>
<td>Job Control 0.39</td>
<td>0.08</td>
<td>0.37</td>
<td>5.14</td>
</tr>
<tr>
<td></td>
<td>Dependent Variable: Organizational Commitment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Table 1.4: Model Summary **

<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>1</td>
<td>0.83</td>
<td>0.69</td>
<td>0.69</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Job Control, Job Satisfaction

** Table 1.5: ANOVA (b) **

<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>1</td>
<td>Regression 47.26</td>
<td>2.00</td>
<td>23.63</td>
<td>135.28</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Residual 20.78</td>
<td>119.00</td>
<td>0.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total 68.04</td>
<td>121.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predictors: (Constant), Job Control, Job Satisfaction

** Hypotheses Testing **

Following the guidelines established by Hair et al. (1998), the two hypotheses were tested and the data were analyzed using multiple linear regression analysis. The overall model is significant at the 1% level. Both variables, Job control and Job satisfaction have a positive and highly significant effect on Organizational Commitment since the t value greater >2 and P=0;
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Hypothesis 1:

H0: Job satisfaction does not affect organizational commitment
H1: Job satisfaction affects the organizational commitment

Since the t-value is greater than 2, as a rule of thumb, we reject H0; hence job satisfaction has a significant effect on organizational commitment. The sign of coefficient is positive and has a positive effect; as the satisfaction increases the commitment also increases; while the value of coefficient is 0.57, which shows that if job satisfaction increases by one unit the commitment will increase by 0.57 unit.

Hypothesis 2:

H0: Job control does not affect organizational commitment
H1: Job control affects organizational commitment

The second hypothesis is also rejected since the t-value is greater than 2, we H0 is, therefore, rejected, hence job control has a significant effect on organizational commitment. The sign of the coefficient is positive showing a positive effect, as the satisfaction increases the commitment also increases, while the value of coefficient is 0.39 shows that if job control increases by one unit the commitment will increase by 0.39 unit.

Conclusion

This study focused to investigate the impact of job satisfaction and job control on organizational commitment through a simple linear regression and correlation analysis. The analysis demonstrates a positive significant affect of job satisfaction (+) and job control (+) on organizational commitment. Those air traffic controllers who had high level of job satisfaction and job control impacted on their organizational commitment positively. The regression coefficient of job satisfaction, which is 0.57, shows that if job satisfaction increases by one unit the commitment will increase by 0.57 units, while the value of coefficient of job control is 0.39, which shows that if job control increases by one unit the commitment will increase by 0.39 units.

Like other empirical studies, this study is not without its limitations. The results are only applicable to air traffic controllers of Pakistan Civil Aviation Authority and may limit the generalization of the results. More factors or variables can also be included in the theoretical framework as organizational commitment may have many different aspects of the working environment.
Acknowledgement

It has been a challenge but enriching experience to complete this research paper. I wish to thank everyone who helped me complete this article. Without their continued efforts and support, I would not have been able to bring my work to a successful completion. My sincere thanks to the respondents – the Air Traffic Controllers of Pakistan Civil Aviation Authority who facilitated this research work. My special thanks to Prof. Dr. Abdul Latif, Dean, Faculty of Management Sciences, Islamia University, Bahawalpur, and Syed Ammad, Research Scholar, who shared their views for providing the valuable qualitative information.
References


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