**Effect of Employee Work Stress, Work Satisfaction and Work Values on Organizational Commitment**

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**Abstract**

With an increase of 13.4% passengers occurred in 2014, the airline industry face the atmosphere of aviation safety and customer service satisfaction, often appear so airline personnel work stress emotions, resulting in reduced efficiency and even affecting flight safety. As airline employees carry important transportation mission, therefore aviation staff awareness of the work values. In this study, taking employee of the domestic airline as the object, we explore the effect among airline staff facing job satisfaction, work values and commitment by looking at different departments. Our research findings show that job satisfaction, work values, and organizational commitment in varying job classifications, staffs have a different perception. Employees working achievements and challenges of higher self-satisfied person, or can feel their expertise when the work value of the employees will have stronger organizational commitment. Further to the intrinsic values of employee self-affirmation, promotion and remuneration of extrinsic values, both have a positive impact on organizational commitment. Especially pilots and flight attendants cognitive intrinsic values are more evident, thus higher organizational commitment. Company executives shall pay attention to the work of self-affirmation of the intrinsic values of cognition to the administrative staff.

*Keywords: Work stress, Work satisfaction, Work value, Organizational commitment.*

**1、Introduction**

According to the International Civil Aviation Organization (ICAO) reports that 3.5 billion passengers buckled up for take-off in 2015, a 6.4 per cent increase over last year. And the International Air Transport Association (IATA) expects that number to jump to 3.8 billion next year, an 8.6 per cent increase over 2015.

Recently, due to the developments in economy and trade between Taiwan and Mainland-China, tourism between these two countries has increased significantly. Taiwan airline industry has boomed and its output has reached about US $10.71 billion or 2.6% Of GDP annually. In addition the aviation sector supports 122,000 jobs in Taiwan. In 2012 and 2013, number of visitors had 45.42 and 48.82 million respectively. It increased 9.7% and 7.5%, comparing with the previous year. Furthermore the visitors reached to 55.35 million with daily average 151,662 visitors. It increased 13.4%, comparing with 2014. Civil Aviation Authority predicts that by the year 2030 the traffic volume will reach to 58.9 million visitors annually according to 2012-2014 annual report on Taiwan Civil Aviation statistics.

As the fact, a success composition of airline management team must include five sectors, such as, pilots, flight attendants, ground service officers, maintenance personnel, and administrative staff. In fact, they must have specific skills, dedicate mind, and the enthusiasm for service. Some factors may lead to airline employees to have some negative emotions, such as work values. Therefore, this research is conducted through a questionnaire survey to staff from five different departments of the largest domestic airlines company in Taiwan, seeking for the influential difference of airline employee’s cognitions of work stress, work satisfaction, work values, and organizational commitment. It is also to explore and understand the relationship of influential perceptions to the organizational commitment among employee from the five distinct departments, and try to provide relevant recommendations for management and decision making.

**2、 Literature Review and Research Hypotheses**

**2.1 Organizational Commitment**

Organizational commitment refers to the employee’s attachment to the employing organization–namely, the commitment to the entire organization as the employee perceives it [1] and the organization’s support for the employee [2]. Organizational commitment is defined as “the relative strength of an individual’s identification with and involvement in an organization” [3]. Porter, Steers, Mowday and Boulian (1974) argues that organizational commitment refers to the personal identification of individuals for a particular organization and relative intensity of inputs, and via understanding of the organizational commitment to find ways to retain at work and increase employee performance method [4]. Organizational commitment refers to employee identification with, and involvement in, a particular organization [5] Higher levels of commitment are reflected in lower rates of turnover [6] [7] and are also believed to be related to enhanced productivity and better delivery of services. According to Buchanan (1974) organization commitment is the emotional connection to a particular organization, which is characterized by three major facets by the individual’s attitudes towards the organization [8]. They are 1. Identification about internalization of the organization’s goals and values; 2. Involvement for activity that the employee performs as part of their role; and 3. Loyalty of a sense of belonging to the employing organization. Robbins (2001) also refers to workers’ identification with goals of the organization as willingness to become and to maintain a member of the organization, and further to invest effort in order to support the organization’s goals [9].

Such a development might take place in order to spare the employee cognitive dissonance and to preserve a positive self-perception of controllability. According to this approach, the employee might reach a psychological state of commitment solely as a result of engaging in binding behaviours. That is, behaviour which in fact turns the termination of the organizational commitment into a substantial price such as accumulation of a retirement fund, seniority. According to the attitudinal approach, commitment is perceived to be a stance or a psychological state. Employees can examine their relations with the organization, and on the other hand examine the degree to which their own values meet the organization’s goals [10] [11] [12] after examining flight crew and ground service personnel of the airline industry, found out that when employees’ perception of their payment is high, then their commitment of willingness to retain at work to organization will also increase.

The behavioural approach to organizational commitment holds that the employee is committed to a certain mode of action in the organization as a whole, but is not necessarily committed to any particular entity in the organization [13] [14]. Chuang (2009) in a study on employees of airlines in Taiwan revealed that airline ground service personnel had high levels of perception of commitment and turnover rate is low [15]. Tang doubts that employee with different backgrounds, such as marriage status, working experience, working position, and the company size, could also have correlation by attitude performance [16]. Besides, there are some reports about the relationship between organizational commitment or job satisfaction and employees with different background by age or gender [17]. Porter et al. (1974) noted that organizational commitment includes value, effort and retention commitments [4]. Similarly, Mowday et al.(1982) also defined three characteristics of organizational commitment as that employees believe organization’s targets and the values as to identification; they are willingness to pay back to organization with efforts; they will retain within the organization [3].Therefore this study will relate to organizational commitment with three variables as identification, hard work effort, retain.

**2.2 Work Stress**

The elements of work stress are affected due to personal, organizational and job-related factors. French, and Kahn Considered that the work stress is due to being unable to adapt to work resulting in an unpleasant feeling [18].Being unable to adopt probably comes from the work itself, work environment or workers being unable to cooperate with each other. Stressors are defined as the “antecedent conditions within one job or the organization which require adaptive responses on the part of employees”. On the other hand, job strain is a reaction or outcome resulting from the experience of stressors and maybe classified into three areas: psychological / emotional, physical, and behavioural [19]. Steers (1988) considers the work stress is coming from workers facing some threats caused by the certain characteristics of work environment [20]. Stress is the subjective feeling that work demands exceed the individual's belief in his or her capacity to cope [21]. [22].According to [23] this tension is manifested as nervousness and apprehension about their work, as well as by ill health and physical symptoms. Robbins (2005) said that stress can cause dissatisfaction and job-related stress can cause job-related dissatisfaction [24]. Job dissatisfaction is the simplest and most obvious psychological effect of stress. It has been found that exposure to a stressor, such as role conflict or role ambiguity, has deleterious effects on employee job performance [25] [26] [27] stated Work stress is caused by workers unable to adapt to the working environment, workers directly affected causing individual physiological, psychological and behavioural changes. Sources of work stress factors are multidimensional, so research methods and objects are also not the same, resulting in different findings. Workplace stress can lead to increased health/medical costs, higher rates of absenteeism and turnover, more accidents, and worse performance. [28] [29] [30]stated that work stress has six main factors including workload, relationships, role conflict, family factor, environmental factor and supervisor conduct style. Based on the aforementioned literature review, in this study we use work load, family environment and interpersonal relationships for work stress.

Work stress has an obvious negative impact on the individual and equally deleterious effects on the organization and the economy. The costs of stress can be enormous, due to lost time, reduced production, and accidents [31] [32] [33] [34] Lack of employee commitment to the organization is one of the negative consequences of stress. Two distinctive approaches to defining organizational commitment are found in the literature: as an employee’s intention to continue employment in an organization [35] and as an attitude in the form of an attachment between the individual and the organization that is reflected in the relative strength of an employee’s psychological identification and involvement with the organization [36] The attitudinal approach is prevalent to defining organizational commitment [37] [38] To put it simply, as [39] concluded, high stress reduces job performance. Therefore, it is hypothesized that job stress will have direct negative effect on job performance. Based on the above, hypothesis is developed as follows:

H1: Work stress has a negative impact on organizational commitment.

**2.3 Work Satisfaction**

The concept of work satisfaction is firstly brought up by [40] He mentions that work satisfaction depends on employee’s mental and physical state, feelings toward work environment and perception of work satisfaction itself, which is workers’ subjective response to work situations. Work satisfaction refers to a collection of feelings toward the job. A number of organizationally relevant behaviours are thought to be the result of job satisfaction or dissatisfaction [41] Satisfied employees would seem more likely to talk positively about the organization, help others, and go beyond the normal expectations in their job [24] [42] argues that work satisfaction is a personal attitude towards work, and it is an important factor in workplace. [43] Give a comprehensive definition of job satisfaction as pleasurable or positive emotional state resulting from the appraisal of one’s job or job experience. Job satisfaction is a result of employee's perception of how well their job provides those things that are viewed as important. In favour of the control of job satisfaction by factors intrinsic to the workers, some arguments are based on the idea that workers deliberately decide to find satisfaction in their jobs and perceive them as worthwhile (e.g. [44] [45]). Explaining its nature some researcher [46] 47] [48] tend to agree that job satisfaction is essentially controlled by factors described in [49] perspectives as external to the worker. From this viewpoint satisfaction on a job might be motivated by the nature of the job, its pervasive social climate and extent to which workers peculiar needs are met. Working conditions that are similar to local and international standard [50] and extent to which they resemble work conditions of other professions in the locality. Other meaningful relations to job satisfaction are the availability of power and status, gaining respect, promotion opportunities, wages and benefits’, working conditions, task clarity, self-development and achievement of the use of talents [51] Age is also one of the factors affecting job satisfaction so that older workers are more satisfied. It is meaningful relationship between the job satisfaction and age, to professional experience or educational level [52] and to sex [53] [54].

According to [55] it is generally recognized in the organizational behaviour field that job satisfaction is the most important and frequently studied attitude. [56] While posited that job satisfaction has three important properties. First it is an emotional response to a job situation. As such it cannot be seen, it can only be inferred. At second, job satisfaction is often determined by how well outcome meet or exceed expectations. For instance, if organization participants feel that they are working much harder than others in the department but are receiving fewer rewards they will probably have a negative attitudes towards the work, the boss and or co-workers. On the other hand, if they feel they are being treated very well and are being paid equitably, they are likely to have positive attitudes towards. The third, job satisfaction represents several important related attitudes which are a job about which people have effective response to the work itself, pay, promotion opportunities, supervision and co-workers. Hence work satisfaction is so important in that its absence often leads to lethargy and reduced organizational commitment [57] [58]reveal that, in which high commitment was associated with high satisfaction. [17] Shows the results of meta-analysis that there is strong correlation between organizational commitment and global job satisfaction, and the result shows that organizational commitment is relates to age and gender as well. Lack of job satisfaction is a predictor of quitting a job [59] [60] In this study, work satisfaction includes internal satisfaction from work characteristic, external satisfaction for payment and promotion, and general satisfaction to colleague’s relationship and communication. [61] Examined the relation of perceived support with job satisfaction. They found a significant positive relationship between job satisfaction and organizational support. Additional studies by [62] [63] [64] and [65] reached similar conclusions. According to [4] work satisfaction has a positive effect on organizational commitment. To find out whether employees’ perceived satisfaction by work to commitment, the hypothesis is formulated:

H2: Work satisfaction has a positive impact on organizational commitment.

**2.4 Work values**

Ginzberg, (1951) is one of the earliest studies to propose the categories of work values. [66] He divides work values into three categories by intrinsic values, extrinsic values, and the concomitant values. Work values are generally defined as “the goals or rewards people seek through their work, and they are expressions of more general human values in the context of the work setting” [67] According to [68] work-related values can be divided into three dimensions including work-related activities, values coming along with work, and values related with work result. The first dimension is intrinsic work value, the latter two are extrinsic work values. The intrinsic value dimension consists of altruism, stimulation of creativity, intelligence, independence, the pursuit of beauty, the feeling of accomplishment and regulatory authority. The extrinsic value dimension contains lifestyle, safety, prestige and financial rewards and the concomitant part with environment, colleagues, and relationship with superiors and variability. [69] Argued that work values are thought to predict work behaviour and outcomes, including job performance. They demonstrated a direct relationship between the value of achievement and job performance in a service-sector field setting. As [70] suggests, work values combine with other factors (objective/perceived sociotechnical working conditions) to generate psychological and other reactions (health and well-being) among workers, as well as work performance (e.g., productivity) Recently, a three component conception of commitment has been developed, which includes affective, continuance, and normative commitment [71] However, other studies have demonstrated that the three facets of organizational commitment and job performance are positively correlated [72] [73] [74] divides the work values into work expectations and beliefs, and expectations of work refers to the work content and the result of evaluating the significance of the various internal and external benefits. Previous research on work value, academics commonly used two classifications by intrinsic and extrinsic work values [75] [76] [77] [78] Key point of intrinsic work values lies in the work itself, such as autonomy and conform to personal interest. Work itself can provide a sense of personal achievement or a chance of self-accomplishment, and so on [79] [80] Extrinsic work values are more emphasized with getting along with work and work related affairs such as, payment benefits, social status, interpersonal relationships and so on [81] On the aforementioned illustration, in this study work value dimensions are grouped as intrinsic work values and extrinsic work values.

[82] also noted that the work values will affect the wishes of people to join and to stay in the organization, but also affect the individual wishes of the efforts for the organization. In the study of manufacturing industry, [83] [84] founded that the higher the intrinsic value of employees, the higher the relative commitment of their organizations. To the relationship between intrinsic and extrinsic work values and organizational commitment, others suggest that commitment is shown through the congruence between individual and organizational goals and values [8] [5] [3]which indicate that work values and individual attitudes may play a very important role of explaining employees’ affective commitment to an organization [3] [85] [86]indicated that the intrinsic work values are related more closely to organizational commitment than extrinsic work values. The higher cognitive work values causes to higher career intention [87] [71] suggested that employees will differ in work values and that `a particular type of work experience...should influence commitment only among those employees for whom it is relevant'. [88] Reported significant correlations between work values and commitment. Based on the above, three hypotheses are developed as follows:

H3: Work Value has a positive impact on organizational commitment.

H3a: An intrinsic value has a positive impact on organizational commitment.

H3b: An extrinsic value has a positive impact on organizational commitment.

Due to airlines employees work stress will affect flight safety and result in work environment not satisfaction. This research based on previous literatures and use domestic airlines company’s five different departments’ employees, to explore the difference of work stress, and work satisfaction levels and work values on organization commitment’s effect, and while understanding gender, age, education, service sector, positions, and work seniority, This research framework is shown in Figure 1.

Hl

H2

H3

**Work satisfaction**

1. Internal satisfaction (work characteristic)
2. External satisfaction (payment and promotion)
3. General satisfaction (colleague’s relationship and communication)

**Work value**

1. Intrinsic

2. Extrinsic

**Work stress**

1. Family environment
2. Interpersonal relationships
3. Work load

**Organizational commitment**

1. Identification
2. Hard work effort
3. Retain

Figure 1.Research framework

**3、Research method**

**3.1 Questionnaire and measures**

In this research, appropriate evaluation of constructs was done through extensive literature review and to complete the study, a questionnaire was developed referencing various previous studies. About sources of work stress, [89] was referenced and a revised version of measure of 14 items was used. The study also referencing [90] on characteristics of airline employees, the measure with 10 items was revised to work satisfaction. The items on work values was refereed by [78] Liang (2012) with 9 items. In addition, this study also refers to "organizational Commitment Questionnaire" of [4] and [3] on the tendency about "identity, willingness to stay, and effort to work", as measure of organizational commitment of 11 items. Hence this research questionnaire is divided into five constructs, a total of 44 items were included, measured by a Likert scales with 7 points of totally agree, as well as some related geographical variables.

**3.2 Methods for data analysis**

In this research, descriptive statistics was done mainly to understand various geographical characteristics of samples including gender, age, marital status, education level, service department, position, work seniority, and average salary. Later, reliability analysis conducted to understand questionnaire’s stability and consistency. Through ANOVA were analyses to understand the mean difference among the levels of demographical variables. Moreover, we use regression analysis to test the hypotheses about the relationship from work stress, work satisfaction, work values, to the organization commitment.

**4、Analysis of study results**

**4.1 Sample Data**

In total of 300 questionnaires was sent, from which 284 questionnaires were received and only 270 questionnaires were suitable and completed, including 58 pilots, 50 maintenance personnel, 70 flight attendants, 48 ground service officers and 44 administrative personnel. Recovery rate is 94.6%, and effective sample rate is 90%. Within the samples 55.6% were male, and 44.4% were female. Among respondents, 26-50 years of age account for 87%; where as 64.4% are married. College degree has the highest proportion with 88.1% to education level, and current position majority were ordinary employees at 85.2%. All measures including intrinsic and extrinsic facets of work values had Cronbach alphas greater than the cut-off point of 0.7 suggested by [91] and [92] Each construct or facet has its internal consistency (see Table 1).

Table 1： The reliability of constructs

|  |  |  |
| --- | --- | --- |
| Constructs | Items | Cronbach α |
| Organizational commitment | 11 | 0.870 |
| Work stress | 14 | 0.837 |
| Work satisfaction | 10 | 0.810 |
| Work values | 9 | 0.901 |
| Intrinsic work values | 3 | 0.858 |
| Extrinsic work values | 6 | 0.865 |

**4.2 Modal analysis**

**4.2.1 Correlation analysis**

First we explore the correlations for job stress, job satisfaction, work values to organizational commitment in the overall or separately due to the property of work of various departments as shown in Table 2. On the overall perception of staff, in addition to work stress, work satisfaction and work values ​​associated with organizational commitment there were a significant positive relationship, airline employee’s perception of work stress has negative but not significant on organizational commitment within all five departments. Ground service officers in the face of the working environment and interpersonal relationships, will produce a sense of workload, thereby affecting organizational commitment. Work satisfaction cognitive airline employees to organizational commitment has significant positive relationship (r= 0.73) on overall; also other five departments (0.7< r < 0.755) are significant too. This show that employees currently work departments are feeling more joyful, due to the nature of the service, and because of the high technical level of professionalism, respect to the successful completion of the work, a sense of achievement is higher.

Second, the airline employees' work values ​​to organizational commitment has significant positive relationship (r= 0.667), similarly other five departments (0.69< r < 0.758) are significant too. Employees that the work will get job promotion, and to establish their own social prestige. Airline employees' intrinsic work values and organizational commitment has significantly positive relationship (r= 0.662), and also within all five departments too. Employees can display more emphasis on service to the community through people, in the work to achieve their ideals. Airline employees' extrinsic work values to organizational commitment in whole (r= 0.60) or in accordance with terms of five departments (0.572< r < 0.736) show significantly positive relationship too. Employees perceive that the ideal could apply to work, and can give full play to the autonomy.

**4.2.2 Analysis of variance of the demographics**

Organizational commitment and influence of facets, variation in the levels of sex, age, and other six demographic variables analyzed, and Scheffe multiple comparisons of the post-test are shown in Table 3. Work values have mean difference between genders. Women in intrinsic work values (M= 14.22) and extrinsic work values (M= 24.72) are lower than those by men (M= 15.47, M= 26.99 respectively), compared with male employees it can be seen through the work of self-affirmation by the ideals of life and get a sense of accomplishment. In addition older Age with above 51 years of age at the intrinsic values, job satisfaction and organizational commitment cognitive younger persons with 18-30 years age is higher. Master degree in education on the work value (M= 45.16) and job satisfaction (M= 57.21) awareness is higher than staff with high school level (M= 33.69, M= 45.31 respectively). Flight pilots and flight attendants awareness at the work stress are higher than administrative staff. Flight pilots cognitive cue to the highest work values (M= 49.09) than staff at other four departments (M=39.54, M=39.47, M= 37.79, M= 37.45, respectively). Flight attendants of working satisfaction awareness and organizational commitment (M= 45.73, M= 50.50 respectively) are lower than pilots (M= 50.12, M= 56.34 respectively); To the staffs’ position the cognition of intrinsic work values does not show significant difference. Job satisfaction, work values and extrinsic values have the largest for the highest position with cadre or head titles.

According to the above ANOVA results probe, organizational commitment will be the existence of differences among the five departments, and job satisfaction and work values ​​in different sectors there are also significant differences. Especially, flight pilots show the largest cognitive to organizational commitment and work values, as well as intrinsic and extrinsic perceptions. Therefore, we will go to further explore the various structures in the face of organizational commitment in different sectors applying multiple regression models.

Table 2： Correlations between independent factors and organizational commitment

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Independent variables | Organizational commitment | | | | | |
| Total | Pilots | Maintenance personnel | Flight attendants | Ground service | Administrative staff |
| Work  stress | -0.078 | -0.023 | 0.166 | -0.04 | -0.377\*\* | -0.141 |
| Work satisfaction | 0.730\*\*\* | 0.729\*\*\* | 0.729\*\*\* | 0.710\*\*\* | 0.755\*\*\* | 0.700\*\*\* |
| Work  values | 0.667\*\*\* | 0.690\*\*\* | 0.725\*\*\* | 0.758\*\*\* | 0.690\*\*\* | 0.724\*\*\* |
| Intrinsic  work values | 0.662\*\*\* | 0.544\*\*\* | 0.660\*\*\* | 0.753\*\*\* | 0.728\*\*\* | 0.560\*\*\* |
| Extrinsic  work values | 0.600\*\*\* | 0.612\*\*\* | 0.626\*\*\* | 0.536\*\*\* | 0.673\*\*\* | 0.705\*\*\* |

Note：Significant at \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

Table 3 ：Analysis of variance to the demographics and Scheffe Test

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Demographics |  | Dependent Variable | | | | |
| Stress | Work values | Intrinsic  values | Extrinsic  values | Satisfaction | Organizational  commitment | |
| Gender | 3.458 | 10.198\*\* | 10.772\*\*\* | 7.912 | 2.721 | 6.661 | |
|  | 2<1 | 2<1 | 2<1 |  |  | |
| Age | 0.237 | 3.750\*\* | 2.421\*\*\* | 4.009\* | 3.225\*\* | 3.436\*\* | |
|  | 2<8 | 1<8 | 2<8 |  | 1<7 | |
| Education | 2.310 | 6.570\*\* | 3.257\* | 7.099\*\* | 3.373\* | 2.005 | |
|  | 1<(2,3) |  | 1<(2,3) | 1<3 |  | |
| Department | 10.662\*\*\* | 20.309\*\*\* | 11.541\*\*\* | 21.076\*\*\* | 3.646\*\* | 4.172\*\* | |
| 5<1,5<3 | (5,4,3,2)<1 | (3,5,4,2)<1 | (5,4,2,3)<1 | 3<1 | 3<1 | |
| Position | 7.328\*\* | 6.430\*\* | 2.236 | 7.920\*\*\* | 15.656\*\*\* | 16.196\*\*\* | |
| 3<1 | (1,2)<3 |  | (1,2)<3 | (1,2)<3 | 1<(2,3) | |
| Seniority | 1.089 | 5.237\*\* | 2.312 | 5.897\*\* | 8.785\*\*\* | 8.272\*\*\* | |
|  |  |  |  | 2<4 | 2<4 | |

Note 1: Significant at \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

Note 2: Gender: 1=male, 2=female; Age: 1=18~25, 2=26~30, 3=31~35, 4=36~40, 5=41~45, 6=46~50, 7=51~55, 8= above 56; Education: 1= high school, 2= college, 3= master; Department: 1= pilot, 2= maintenance, 3= flight attendants, 4=ground service, 5= administrative; Position: 1= ordinary staff, 2= foremen or supervise, 3= cadre or head; Seniority: 1= 1, 2= 2~9, 3= 10~20, 4= above 21 years.

**4.2.3 Regression analysis**

With job stress, job satisfaction and work value ​​and intrinsic, extrinsic work values on the organizational commitment of regression analysis results are shown as model 1 and model 2 in Table 4. Then, with common independent factors of stress, job satisfaction, we follow the regression analysis by each of five departments are shown in Table 5 for model 1A with work value and model 2A with intrinsic, extrinsic work values in Table 6.

Comparing the regression results between Model 1 in Table 4 and Model 1A in Table 5 using work values as one of independent variables, working stress to organizational commitment overall is negative, but the impact is not significant, as well as to the other five departments neither. This shows that the majority of employees in the face of airline operating pressure for companies is still very high sense of identity and loyalty, and pride in being part of the company. Organizational commitment regression by job satisfaction have significantly positive impact (b= 0.506) overall and in all departments, and the impact of the ground service workers with the highest (b= 0.647) satisfaction. From model 2 in Table 4 and model 2A in Table 6, work stress is still a negatively non-significant impact. The regression effect of job satisfaction on the organizational commitment in model 2 and model 2A are significantly positive as a whole and in terms of five departments. These results have the same perspectives as those in Model 1 or Model 1A.

Secondly, the regression analysis to overall work values on organizational commitment (b= 0.323) has significant positive effect. The order of effect among the departments is flight attendants (b= 0.514), administrative, maintenance, and flight pilots (b= 0.387); but the effect of work values from ground service workers is non-significant. This result presents that the employees from different sectors may induce some distinct perceptions due to job characteristics with challenge, successful completion of the work and cognition of accomplishment.

Table 4：Regression analysis on Organizational commitment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Model 1 | Estimated Value | Standard error | Model 2 | Estimated Value | Standard error |
| Stress | -0.049 | 0.031 | Stress | -0.042 | 0.030 |
| Satisfaction | 0.506\*\*\* | 0.067 | Satisfaction | 0.513\*\*\* | 0.065 |
| Work Values | 0.323\*\*\* | 0.053 | Intrinsic value | 0.361\*\*\* | 0.149 |
|  | | | Extrinsic value | 0.010 | 0.080 |
| F | 127.04\*\*\* |  | F | 109.34\*\*\* |  |
| R square | 0.589 | R square | 0.623 |

Note: Significant at \* p<0.1，\*\* p<0.05，\*\*\* p<0.01, N=270

Table 5： Regression Model 1A on Organizational Commitment by Departments

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Independent variables | Department | | | | |
| Pilots | Maintenance personnel | Flight attendants | Ground service | Administrative staff |
| Stress | -0.031  (0.096) | 0.032  (0.072) | 0.006  (0.059) | 0.112  (0.085) | -0.024  (0.079) |
| Satisfaction | 0.479\*\*\*  (0.156) | 0.415\*\*\*  (0.183) | 0.382\*\*\*  (0.119) | 0.647\*\*\*  (0.196) | 0.387\*\*\*  (0.148) |
| Work Values | 0.387\*\*\*  (0.148) | 0.409\*\*\*  (0.152) | 0.514\*\*\*  (0.095) | 0.220  (0.178) | 0.450\*\*\*  (0.115) |
| F | 28.99\*\*\* | 23.39\*\*\* | 42.88\*\*\* | 21.76\*\*\* | 20.03\*\*\* |
| R square | 0.617 | 0.604 | 0.661 | 0.597 | 0.600 |

Note 1: Significant at \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, N=270.

Note 2: The standardized estimates with standard errors in parentheses.

To further understand the effects of the intrinsic or extrinsic work values ​​on organizational commitment, the intrinsic work values regression on commitment (b= 0.361) have significant positive effect, but the extrinsic work values is non-significant (b= 0.01) in model 2. Among the characteristic of five departments, intrinsic work values are positive and significant only for two sectors, namely flight pilots (b= 0.504) and flight attendances (b= 0.480) in model 2A. It displays flight crews of airlines who have steady income and get through the work of self-affirmation and ideal life. Organizational commitment regression analysis due to extrinsic work values has only significant positive impact on maintenance (b= 0.339) and administrative (b= 0.421) staffs. It displays maintenance and administrative employees of airlines who perceive full play to the autonomy and the initiative to learn new job skills, thus reflecting the commitment to support the organization.

However ground service officers have non-significant effect by the work values for overall and for all five departments. By the above Table 4, Table 5 and Table 6, the results of regression analysis of the study on organizational commitment hypothesis summarized in Table 7.

Table 6： Regression Model 2A on Organizational commitment by departments

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Independent  variables | Department | | | | |
| Pilots | Maintenance personnel | Flight attendants | Ground service | Administrative staff |
| Stress | -0.007  (0.085) | 0.037  (0.073) | -0.029  (0.056) | 0.106  (0.085) | -0.045  (0.085) |
| Satisfaction | 0.503\*\*\*  (0.138) | 0.440\*\*\*  (0.193) | 0.414\*\*\*  (0.112) | 0.669\*\*\*  (0.198) | 0.361\*\*  (0.158) |
| Intrinsic value | 0.504\*\*\*  (0.332) | 0.074  (0.425) | 0.480\*\*\*  (0.248) | 0.179  (0.376) | 0.071  (0.361) |
| Extrinsic value | -0.049  (0.197) | 0.339\*\*  (0.209) | 0.078  (0.156) | 0.056  (0.249) | 0.421\*\*  (0.181) |
| F | 31.95\*\*\* | 17.38\*\*\* | 39.12\*\*\* | 16.46\*\*\* | 14.81\*\*\* |
| R square | 0.707 | 0.607 | 0.707 | 0.605 | 0.603 |

Note 1: Significant at \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, N=270.

Note 2: The standardized estimates with standard errors in parentheses.

Table 7： Regression results of hypotheses tests

|  |  |  |  |
| --- | --- | --- | --- |
|  | Hypotheses on organizational commitment | Results of  overall | Results of  department |
| H1. | Work stress has a negative impact | Not support | Not support |
| H2. | Work satisfaction has a positive impact | Support | support |
| H3. | Work values has a positive impact | Support | Ground service  is not support |
| H3a | Intrinsic work values has a positive impact | Support | Pilots & Attendants  are supported |
| H3b | Extrinsic work values has a positive impact | Not support | Maintenance & Administrative  are supported |

**5、 Discussion and conclusions**

Based on this survey sample of an airline employee’s retention intention and loyalty of organizational commitment empirical results obtained following findings and important conclusions.

The organizational commitment and its related factors of employees’ cognition have different perceptions among the levels of departments, education and position. Working stress facing, overall presentation and other five departments shows a non-significant influential factor; visible airline employees have their resistance to pressure at work. Overall, perceived higher job satisfaction and is to render higher organizational commitment, especially flight pilots and ground service employees have optimal cognitive on the job that does reflect loyalty to the company. Overall work value ​​for the impact on organizational commitment, positive effect is presented except the ground service technicians, showing the airline staff think they can work through their own work, and improve the quality of life, and therefore the higher the employee involvement to the airline company.

For looking into the facets of work values, intrinsic work values cue positively on organizational commitment. Airline employees can gain ability and self-confidence through the job, but the perceived intrinsic work values within maintenance, ground service and administrative sectors are failed to reflect to the staying intention. Flight crews of airlines have steady income and get through the work of self-affirmation and ideal life. On the other hand, cognition of extrinsic work values ​​on maintenance technicians and administrative staff will be the only two sectors who are reflected to the organizational commitment, which may be due to the resulting personnel relative lower pay and full autonomy at work, and then in support of organizational commitment relative increase. But this will not for the pilots and attendances who have higher and steady remuneration, and social prestige,

According to the above conclusions, the present study suggests that the follow-up for transport ground services can mainly play in job training in order to reduce risks in the work environment, and they will have further improvement by their work efforts to perceived better paid or the possibility of promotion. Secondly, company can encourage staffs, who are lower perceived intrinsic work values, to participate in social services and activities in order to enhance interactive ability and self-confidence. And then they can access to self-affirmation, it may enhance the company's identity and commitment.

However these valuable findings of the presented study are based on airline industry, the results may not imply to other service groups, for instance the banking service industry. This point view is similar to the result that there exists a difference between different bank in terms of work stress or satisfaction of employees. This can be the restriction and can be a further research. Overall, the employee loyalty and retention to the organization are high, chief executive officers need provide a good and safe working environment so that employees can fully utilize their abilities and apply their knowledge, affirm ideals of self-realization, and thus reduce turnover and enhance flight safety.

**References**

〔1〕 Morrow, P.C. The Theory and Measurement of Work Commitment. JAI, Greenwich, CT. (1993).

〔2〕 Whitener, E. Do high commitment human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modelling. Journal of Management, (2001).27(5), 515-35.

〔3〕 Mowday, R.T., Porter, L.W. and Steers, R.M. Employee Organization Linkages: psychology of commitment, absenteeism, and turnover. New York: Academic Press. (1982).

〔4〕 Porter, L.W., Steers, R.M., Mowday, R.T. and P.V. Boulian, Organizational Commitment, Job Satisfaction, and Turnover among Psychiatric Technicians, Journal Apply Psychology, (1974). 59(5), 603-609.

〔5〕 Mowday, R. T., Steers, R. M. and Porter, L. W. ‘The measurement of organizational commitment’, Journal of Vocational Behavior, (1979).14,224-247.

〔6〕 Price, J. L. and Mueller, C. W. ‘A causal model of turnover for registered nurses’, Academy of Management Journal, (1981).24, 543-565.

〔7〕 Steers, R. M. ‘Antecedents and outcomes of organizational commitment’, Administrative Science Quarterly, (1977). 22, 46-56.

〔8〕 Buchanan, B. Building organizational commitment: the socialization of managers in work organizations. Administrative Science Quarterly, 19, 533-546. (1974).

〔9〕 Robbins, S.P. Organizational Behavior. 9th Ed. New Jersey: Prentice-Hall, Inc. (2001).

〔10〕Michael, O., Court, D. and Petal, P. Job stress and organizational commitment among mentoring coordinators. International Journal of Educational Management, (2009).23(3), 266-288.

〔11〕Yin, R. K. Case Study Research, Design and Methods, 3rd ed. Newbury Park, Sage Publications. (2002).

〔12〕Huang, Y.C. A study of the relationship among the awareness of compensation, job involvement, organizational commitment and intention to stay for the employees of airline industry. Master thesis, Fu Jen Catholic University, Department of Hospitality Management. (2008).

〔13〕Angle, H.L. and Lawson, M.B. Changes in affective and continuance commitment in times of relocation. Journal of Business Research, (1993).26(1), 3-16.

〔14〕Meyer, J. and Allen, N. Testing the side-bet theory of organizational commitment: some methodological considerations. Journal of Applied Psychology, (1984). 69, 372-378.

〔15〕Chuang, L.Y. The relationship among job satisfaction, organization commitment and turnover intention of ground staff of airline - A case study of airline employee of international route in Taiwan. Master thesis, Ming Chuan University, Institute of Tourism. (2009).

〔16〕Jyh-Lung Tang, A Study of Work Stress, Organizational Commitment, Job Satisfaction, and Organizational Citizenship Behaviour The Journal of Human Resource and Adult Learning Vol.4,Num.1,June (2008)104-112

〔17〕Mathieu, J.E., and Zajac, D.M. A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. Psychological Bulletin, (1990).108, 171-194.

〔18〕French, J.P.R. and Kahn R.L.. A programmatic approach to studying the industrial environment and mental health. Journal of Social Issues, (1962)18(3), 1-47.

〔19〕Jex, S.M. and Beehr, T.A. (1991), “Emerging theoretical and methodological issues in the study of work-related stress”, Research in Personnel and Human Resources Management, Vol. 9, pp. 311-65.

〔20〕Steers, R.M. Work and Stress Introduction to Organizational Behaviour. Human Performance, (1988).32, 160-177.

〔21〕Folkman, S. and Lazarus, R.S. Coping and emotion. In: Monat, A. and Lazarus, R.S. (eds) Stress and Coping: An Anthology, Columbia University Press, New York, pp. (1991).207-227.

〔22〕Edwards, J.R. A cybernetic theory of stress, coping, and well-being in organizations. Academy of Management Review, (1992).17, 238-274.

〔23〕Spielberger CD, Gorsuch RL, Lushene R, Vagg PR, Jacobs GA. Manual for the State-Trait Anxiety Inventory. Consulting Psychologists Press, Inc.; Palo Alto, CA: 1983.

〔24〕Robbins, S.P. Essentials of organizational behavior (8th Ed.). Pearson Prentice Hall, NJ. (2005).

〔25〕Fried, Y., Ben-David, H. A., Tiegs, R. B., Avital, N., & Yeverechyahu, U. The interactive effects of role conflict and role ambiguity on job performance. Journal of Occupational and Organizational Psychology, (1998).71, 19–27.

〔26〕Jackson, S. F., & Schuler, R. S. A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. Organizational Behaviour and Human Decision Processes, (1985).36, 16–78.

〔27〕ChuA study on the Hi-Tech employees'''' Leisure Behaviour, Job Stress and Job Performance (2001)

〔28〕Jamal, M. Job stress, Type-A behaviour, and well-being: A cross-cultural examination. International Journal of Stress Management, (1999).6, 57–67.

〔29〕Xie, J. L. Karasek’s model in the People’s Republic of China: Effects of job demands, control, and individual differences. Academy of Management Journal, (1996). 39, 1594–1618.

〔30〕Elizabeth, G. and Zakkariya, K.A. Job related stress and job satisfaction: a comparative study among bank employees. Journal of Management Development, (2015).34(3), 316-329.

〔31〕Ganster, D.C. and Schaubroeck, J. Work stress and employee health. Journal of Management, (1991).17, 235-271.

〔32〕Joure, S.A., Leon, J.S., Simpson, D.B., Holley, C.H. and Frye, R.L. Stress: The pressure cooker of work. The Personnel Administrator, (1989).34, 92-95.

〔33〕Minter, S.G. Relieving workplace stress. Occupational Hazards, (1991). 53(4), 39-42.

〔34〕Murphy, L.R. Workplace interventions for stress reduction and prevention. In: Cooper, C. L. and Payne, R. (Eds), Causes, Coping, and Consequences of Stress at Work, Wiley, London. (1988).

〔35〕Meyer, J.P. “Organizational commitment”, in Cooper, C.I. and Robertson, I.T. (Eds), International Review of Industrial and Organizational Psychology, John Wiley & Sons, New York, NY, (1997) . pp. 175-225.

〔36〕Becker, H.S. “Notes on the concept of commitment”, American Journal of Sociology, (1960), Vol. 66 No. 1, pp. 32-40.

〔37〕Brunetto, Y. and Farr-Wharton, R. “The commitment and satisfaction of lower-ranked police ofﬁcers”, Policing: An International Journal of Police Strategies & Management, (2003), Vol. 26 No. 1, pp. 43-63.

〔38〕Spector, P.E. Industrial and Organizational Psychology: Research and Practice, 3rd ed., Wiley Textbooks, New York, NY. (2002),

〔39〕Jex, S. M. Stress and job performance. Thousand Oaks, CA: Sage. Personality and Social Psychology, (1998).42, 168–177.

〔40〕Hoppock, R. Job Satisfaction. New York: Random Harper. (1935).

〔41〕Spector, P.E. Industrial and organizational psychology: research and practice. John Wiley & Sons, Inc. NJ. (2006).

〔42〕Stanley, T.L. The joy of working: A new look at job satisfaction. Supervision, (2001).62, 3-6.

〔43〕Locke, E.A. and Lathan, G.P. Theory of Goal Setting and Task Performance. Englewood Cliffs, N.J.: Prentice-Hall. (1990). pp. 248-250.

〔44〕MacDonald, R. Labours of love: Voluntary working in a depressed economy. Journal of Social Policy, (1996). 25(1), 19-38.

〔45〕O'Toole, A. Work in an era of show economic growth. Technological Forecasting and Social Change (1980). 16 (4) 277-330.

〔46〕Armentor, J. and Forsyth, C.J. Determinants of job satisfaction among social workers. International Review of Modern Sociology, (1995). 25(20), 51– 63.

〔47〕Flanegan, T.J., Johnson, W.W. and Berret, K. Job satisfaction among correction executives: A contemporary portrait of warders of state prisons of adults. Prison Journal, (1996).76(4), 385-397.

〔48〕Kadushin, G., and Kullys, R.. Job satisfaction among social work discharge planners. Health and Social Work, (1995) 20(3), 174-186.

〔49〕Adeyemo, D.A. Job involvement, career commitment, organizational commitment and job satisfaction of the Nigerian police: A multiple regression analysis. Journal of Advance Studies in Educational Management, (2000).5(6), 35-41.

〔50〕Oshagbemi, T. “Gender Differences in the Job Satisfaction of University Teachers”. Women in Management Review. (2000) 15, 331-343.

〔51〕Bolarin, T.A. Late payment of teachers' salary as it affects the quality of education in Lagos state primary schools: A socio-psychological perspective. Journal of National Association of Education Teachers, (1993).6(1), 11-15.

〔52〕D'elia, G.P. Determinants of job satisfaction among beginning librarians. Library Quarterly, (1979). 9, 283-302.

〔53〕Lynch, B.P., and Verdin, J.A. Organisational commitment: Analysis of Antecedents. Human Relations, (1987). 40(4), 219-236.

〔54〕Mitchell, T.R. and Lason, J.R. People in Organization. 3rd ed. New York: McGraw-Hill. (1987).

〔55〕Luthans, F. Organisational Behaviour. 8th ed. Boston: McGraw-Hill. (1998).

〔56〕Levinson and Moser, K (1997) Commitment in organizations. Psychologies 41 (4), (160-170).

〔57〕Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. Journal of Vocational Behaviour, (2002). 61, 20-52.

〔59〕Alexander, J.A., Liechtenstein, R.O. and Hellmann, E. A causal model of voluntary turnover among nursing personnel in long term psychiatric setting. Research in Nursing and Health, (1998).21(5), 415-427.

〔60〕Jamal, M. Job stress, satisfaction and mental health: An empirical examination of self-employed and non-self-employed Canadians. Journal of Small Business Management, (1997). 35(4), 48-57.

〔61〕Shore, L. M. and Tetrick, L. E. `A construct validity study of the Survey of Perceived Organizational support', Journal of Applied Psychology, (1991). 76, 673-643.

〔62〕Ferris, G. R., Brand, J. F., Brand, S., Rowland, K. M., Gilmore, D. C., Kacmar, K. M. and Burton, C. A. `Politics and control in organizations'. In: Lawler, E. J., Markovsky, B., Heimer, K. and O'Brien, J. (Eds) Advances in Group Processes, Vol. 10, JAI Press, Greenwich, HCT. (1993). pp. 83-111.

〔63〕Nye, L. G. and Witt, L. A. `Dimensionality and construct validity of the Perceptions of Politics Scale (POPS)', Educational and Psychological Measurement, (1993). 53, 821±829.

〔64〕Wayne, S. J., Shore, L. M. and Liden, R. C.. `An examination of the effects of human resource practices on leader member exchange and perceived organizational support'. Paper presented at the annual meeting of the Academy of Management. Atlanta, Georgia. (1993, August)

〔65〕Randall, M., Cropanzano, R., Bormann, C. and Birjulin, A. `The relationship of Organizational politics and organizational support to employee attitudes and behaviour'. Paper presented at the Annual Meeting of the Academy of Management, Dallas, TX. (1994, August)

〔66〕Ginzberg, E. Occupational Choice, An Approach to A General Theory. New York: Columbia University Press. (1951).

〔67〕Schwartz, S. H. A theory of cultural values and some implications for work. Applied Psychology: An International Review, 1999. 48(1): 23-47.

〔68〕Super, D.E. Manual for the Work Values Inventory, Chicago: Riverside Publishing Company. (1970).

〔69〕Adkins, C. L., & Naumann, S. E. Situational constraints on the achievement–performance relationships: A service sector study. Journal of Organizational Behavior, (2001). 22, 453–465.

〔70〕Hunt, R. G. Work values and work performance: Critical commentary from a comparative perspective. In G. M. Green & F. Baker (Eds.), Work, health, and productivity (1991). (pp. 198 – 214). New York: Oxford University Press.

〔71〕Meyer, J. P., & Allen, N. J. A three-component conceptualization of organizational commitment. Human Resources Management Review, (1991). 1, 61–89.

〔72〕Somers, M. J., & Birnbaum, D. Exploring the relationship between commitment profiles and work attitudes, employee withdrawal, and job performance. Public Personnel Management, (2000). 29, 353–365.

〔73〕Suliman, A., & Iles, P. Is continuous commitment beneficial to organizations? Commitment–performance relationship: A new look. Journal of Managerial Psychology, (2000).15, 407–426.

〔74〕Kalleberg, A.L. Work Values and Job Rewards: A Theory of Job Satisfaction. American Sociological Review, (1977).42(1), 124-143.

〔75〕Cotton, L., Bynum, D. and Madhere, S. Socialization forces and the stability of work values from late adolescence to early adulthood. Psychological Reports, (1997).80(1), 115-124.

〔76〕Dagenais, F. Super's work values inventory scales as intrinsic or extrinsic conditions. Psychological Reports, (1998). 83(1), 197-198.

〔77〕Nord, W.R., Brief, A.P., Atieh, J.M. and Doherty, E.M. Studying Meanings of Work: The case of work values. In Brief, A. and Nord, W. (Eds.). Meanings of occupational work: A collection of essays. Lexington Books. (1990).

〔78〕Liang, Y.W. The relationships among work values, burnout, and organizational citizenship behaviours: A study from hotel front‐line service employees in Taiwan. International Journal of Contemporary Hospitality Management, (2012). 24(2), 251-268.

〔79〕Gay, E.G., Weiss, D.J., Hendel, D.D., Dawis, R.V. and Lofquist, R.H. Manual for the Minnesota importance questionnaire. Minnesota Studies in Vocational Rehabilitation. University of Minnesota, Industrial Relations Center. (1971).

〔80〕George, J.M. and Jones, G.R. Experiencing work: values, attitude, and moods. Human Relations, (1997). 50(4), 393-416.

〔81〕Vanus, D. and McAllister, I. Gender and work orientation. Work and Occupations, (1991). 18(1), 72-93.

〔82〕Boyatzia, R.E. and Skelly, F. The impact of change values on organizational life. In D.A. Kolb, I.M. Rubin and J.S. Osland (eds.), Organizational Behaviour: A book of readings, Englewood Cliffs, NJ: Prentice-Hall. (1990).

〔83〕Pu, Y.P. Work values, leadership research on job satisfaction and organizational commitment closing: Korea electronic industry as an example, Doctoral thesis, National Chengchi University, Institute of Business Administration. (1988).

〔84〕Chen, R.H. Two bank employees work values and job characteristics impact on attitudes. Master thesis, National Central University, Institute of Human Resource Management. (2001).

〔85〕Elizur, D. Work values and commitment. International Journal of Manpower, (1996). 17(3), 25-30.

〔86〕Putti, J.M., Aryee, S. and Ling T.K. Wok values and organizational commitment: a study in the Asian context. Human Relations, (1989). 42, 275-288.

〔87〕Hirschi, A. and Fischer, S. Work values as predictors of entrepreneurial career intentions. Career Development International, (2013). 18(3), 216-231.

〔88〕Oliver, N. `Work rewards, work values, and organizational commitment in an employee-owned ®rm: Evidence from the U.K.', Human Relations, (1990). 43, 513±526.

〔89〕Hellriegel, D, Slocum, J.W. and Woodman, R. Organizational Behavior, 10th ed., Ohio: South Western. (2004).

〔90〕Ma, C.J. A Study on Job Satisfaction for Airlines Maintenance Employees. Master thesis, Fu Jen Catholic University, Institute for Applied Statistics (2004).

〔91〕Nunnally, J.C. (1978). Psychometric Theory (2nd ed.), New York: McGraw-Hill.

〔92〕De Vellis, R.F. Scale Development Theory and Applications. Lond: SAGE (1991).