

# Factors Affecting Employee Job Engagement towards Aircraft Maintenance Organizations — A Mediation Analysis of Job Satisfaction

Mai Ngoc Khuong and Nguyen Hoang To Uyen

**Abstract**—This study aimed to measure the impacts of the six key factors of the job itself, career development, relationship with management, compensations and benefits, work environment, and teamwork on maintenance technicians' satisfaction and their job engagement. Data was collected from a sample of 325 respondents, who are currently working for aircraft maintenance organizations in Vietnam. The results indicated the significant relationship between all independent variables and dependent variables, except for career development. While relationship with management and compensation and benefits had indirect effects on employee Job engagement, the job itself had both direct and indirect influences on the dependent variable. In addition, work environment and teamwork directly influence employee job engagement without the mediating role of employee job satisfaction. Consequently, the companies operating in the aviation sector should consider taking specific actions for improvement the human resources management of the Aircraft Maintenance Organizations (AMOs).

**Index Terms**—Aircraft maintenance organizations, aircraft maintenance technicians (AMTs), employee job engagement, employee job satisfaction.

## I. INTRODUCTION

One of the most competitive industries in Vietnam is the aviation one, which not only has high level of importance in transportation but also in international cooperation and tourism. According to ref. [1], Vietnam would rank as the 7th fastest growing market in the world (2013-2017). Therefore, the need for human resources in terms of quantity and quality here, especially for pilots and aircraft maintenance technicians, is more urgent due to the rapid growth of private and low-cost airlines recently which resulted in the human capital flights. Aircraft Maintenance Technicians (hereinafter called AMTs) in aviation – the object for prospecting – are the ones who responsible for repairing and maintaining airplanes, operating aircraft systems and engines, as well as taxiing the aircraft for flights to prevent any technical fault possible in Aircraft Maintenance Organizations (hereinafter called AMOs). They are referred to as “the only human capital of the company to ensure safe flights” [2]. Currently in Vietnam, there are five biggest AMOs: VAECO, Vietjet, SAAM,

Jetstar Pacific and Vietstar with around 2,150 mechanics,

technicians, and engineers [2]-[5].

It does cost much to build up maintenance teams which are rich in experience and knowledge to prevent dangerous technical errors during flights, but they can leave the company for another organization with better conditions when they really want to and ready for any indemnification. One significant evidence of the risk is when too many AMTs resigned from VAECO in 2014, the authorities have to resign labor contracts which have constraints such as staffs trained by the company have to work there from 10 to 20 years or recoup the training fees of hundreds million. Or most recent when 117 pilots who asked for time off with health reasons, the fact that most of them intended for a resignation raised the alarm on internal problems of aviation along with other flight accidents and incidents of many foreign airlines as well as the incidents at Tan Son Nhat Airport's air traffic control tower [6], [7]. All of these problems woke people up about the importance of an effective and responsible human resource in the sector, as just one small mistake could cause a huge crash with hundreds of livings lost. Therefore, the information about the factors which represent the technicians need in the AMOs to the extent which they want to stay even if there are better conditions offered by other organizations were highly anticipated. The study thus strives to find out the possible answers. On that ground the recommendations could be referred to for effective improvements in the AMOs' policies.

## II. LITERATURE REVIEW

Due to rising competition related to human resources between the AMOs, the turnover of aircraft maintenance technicians is an important practical issue for the years and is expected to strongly continue in the near future. Surprisingly, however, this subject seems to be neglected in the literature, since there is almost no significant study about the field. Meanwhile, among various antecedents, job satisfaction appears to be good predictors of turnover intention [8], [9]. The consequences of employee job engagement are absolutely what most organizations are seeking for: productive employees – those who can achieve the assigned targets and even more on time yet efficient and profitable, and engaged employees – those who have low probability in being absent from work or quit the job, and always willing to exert every effort to acquire organizational success [10], [11]. Previous researches about employee job satisfaction and job engagement also proved a significant relationship between the two variables [12], [13].

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The authors are with the School of Business, International University – VNU-HCM, Vietnam (e-mail: mnkhuong@hcmiu.edu.vn, touyen.nguyenhg@gmail.com).

### *A. Employee Job Engagement*

According to ref. [12] and [14], the majority of findings about employee job engagement were concluded from practitioner journals which had been conducted based on practice rather than theory and empirical research. Meanwhile, Employee Engagement – a wider term than employee job engagement – is the one which received most attention. Concise definition is, suggested by ref. [12] based on the results of ref. [15], “engagement means to be psychologically present when occupying and performing an organizational role”. Concerning about the antecedents and consequences of engagement, ref. [12] proposed the model of employee engagement consisting of job engagement and organizational engagement on the basis of ref. [15], [16], and [17]’s models. Meanwhile, ref. [18] explained employee engagement as the combination of “Engagement Opinions”, “Engagement Behaviors” and “Conditions for Engagement”; with “Engagement opinions” focuses entirely on job-related dimensions as it contain feelings of deep concentration, eagerness, and passion. As a conclusion to the review above about engagement, the variable “Employee Job Engagement” in this research is succinctly explained as the feel of being emotionally attached to the job provided by the company to the point that the employee is willing to put an amount of his or her discretionary effort to achieve the best possible results.

### *B. Employee Job Satisfaction*

Despite being widely used in scientific researches as well as in daily life, there is still no commonly accepted definition of job satisfaction. The most popular research definition of job satisfaction is indicated by ref. [19], who defined the term as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences”. While ref. [20] defined the term as the extent to which a worker is fulfilled with the rewards he or she gets from performing the job, particularly in term of intrinsic motivation, ref. [21] commented on how positive and favorable attitudes towards the job indicate job satisfaction as well as negative and unfavorable attitudes towards the job indicate job dissatisfaction. In sum, job satisfaction could be explained as the feeling of contentment resulting from the consistence between individual’s standards and expectations about the job and the job’s characteristics. Society for Human Resource Management (hereinafter called SHRM) has been conducting its annual job satisfaction survey from 2002 to 2014 to calculate the proportion of U.S. employees who feel satisfied with their different aspects of their current job (Career Development, Employee Relationship with Management, Compensation and Benefits, and Work Environment). By applying the similar measurements through years, they achieved an effective classification which can be accurately applied in any economic situations. ref. [22] has also done numerous studies related to employee job satisfaction and identified 17 main groups which have effects on the term. Although different researchers used different sets to evaluate, there are some essential factors which appeared in most studies and appropriate with the AMOs’ environment. They are the job itself, career development, relationship with management, compensation and benefits, work environment, teamwork, working conditions.

### *C. The Job Itself*

Out of all the factors which affect job satisfaction, feeling satisfied with the nature of the work itself – which includes job challenge, variety of work, autonomy, and scope – is the best predictor of overall satisfaction, and many other major outcomes such as employee retention [23], [24]. ref. [25] suggested that psychological meaningfulness can be achieved when the job position is assigned with challenging work, various different kinds of task and required skill, personal discretion, and opportunities to contribute. Those jobs which satisfied the model of job characteristics could pull employees to their work and result in engaged workers.

### *D. Career Development*

According to ref. [26], career development is an opportunity for employees to keep on taking part in more activities which are advanced or diversified (e.g., training, networking) that could lead to the outcomes like improving existing skills, gaining new skills, taking greater responsibility in the workplace, enhancing their status and gaining higher income. Specifically, among five measured aspects of this category, “opportunities to use skills and abilities at work” is in the top five of the most important contributors to job satisfaction.

### *E. Relationship with Management*

The relationship an employee has with his or her supervisor is seen as the essential feature to the employee’s association with the organization [26]. It has been argued that many of the employees’ behaviors are resulted from the way they are managed by their managers. One of the contributors to a good relationship is effective communication – as supervisors can response more efficiently to the employees’ needs and concerns, which would results in higher level of their satisfaction [27]. ref. [28] also demonstrates how the respondents evaluate three non cash motivators – immediate managers’ appraisals, leadership attention, and a chance to lead projects or task forces – as no less or even more efficient motivators than the three highest-rated financial incentives: cash bonuses, increased base pay, and stock options. These themes reappear continuously in most researches as solutions to motivate members and stick them with their respective organization. In organizations, the relationship between employees and employers is also highly affected by justice in allocating rewards for any contribution as it could be the evidence for any favoritism. Therefore, the distribution of rewards and the procedures used to allocate should be predictable and consistent [29].

### *F. Compensation and Benefits*

Employee compensation contains all types of payments given to employees which arise from their employment [30]. Specifically, compensation is comprised of wages, incentives, rewards and other benefits given to the workers [31]. Compensation programs and practices should be internally equitable, externally competitive and personally motivating. Specifically, they are considered in three main features: equitable within the employee’s work force, competitive in comparison with others’ in the same business field, and efficient in motivating the employee to continue and even improve his performances. ref. [32] has concluded that for

people with satisfactory salaries, some non-financial motivators are even more efficient than cash bonuses in most business sectors and contexts. Financial rewards are indicated to generate short-term energy boosts which could result in unintended consequences. The ongoing competitions among the companies urged the needs of reducing costs and balancing short-term and long-term performance effectively. Therefore, the business leaders have to reassess the combination of financial and non-financial incentives which will best appropriate with their companies.

Benefits are the material and non-material incentives offered by the organization to its staffs in order to attach them with the company itself. According to ref. [33], benefits are incentives that employees are given as companion with their wages during their working period and as addition after retirement. As indicated by ref. [34], benefits significantly and directly affect job satisfaction. They help improve employee performance and reduce employee turnover as a motivator factor as well [35]. Benefits are comprised of obvious benefits, foregone labor benefits and hidden benefits [36]. While obvious benefits which includes social security, pension plans, and insurances is considered as the most common types, foregone labor benefits is the one which create differences when in comparison amongst the companies. That type of benefits consists of personal days, paid time off, jury duty, bereavement time, defined benefit/contribution plan, and military service leave. Hidden benefits are also varied among companies and could be adapted in accordance with the company's policies and objectives.

#### *G. Work Environment*

Ref. [37] defined "work environment" as "locations where employees are engaged in work-related activities or are present as a condition of their employment". ref. [38] suggested that a person chooses to work for an organization of which work climate fits well with his/her desires. ref. [39] indicated in their research that a more appealing work environment can improve the contextual performance. Employers already acknowledged that since employees spend a large amount of their time at work, companies should take steps to ensure that their working environments are conducive for their workers. Such efforts will make their employees more productive, satisfied and engaged in the workplace [26].

#### *H. Teamwork*

A team is defined as a unit of two or more people who communicate and coordinate their work to accomplish a same target. ref. [40] defined work team as "an interdependent collection of individuals who share responsibility for specific outcomes for their organization". When tasks are highly interdependent, especially in aircraft maintenance sector where many engineers have to work together for ensuring any particular aircraft operate properly and safely, a team can be the best approach to guarantee the level of coordination, information sharing, and exchange of materials necessary for successful task accomplishment. Efficient teamwork could bring in better business outcomes thanks to improved employees' performance [41],

productivity [42], [43], and organizational responsiveness and flexibility [44]. The works of many researchers indicated high level of association between teamwork and job satisfaction [45], [46].

#### *I. The Proposed Hypotheses*

Based on the previous studies and literature, this study hypothesizes that:

- H<sub>1</sub>: Factors of The Job Itself, Career Development, Relationship with Management, Compensations and Benefits, Work Environment, and Teamwork positively affects Employee Job Satisfaction.
- H<sub>2</sub>: Factors of The Job Itself, Career Development, Relationship with Management, Compensations and Benefits, Work Environment, Teamwork, and Employee Job Satisfaction positively affects Employee Job Engagement.
- H<sub>3</sub>: The effect of The Job Itself, Career Development, Relationship with Management, Compensations and Benefits, Work Environment, and Teamwork on Employee Job Engagement is mediated by Employee Job Satisfaction.

### III. METHODOLOGY

#### *A. Questionnaire Design and Data Collection*

Quantitative approach was applied as the major method for this study. The target population of the study was the technicians and engineers who were directly working with the aircrafts in Vietnam aviation maintenance companies (VAECO, Vietjet Air, SAAM, and Vietstar). Krejcie and Morgan's table (1970) was used to determine sample size of  $N = 322$ . After running pilot test with  $N = 20$  to ensure that the questionnaire was clear and understandable, there were 325 cases collected for further analysis.

The most effective tool for this study was the questionnaire which was built based on major variables mentioned in the literature review. Questionnaire design was established in accordance with the developed theoretical framework. Relevant research questions were applied to guarantee the reliability and validity of all scales of the study. Most of the questions were measured using a five-point Likert-scale ranging from 1 to 5; 1 = "strongly disagree", 2 = "disagree", 3 = "neutral", 4 = "agree" and 5 = "strongly agree".

#### *B. Data Analysis*

SPSS (Statistical Package for the Social Sciences) statistical software version 22 was installed to analyze the data. Exploratory Factor Analysis (EFA) and Reliability Test were conducted first to ensure the reliability and validity of the factors. Then Multiple Regression and Path Analysis were applied to measure the strength of the direct and indirect relationships among variables.

#### *C. Factor Analysis and Reliability*

Two Exploratory Factor Analyses were conducted with Kaiser-Meyer-Olkins and Bartlett's Test of Sphericity as well as Varimax Rotation of 38 items of independent variables and 18 items of dependent variables. After deleting 16 items of the independent variables and 3 items of the dependent variables during the processes, the remaining items all have

factor loadings higher than the minimum requirement (.400) [47], ranging from .541 to .828. The dependent variables' items were grouped into two groups (EMJOEN and EMJOSA), while the independent variables' ones were divided into 5 groups (JOBITS, REWIMA, COMBEN, WORENVI, and TEAWOR).

TABLE I: SUMMARY OF DEPENDENT VARIABLES WITH RELIABILITY COEFFICIENTS

Dependent Variables	Number of Items	Cronbach's Alpha
Employee Job Engagement (EMJOEN)	7	.869
Employee Job Satisfaction (EMJOSA)	8	.884

The KMO Measure of Sampling Adequacy's index for both groups of independent (KMO = .909) and dependent variables (KMO = .925), which were much higher than the minimum value of .600 [48]. Bartlett's Tests of Sphericity were all significant (Sig. = .000 < .05). Thus, this analysis was considered appropriate, as there were sufficient correlations among variables.

TABLE II: SUMMARY OF INDEPENDENT VARIABLES WITH RELIABILITY COEFFICIENTS

Independent Variables	Number of Items	Cronbach's Alpha
The Job Itself (JOBITS)	4	.743
Relationship with Management (REWIMA)	5	.869
Compensation and Benefits (COMBEN)	7	.888
Work Environment (WORENVI)	3	.667
Teamwork (TEAWOR)	3	.692

All of the items satisfied the requirements for both Cronbach's alpha as all values are higher than .60 [49], and Corrected Item – Total Correlation as all values were higher than .30, which indicates high validity, high reliability, and effective measurement scales for the same constructs.

#### IV. RESEARCH FINDINGS

##### A. Sample Profile

TABLE III: PERSONAL INFORMATION (N = 325)

	Frequency	Percentage
Gender		
Male	308	94.8
Female	17	5.2
Marital Status		
Single	134	41.2
Married	191	58.8
Age		
18 – 25	46	14.2
26 – 35	152	46.8
36 – 45	65	20.0
46 – 55	43	13.2
56 – 65	19	5.8
Seniority		
< 1 year	14	4.3
1 – 4 years	93	28.6
4 – 7 years	56	17.2
7 – 10 years	61	18.8
> 10 years	101	31.1
Educational Attainment		
High-school degree	1	0.3
Vocational School	35	10.8
College degree	53	16.3

Bachelor degree	225	69.2
Post University	11	3.4
Current Company		
VAECO	241	74.2
VJC	48	14.8
SAAM	35	10.8
Vietstar	1	0.3
Current Position		
Mechanic	104	32.0
Technician	78	24.0
Engineer	143	44.0

##### B. Factors Affecting Employee Job Satisfaction and Employee Job Engagement

In this research, Pearson's correlation analysis and two linear regression analyses were used to analyze the data and to test the research hypotheses. First of all, the Pearson's correlation was used to explore the linear associations between independent variables and dependent variables of EMJOSA and EMJOEN.

The results in table IV suggested that the better each of the independent variables was, the higher level of satisfaction the employees felt towards their job. In addition, the hypothesis 1 was tested by conducting a multiple regression between the independent variables and the dependent variable of employee job satisfaction. The results showed that COMBEN ( $\beta = .434, p = .000$ ) played the most important role in predicting EMJOSA, then REWIMA ( $\beta = .256, p = .000$ ), and JOBITS ( $\beta = .214, p = .000$ ). Furthermore, the model had the  $R^2$  value of .757, which indicated that 75.7% of the Employee Job Satisfaction could be explained by the 5 predictors.

TABLE IV: VARIABLES' DESCRIPTIONS AND PEARSON'S CORRELATIONS BETWEEN COMBEN, REWIMA, JOBITS, WORENVI, TEAWOR, EMJOSA, AND EMJOEN

	EMJOEN	1	2	3	4	5
1. COMBEN	.469*					
2. REWIMA	.529*	.644*				
3. JOBITS	.664*	.412*	.441*			
4. WORENVI	.504*	.419*	.581*	.363*		
5. TEAWOR	.453*	.322*	.423*	.363*	.439*	
6. EMJOSA	.639*	.800*	.733*	.559*	.480*	.415*
Mean	4.10	3.57	3.68	4.23	4.05	3.86
S.D.	.494	.648	.626	.513	.466	.517

\*. Correlation is significant at the 0.01 level (2-tailed)

Table IV also showed positive correlations between independent variables and dependent variable of employee job engagement. Specifically, in these significant relationships, there were four substantial correlations between JOBITS and EMJOEN ( $r = .664, p < .01$ ), EMJOSA and EMJOEN ( $r = .639, p < .01$ ), REWIMA and EMJOEN ( $r = .529, p < .01$ ) as well as WORENVI and EMJOEN ( $r = .504, p < .01$ ). In addition, the other two variables including COMBEN ( $r = .469, p < .01$ ) and TEAWOR ( $r = .453, p < .01$ ) also had moderate correlations with EMJOEN. In addition, the hypothesis 2 was tested by conducting the second multiple regression between 6 variables including 5 independent variable and employee job satisfaction and the dependent variable of employee job engagement. The results showed that JOBITS ( $\beta = .381, p = .000$ ) provided strongest effect on EMJOEN, then WORENVI ( $\beta = .188, p = .000$ ), TEAWOR ( $\beta = .107, p = .008$ ), and EMJOSA ( $\beta = .323, p$

=.000), respectively. The model had the  $R^2$  value of .590, which meant that 59% of the Employee Job Engagement could be explained by the 6 predictors.

### C. Indirect Effect on Employee Job Engagement

The indirect impact was calculated by multiplying two coefficients of two related direct effect index [50].

As previously mentioned, out of five independent variables, employee job satisfaction was positively affected by the job itself ( $\beta=.214$ ,  $p=.000$ ), relationship with management ( $\beta=.256$ ,  $p=.000$ ), and compensation and benefits ( $\beta=.434$ ,  $p=.000$ ). These three factors directly influenced EMJOSA, the mediating variable while EMJOSA directly affected employee job engagement with  $\beta=.323$ ,  $p=.000$ . Therefore, through the mediating role of EMJOSA, JOBITS, REWIMA, and COMBEN have indirect effects on EMJOEN. In other words, the better the job itself, the relationship between employee and employer, and compensation and benefits the employee receive, the more they will be engaged in their jobs at their companies.

### D. Significance of Indirect Effect

Table V below includes the results from performing the bootstrapping method recommended by [51] to test the significance of indirect effects or mediations. At the bootstrapped confidence intervals of 95%, if there is a ZERO (0) occurs between the lower boundary (LL) and the upper boundary (UL) of the interval range, then with 95% level of confidence, it can be concluded that there is no mediation or indirect effect. Otherwise, if there is no ZERO between the LL and the UL, the mediation or indirect effect is significant with 95% confidence [52]. In this study, the indirect effects of JOBITS, REWIMA, and COMBEN on EMJOEN through the mediation of EMJOSA were estimated to lie between .1483 (LL) and .2728 (UL), .2482 (LL) and .3930 (UL), and .3488 (LL) and .5606 (UL), respectively. As ZERO do not appear in those ranges, the indirect effects of the three independent variables including JOBITS, REWIMA, and COMBEN were indeed significantly different from zero at  $p$  lower than .05 (two-tailed). Therefore, the mediation of EMJOSA in this research was true.

TABLE V: DIRECT, INDIRECT, AND TOTAL CAUSAL EFFECTS

Variables	Causal Effects			LL	UL
	Direct	Indirect	Total		
JOBITS	.381	.069	.450	.1483	.2728
REWIMA	-	.083	.083	.2482	.3930
COMBEN	-	.140	.140	.3488	.5606
WORENVI	.188	-	.188		
TEAWOR	.107	-	.107		
EMJOSA	.323	-	.323		
<b>Total</b>	<b>.999</b>	<b>.292</b>	<b>1.291</b>		

### E. The Causal Effects of Employee Job Engagement

The table V above also summarizes the total effects on EMJOEN, including direct and indirect effects of independent variables and the mediator. It can be seen in table V, The Job Itself (JOBITS) has the strongest effect on the Employee Job Engagement, with  $\beta = .450$ . With  $\beta = .323$ , the Employee Job Satisfaction (EMJOSA) also positively affects significantly to the Employee Job Engagement. In contrast, the Relationship with Management has the weakest

influence to the dependent variable ( $\beta=.083$ ). Finally, the total effect on the Employee Job Engagement is 1.291, in which the direct effects from JOBITS, WORENVI, TEAWOR, and EMJOSA accounted for over 77% of the total effects. Fig. 1 shows all significant direct effects and indirect effects (dotted lines) towards employee job engagement.

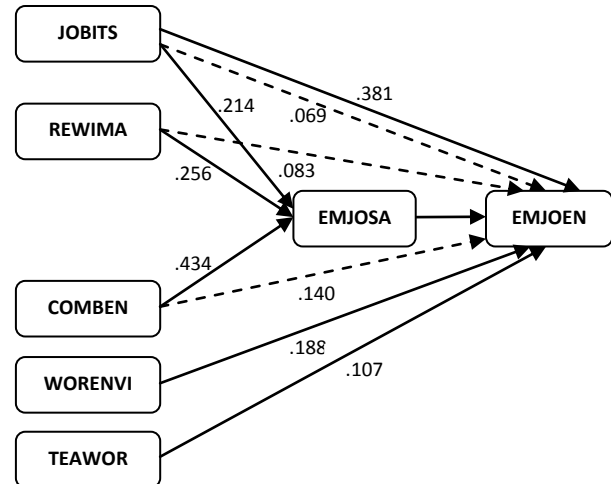


Fig. 1. Path coefficients.

## V. DISCUSSION AND RECOMMENDATIONS

### A. Discussion

The results from this empirical study supported the conceptual framework with positive relationships in nearly all of the proposed variables, which could give out reasonable and valuable explanation on what conditions would be able to keep the employees to stay with the AMOs in Vietnam. Even though there is a lack of previous research on the field, the findings from this study are still be supported by some reliable sources.

First, the statistical findings showed that only three (JOBITS, REWIMA, and COMBEN) out of six independent variables have direct effects on Employee Job Satisfaction, yet those three variables could explain 75.7% the variation of EMJOSA. This means that the more interesting and meaningful the job is, the better relationship an employee has with his or her company's management, and the more he or she receive from compensation and benefits, the more the employee feel satisfied with the job at the current company. These relationships are supported by some previous researches of ref. [13] and [53], as they also agreed that the nature of the job, the employee relationship with management, and compensation and benefits positively affected employee job satisfaction. Moreover, in the study of ref. [13], they found weak affection in the relationship between Career Development and Employee Job Satisfaction. Meanwhile, in this research, the CADEV's items were extracted during the EFA process, which raise questions on whether that particular factor has insignificant effects on the recent years' manpower or the applied measurement scales were ineffective. In comparison with another research of ref. [54], the contradict results indicated the differences in different jobs, as people working in banking sector found the

factors of teamwork and working environment important to their level of satisfaction with the job while the AMTs' responses expressed insignificant relationships among those variables and EMJOA.

Second, the four independent variables of JOBITS, WORENVI, TEAWOR, and EMJOA, all have significant relationships with Employee Job Engagement with 59% of the variation of EMJOEN can be explained by those four factors. A part of the result is supported by ref. [12] of which job characteristics and organizational support were significant predictors of job engagement. Interestingly, The Job Itself was also the only one variable which has both direct and indirect relationship with EMJOEN, which indicated the important effect this factor hold onto the dependent variable in the research model.

Finally, in summary, the engagement of the AMTs to the maintenance job at their current companies could be well-predicted by the nature of the job and their level of satisfaction with that specific job as well. The more enjoyable the job is and the higher level the AMTs' job satisfaction is, the more they engaged in their work at the company. It's worth mentioning that among various antecedents of EMJOA which were tested in this research, Compensation and Benefits had a significantly highest effect on the mediator ( $\beta = .434$ ) in comparison with Relationship with Management as the second highest with  $\beta = .256$ . Therefore, Compensation and Benefits should also be highly focused on when considering the factor of satisfaction.

#### B. Recommendations for AMOs in Vietnam

Understanding the key drivers of Employee Job Satisfaction and Employee Job Engagement is the first step for any organization to develop strategies and put them in action to fully optimize the effects of these factors to the growth of the firm itself.

According to the findings, The Job Itself has the strongest influence on EMJOEN. In a field which has many differences from any other jobs, somehow the nature of the aircraft maintenance already contains some attractive sides. In reality, AMTs always have to deal with high pressure in the workplace, as any case could occur, and just one mistake can ruin their entire life. In addition, high technology always change, it is an advantage of the job other than disadvantage, as nothing seems to be old in such environment. Therefore, it's highly recommended that the managers focus on improving the business performance of the firm to achieve growth and increased profits. As the organization develops, each member of it should also develop, and vice versa. Especially when an AMO develop and earn good reputation, many contracts with other airlines could be signed, which results in chances for the employees to come to other cities and countries, perform tasks in new machines and aircraft to earn new knowledge. In the end, there's no one who wants to waste his time in the workplace with no task to do and a bleak future. It is a win-win situation for both employees and employers once the firm's growth is the top priority.

Next, the salary and rewards are undoubtedly important in any firm. "People are beginning to ask questions about the financialization of the corporation—has it gone too far, and is there a more equitable way to reward people for the hard work that they do," Thomas Kochan, a professor at MIT's

Sloan School of Management, told in an interview [55]. In the case of the AMOs, they should clarify the policies of sending the employees to study oversea. The firms also need to increase the bonus for the extra job assigned which is irrelevant to their expertise. Moreover, based on the feedbacks of the employees, most of the respondents working for SAAM felt satisfied with the rewards policies while the employees of VJC disagreed with the bonuses for working in holidays. That is a weakness in the rewards policy of VJC which needs to be improved. Specifically, in order to get the workers engage with the job, the board should have a deeper concern for the engineering department who are working directly with the company's main object. They should immediately recognize and reward individuals who fulfill duties beyond expectation to with incentives to motivate them for better outcomes. For young employees, the AMOs are advised to develop effective training policy and programs to provide clear tasks which allow them to participate in the company for further improvement in skills.

Lastly, about the working environment, as the workload is too much due to the lack of qualified technicians, the company needs to hire more staffs or provide training sessions for current technicians to improve their skills. The firm could also let the employees to be trained in other leading airlines worldwide to gain more necessary experience for their job. In sum, as the workforce is now considered as the key to success of every company along with customers, especially in aircraft maintenance organizations, they should be treasured and well-treated.

## VI. CONCLUSION

All of the research objectives have been successfully achieved, from analyzing the impacts of items and factors on Employee Job Satisfaction and Engagement to identifying important notes for the AMOs to win their employees' hearts and minds. The results from this study illustrated that even though not all variables have direct or indirect effects on the dependent ones, the factors appeared on the final diagram still be able to predict the level of satisfaction and engagement the AMTs have towards their job almost accurately. With all the weaknesses and strengths of one of the rare researches about the factors and maintenance field, the study strived to develop a reliable ground for further researches in the future, with possible variables and positive results. Moreover, these conclusions could be referred to as valuable information for the managers to implement plans and policies, to not only develop strong and trustworthy teams of technicians, but also promote sustainable economic growths.

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**Mai Ngoc Khuong** is a lecturer and researcher of School of Business Administration, International University, Vietnam National University, Ho Chi Minh City. He has bachelor degree in tourism and hospitality management, master of science degree in leisure, tourism and environment at Wageningen University, The Netherlands, and PhD degree in development management at School of Public Administration of the

National Institute of Development Administration (NIDA), Bangkok, Thailand.



**Nguyen Hoang To Uyen** is a research assistant of School of Business Administration, International University – Vietnam National University (Ho Chi Minh City).