

The impact of authentic leadership on employee's engagement at Tan Son Nhat Operation Center in the COVID-19 period: The mediating role of job satisfaction

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ABSTRACT

Human resources is one of the important resources to promote the development of enterprises in the aviation sector in Vietnam. Therefore, airline firms are increasingly interested in job satisfaction and employee engagement. Aviation is a sector of special importance in economic development. Before the COVID-19 pandemic, the aviation sector developed strongly. However, when the COVID-19 pandemic broke out, the world economy suffered from enormous damage, with the first hardest-hit sector being air transport. Vietnam's aviation sector was also not an exception from the impact of the COVID-19 pandemic, according to a report by the Ministry of Planning and Investment, which said that in 2020 and the first 5 months of 2021, the revenue of aviation enterprises decreased by 61% compared to that of 2019. In Vietnam Airlines Annual report 2020, Vietnam Airline had more than 100 aircraft temporarily suspended from operation. Tan Son Nhat Operation Center was a unit of Vietnam Airline JSC with the role of a representative at Tan Son Nhat airport, which was also affected by many related impacts. In a difficult period, the role of leadership in general and authentic leadership in particular was very important in improving employee satisfaction and engagement. This research investigated and tested affecting authentic leadership on employee engagement at Tan Son Nhat Operation Center in the covid-19 period: the mediating role of job satisfaction. It uses both qualitative and quantitative research. The qualitative research was carried out through focus group discussions with 10 employees. The quantitative research was conducted with 155 employees at Tan Son Nhat Operation Center – Vietnam Airlines JSC through a survey questionnaire by the convenient sampling method. The research results analyzed by partial least square – structural equation modeling (PLS – SEM) indicated that: Components of authentic leadership (AL): self-awareness (SA), internalized moral perspective (IMP), balanced processing (BP), and relational transparency (RT) have a positive impact on employee's engagement through the mediating role of job satisfaction.

Key words: Authentic leadership, Job satisfaction, Employee engagement

INTRODUCTION

Aviation is a sector of special importance in economic development. Before the COVID-19 pandemic, the aviation sector developed strongly. However, when the COVID-19 pandemic broke out, the world economy suffered from enormous damage, with the first hardest-hit sector being air transport. According to the report of the International Civil Aviation Organization (ICAO)¹ in the situation of aviation activities in 2020, the number of international and domestic passengers decreased by 1.38 billion and 1.32 billion respectively, down 74 % and 50% compared to those of 2019 and reducing revenue by 250 billion and 120 billion USD respectively.

Vietnam's aviation sector was also not an exception from the impact of the COVID-19 pandemic, according to a report by the Ministry of Planning and Invest-

ment, which said that in 2020 and the first 5 months of 2021, the revenue of aviation enterprises decreased by 61% compared to the previous year in 2019. The third outbreak of COVID-19 in Vietnam caused the aviation sector's revenue to decrease by 80% compared to the same period in 2020. Air transport was forecasted to continue to face difficulties in 2021. If the COVID-19 epidemic is contained, it will take until 2024 for the aviation sector to recover to the way it was before the epidemic. In the Vietnam Airlines Annual report 2020², Vietnam Airlines had more than 100 aircraft temporarily suspended from operation. Tan Son Nhat Operation Center was a unit of Vietnam Airline JSC with the role of a representative at Tan Son Nhat airport, which was also affected by many related impacts. In early 2021, Tan Son Nhat Operation Center also applied a policy of reducing human resources with the temporary suspension of labor contracts with 30% of

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the center's employees. In addition, the regimes and policies had also changed such as the effective salary reduced by 50%, the resort welfare regimes are temporarily suspended. The average income of employees in 2020 and the first quarter of 2021 decreased by 53% compared to 2019, the rate of employees who resigned in the first quarter of 2021 was 83% compared to that of 2019. In a difficult period, the role of leadership in general and AL in particular was very important in improving employee satisfaction and engagement.

Employees are the central factor of any firm or organization that wants to survive and develop, thus leaders have to always put the human factor on top. It should be noted that, as long as leaders do not motivate the employees and do not guide them towards goals, leader activities such as planning, organizing, and decision making would be as efficient as a silk cocoon. This was the art of leadership which energizes the potential of people and achieves brilliant results. Therefore, the existence of leadership is essential and inevitable for organizations to sustain success (Hicks & Gullett³). People feel apprehensive and insecure about what is happening around them, and as a result, they expect they can trust honest and competent good leaders. People's need for trustworthy leadership makes the study of AL timely and worthwhile. The requirement of active leadership is more than at any other time (Cooper, Scandura & Schriesheim⁴). As former Medtronic leader, George⁵, succinctly states: "we need leaders who lead with purpose, values, and integrity; leaders build long-lasting organizations, motivate their employees to deliver superior customer service, and create lasting value for shareholders." (Avolio & Gardner)⁶. Executives who did not show consistency between their words and actions could lose the trust of their followers (Walumbwa, Avolio, Gardner, Wernsing & Peterson)⁷. Proof of this claimed that the collapse of giant companies such as Enron, WorldCom, Tyco and Arthur Anderson was significant because of the moral failure of the leaders. Therefore, AL had received increasing research attention (George⁸ Harvey, Martinko & Gardner⁹).

So, how did the impact of authentic leadership affect employee satisfaction and engagement in aviation? This study examined the impact of AL on the employee engagement of the Vietnam aviation industry in the Covid 19 pandemic. The results of the study would help managers come up with effective solutions to overcome this crisis.

LITERATURE REVIEW

Authentic Leadership

George defined authentic leadership as a unification of a leader's personality and core values, which is being honest, ethical, and practical⁵. AL seems easy to define but it is a complex process and difficult to describe. Among leadership scholars, there is no single accepted definition of AL. Instead, there are many definitions, with each written from a different point of view and with different emphasis. One of those viewpoints is the inner view, which closely is focused on the leader and what goes on inside the leader. It combines the self-knowledge, self-regulation, and self-concept of the leader. In Shamir & Eilam's¹⁰ description of the introspective approach, they suggested that authentic leaders exhibit genuine leadership, attributed from beliefs and original, not a copy. This perspective emphasizes a leader's life experience and the meaning he or she attached to those experiences is important to authentic leader development. AL is an interpersonal process. This view points out that AL is a relationship, created between leaders and employees¹¹. It is the result not only of the efforts of the leaders themselves but also of the feedback of the employees. Authenticity emerges from the interaction between leaders and employees. It is a reciprocal process because both leaders and employees are influenced by each other. AL could be defined from a development perspective, as illustrated in the work of Avolio et al⁶ and Walumbwa et al⁷. This perspective underpins AL approaches. AL develops in people throughout life and could be triggered by major life events, such as a serious illness or a new career. Walumbwa et al⁷ perceived AL as a model of leadership behavior that is developed and grounded in the positive psychological qualities of leaders and their strong ethics. They argued that AL consists of four separate but interrelated components: self-awareness, internalized moral perspective, balanced processing, and relational transparency¹². Throughout life, authentic leaders learn and develop each of these types of behavior.

Job Satisfaction

Job satisfaction is an individual's general attitude towards his or her job and represents several aspects of the job, including the reward system, working conditions, and co-workers¹³. In other words, JS represents an effective response to specific aspects of work¹⁴ and is the result of an employee's perception of what the job content provider of value offers the employee. In addition, it is a positive emotional state or the result

of an assessment of an individual's work experience and would benefit one's physical and mental health¹⁵. Some theorists viewed JS as the positive emotional reactions and attitudes that an individual has towards their job. Others had seen it as a two-dimensional construct consisting of internal and external satisfaction dimensions, or "satisfied/dissatisfied" dimensions. Recently, a debate has raged on whether JS is a global concept or encompasses aspects of satisfaction with different aspects of an individual's job being allowed to do, independent work, and identified opportunities for career advancement¹⁶.

The relationship between authentic leadership and job satisfaction

Walumbwa, Avolio, Gardner, Wernsing, and Peterson⁷ conducted a comprehensive literature review and interviewed groups of content experts in the field to determine what components constituted AL and developed a valid measure of this construct. Their research identified four components: SA, IMP, BP, and RT. Together, these four components form the basis of a theory of AL.

Self-awareness (SA) refers to a leader's personal insights. It is not just that but is a process by which individuals understand themselves, including their strengths and weaknesses, and the impact they have on others. Self-awareness involves reflecting on your core values, identity, feelings, motivations, and goals, and serves to capture who you are on the deepest level. In addition, it includes being aware of and trusting your feelings¹⁷. When leaders know themselves and have a clear sense of who they are and what they stand for, they have a strong anchor for their decisions and actions¹⁸. Other people see leaders who are more self-aware as more authentic. Self-awareness refers to awareness and belief in one's characteristics, values, motives, emotions, and perceptions. SA includes the knowledge of the inherently conflicting aspects of a person and the role these contradictions play in influencing one's thoughts, feelings, actions, and behaviors¹⁹. SA is described as an emerging process by which leaders understand their unique competencies, knowledge, and experiences⁶ and is particularly associated with self-reflection. Self-reflection is an important mechanism through which leaders gain clarity about their core values and mental models¹⁸. A positive relationship between SA and JS was confirmed by Walumbwa et al⁷. The significant relationship between JS and SA was confirmed²⁰. More specifically, a systematic review by Cummings et al²¹ on leadership and results reported that leadership style affected

satisfaction²²⁻²⁶. According to Darvish & Rezaei²⁷; Ayc ²⁸; Wong & Laschinger²⁹ showed that SA has a significant impact on employee JS. Hence, the hypothesis is developed as follows:

H₁: Self-awareness positively influences job satisfaction.

Internalized moral perspective is related to the self-regulatory process by which individuals use internal moral standards and values to guide their behavior rather than allowing external pressures to take control. It is a self-regulatory process because people have control over the extent to which they allow others to influence them. Others see leaders with an intrinsic moral perspective as authentic because their actions are consistent with their beliefs and morals. IMP is the process by which authentic leaders align their values with their intentions and actions⁶. This process involves making a person's motivations, goals, and values completely transparent to their followers, leading by example, and demonstrating consistency between advocate and current theory used⁶. The key to this concept is that the regulatory system is driven from within, not in response to external forces or expectations. Furthermore, IMP differs from concepts such as self-monitoring or impression management, which may purposefully include distorted communications and thus lead to inauthentic dialogue. Instead, self-regulation involves establishing an agreement between one's internal standards and predicted outcomes⁶ and the discipline to transform core values into consistent actions⁵. Therefore, authentic leaders who possess self-regulation would say what they mean what they say, thereby they manage stress and confront conflicts between personal values and the responsibilities of the organization. Authentic leaders act according to their true self and exemplary standards of authenticity by maintaining consistency in their actions³⁰. A positive relationship between IMP and JS was by Walumbwa et al⁷. The significant relationship between JS and IMP was confirmed²⁰. More specifically, a systematic review by Cummings et al²¹ on leadership and results reported that leadership style affects satisfaction²²⁻²⁶. According to Darvish & Rezaei²⁷; Ayc ²⁸; Wong & Laschinger²⁹ showed that IMP has a significant impact on employee JS. Therefore, the next hypothesis is developed:

H₂: Internalized moral positively influences job satisfaction.

Balanced processing is also a self-regulating behavior. That concerns an individual's ability to objectively analyze information and explore the opinions of others before making decisions. It also means avoiding

bias on certain issues and remaining unbiased. BP includes soliciting viewpoints from those who disagree with you and fully considering their position before taking your action. Leaders with BP are seen as authentic because they are open about their perspectives, but are also objective in considering the viewpoints of others. While engaging in self-reflection to gain SA, either through internal introspection or external assessment, authentic leaders do not distort, exaggerate, or ignore information³⁰, but pay equal attention to positive and negative interpretations of themselves and their leadership style¹⁸. BP had been described as central to personal integrity and personality, thus significantly influencing the decision-making and strategic actions of leaders¹⁹. A positive relationship between PB and JS was confirmed by Walumbwa et al⁷. The significant relationship between JS and PB was confirmed²⁰. More specifically, a systematic review by Cummings et al²¹ on leadership and results reported that leadership style affects satisfaction²²⁻²⁶. According to Darvish & Rezaei²⁷; Ayc ²⁸; Wong & Laschinger²⁹ showed that BP has a significant impact on employee JS. Hence, the next hypothesis is developed:

H₃: Balanced processing positively influences job satisfaction.

Relational transparency refers to being open and honest in expressing one's true self to another. It is self-regulating because individuals can control their transparency with others. RT occurs when individuals appropriately share their core feelings, motives, and tendencies with others¹⁷. It includes individuals who display both positive and negative aspects of themselves to others. RT is about communicating openly and practically in relationships with others and includes all previous possibilities for self-disclosure and honesty¹⁹. In addition to being SA, balanced, and united about one's goals, motivations, values, identity, and emotions, authentic leaders are also transparent in revealing these expressions to their followers³⁰. Revealing one's true self to their followers, one built trust and camaraderie, promoting teamwork and cooperation¹⁸. Furthermore, RT requires a willingness to keep oneself open to inspection and feedback, and is therefore also an essential component of the learning process [23]. A positive relationship between RT and JS was confirmed by Walumbwa et al [30]. The significant relationship between JS and RT was confirmed²⁰. More specifically, a systematic review by Cummings et al²¹ on leadership and results reported that leadership style affected satisfaction²²⁻²⁶. According to Darvish & Rezaei²⁷; Ayc ²⁸; Wong & Laschinger²⁹ showed that RT has a significant impact

on employee JS. Hence, the next hypothesis is developed:

H₄: Relational transparency positively influences job satisfaction.

Employee Engagement and job satisfaction

The concept of employee engagement introduced by Schaufeli & Bakker³¹ was widely used in recent research, the author defined employee engagement as a positive mental state, satisfied work-related, characterized by: work inspiration, dedication, and passion. Inspiration is characterized by a high level of energy and inspiration, along with perseverance at work, a willingness to put a lot of effort into work, and a willingness to take on challenges. Dedication is characterized by an enthusiastic, inspirational spirit that prides itself on meaningful work. Enthusiasm is expressed by a high degree of concentration and dedication to work, thinking about work even when not working³¹. According to Dvir, Eden, Avolio & Shamir³², employee engagement was also defined as "a high degree of action, initiative, and responsibility", increasing their contribution to the success of the organization. According to Perrin³³, engagement was defined as the degree to which an individual is willing to put his or her efforts into work and capable of leading the organization to success. That engagement is influenced by emotional and cognitive factors related to work and experiences with work.

According to Djoemadi, Setiawan, Noermijati, & Irawanto³⁴ employee engagement is mainly driven by employee satisfaction. Employee JS increases employee engagement³⁵. Sabir & Khan³⁶ found a significant positive correlation between employee JS and employee engagement. It is hypothesized as follows:

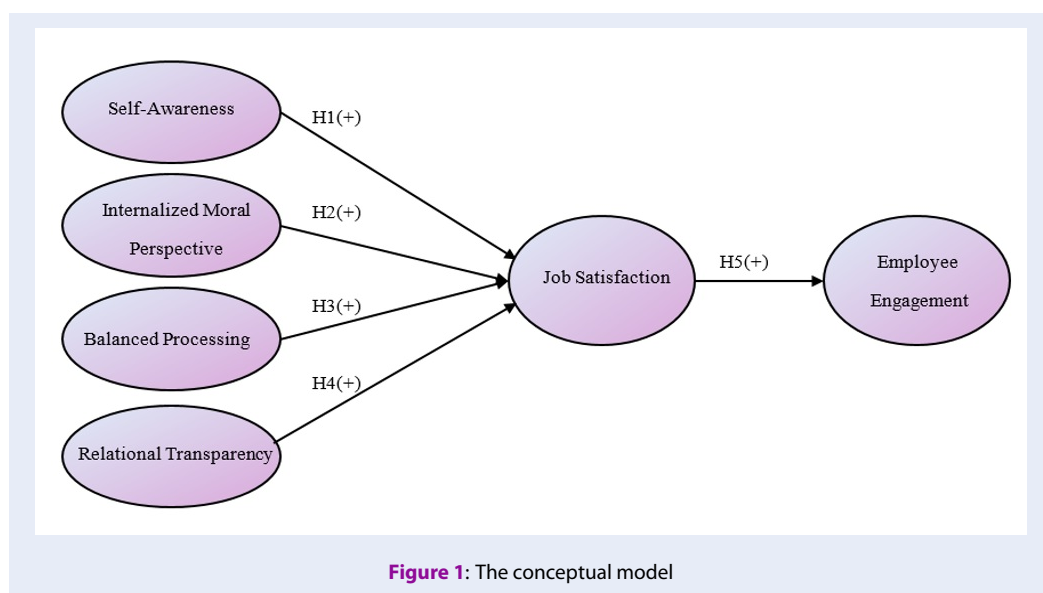
H₅: Job satisfaction positively influences employee engagement.

Based on the research, literature review and hypotheses development, Figure 1 shows a research model.

RESEARCH DESIGN

Research process

The research process was carried out as follows: the summary of the theoretical framework of previous research to give a preliminary scale. After that qualitative research was conducted through focus group discussion from which the official scale was proposed. Then quantitative research was carried out through a survey questionnaire of employees working at Tan Son Nhat Operation Center - Vietnam Airlines JSC.



Research methods

The qualitative research method was conducted through 01 focus group discussion with 10 employees working at Tan Son Nhat Operation Center in April. Based on their responses, minor modifications were made to ensure the generality of the observed variables. Qualitative research results with 24 observed variables used to measure research concepts were formed. AL scale used 16 items by Walumbwa et al²⁸. Job satisfaction was used 4 items of Turkyilmaz et al³⁷. Employee engagement had 4 observed by Schaufeli & Bakker³¹. All variables measured were based on a five-point Likert scale, from 1 – completely disagree to 5 – totally agree. Quantitative research was conducted through a survey of the employees working at Tan Son Nhat Operation Center - Vietnam Airlines JSC. The convenient sampling method was implemented. The questionnaire was sent to each employee by via the google form from April to July 2021. There were 163 respondents, including 155 valid respondents used for analysis with 95.1% recorded.

Data analysis

The collected data were evaluated by Partial Least Square – Structural Equation Modeling (PLS-SEM). To obtain and assess the key reliability and validity indices and the direct effects, Partial Least Squares (PLS) was employed, using the SmartPLS 3 software³⁸.

RESULTS AND DISCUSSION

Demographic profile of respondents

The distribution of gender, age, marital status, education, seniority in Table 1 showed that there was

a difference. The majority gender of the survey respondents was female, accounting for 52.9%. The age group 18-22 accounted for the majority of the respondents (47.1%), the proportions of other groups vary, at 38.1%, 11.6%, and 3.2% for the 23-30, 31-45, and over 45 age groups, respectively. The majority were single (80%). The majority of respondents had university degrees (75.5%). In terms of seniority, the majority is 1-3 years (41.3%).

Scale reliability analysis

- Results of scale reliability and convergent validity
Composite reliability was used to measure construct reliability. The value ranged from 0.913 to 0.929, which was higher than the recommended criteria of 0.7 and higher³⁹. We measured the internal consistency among the items of each construct using Cronbach's Alpha; the value was higher than 0.7, which is considered suitable for reliability/internal consistency between the items³⁹. Convergent validity was measured using factor loading, and the average variance was extracted. The standardized factor loading of all items ranged from 0.809 to 0.915, above the recommended criteria, 0.5³⁹. The value of the average variance extracted ranged from 0.726 to 0.766, which met the criterion of 0.5, and higher³⁹. The results imply that convergent validity has been adequately met. Results of the test were shown in Table 2.

- Results of discriminant validity

The next stage after the convergence validity testing is the discriminant validity testing. Discriminant validity was measured using the Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio. The results

Table 1: Demographic profile of respondents

Measure	Items	Frequency	Percent (%)
Gender	Male	73	47.1
	Female	82	52.9
Age	18-22 years	73	47.1
	23-30 years	59	38.1
	31-45 years	18	11.6
	Over 45 years	5	3.2
Marital status	Single	124	80
	Married	31	20
Education	Intermediate	4	2.6
	College	15	9.7
	University	117	75.5
	M.S / Ph.D	19	12.3
Seniority	Under 1 year	40	25.8
	1-3 years	64	41.3
	4-6 years	42	27.1
	7-10 years	6	3.9
	Over 10 years	3	1.9

Source: Result of data analysis

presented in Table 3 shows that all the square roots of Average Variance Extracted values were all higher than the correlation values of constructs compared to all other constructs⁴⁰. The results presented in Table 4 shows that the Heterotrait-Monotrait ratios for all the constructs were less than the threshold value of 0.85⁴¹. The results imply that discriminant validity has been adequately met.

Results of model test

We modelled and analyzed the direct effects in an integrated framework. We employed the standardized root mean squared residuals (SRMR), structural variance inflation factor (VIF) coefficients, predictive relevance (Q^2), and explanatory power/coefficient of determination (R^2) to evaluate the model fit. The value of SRMR was 0.069, which met the threshold of 0.08⁴². All inner VIF values were between 1.476–2.203, lower than the threshold of 3.0³⁹. The values of Q^2 were between 0.399–0.491, all above the required value of zero⁴³. As observed, the R^2 values (0.685; 0.548) were all above the threshold of 0.5, which implied a moderate model³⁹. All these measures indicated a good model fit of the research framework. The

bootstrapping re-sampling analysis (5000 samples)⁴⁴ result indicated that all five affected coefficients were statistically significant in the proposed direction (Figure 2, Table 5), supporting $H_1 - H_5$.

The result indicated that job satisfaction has a mediating role between authentic leadership and employee engagement as presented in Table 6. Job satisfaction has a mediating role between SA and EE at a coefficient of $\beta = 0.254$ ($p= 0.000$). In addition, there is an indirect relationship between IMP and EE through JS at a coefficient of $\beta = 0.219$ ($p= 0.001$). Furthermore, job satisfaction has a mediating role in the impact between BP and EE at a coefficient of $\beta = 0.175$ ($p= 0.001$). Moreover, there is an indirect relationship between RT and EE through JS at a coefficient $\beta = 0.167$ ($p= 0.008$). The result indicated that job satisfaction has a mediating role between authentic leadership and employee engagement. This result was consistent with the study of Wirawan et al⁴⁵. Alok and Israel⁴⁶, Bamford et al⁴⁷ and Walumbwa et al⁴⁸ found a similar effect of authentic leadership.

Discussions

This study aims to examine the impact of authentic leadership factors on employee engagement through

Table 2: Results of scale reliability analysis

Constructs	Loading	Alpha	CR	AVE
Self-Awareness SA. Mean(SD) = 4.26 (0.75)				
SA1: Your leaders can list their three greatest weaknesses	0.914	0.873	0.913	0.726
SA2: Your leaders can list my three greatest strengths	0.809			
SA3: Your leaders seek feedback as a way of understanding who they really are as a person	0.823			
SA4: Your leaders accept the feelings they have about themselves	0.858			
Internalized Moral Perspective IMP. Mean(SD) = 4.01 (0.88)				
IMP5: Your leaders' actions reflect their core values	0.878	0.898	0.929	0.766
IMP6: Your leaders do not allow group pressure to control them	0.832			
IMP7: Other people know where your leaders stand on controversial issues	0.891			
IMP8: Your leaders' morals guide what they do as a leader	0.897			
Balanced Processing BP. Mean(SD) = 3.62 (1.05)				
BP9: Your leaders seek others' opinions before making up their minds.	0.905	0.895	0.928	0.763
BP10: Your leaders listen closely to the ideas of those who disagree with them	0.859			
BP11: Your leaders do not emphasize their point of view at the expense of others	0.810			
BP12: Your leaders listen very carefully to the ideas of others before making decisions	0.915			
Relational Transparency RT. Mean(SD) = 3.67 (1,00)				
RT13: Your leaders openly share their feelings with others	0.908	0.894	0.927	0.759
RT14: Your leaders let others know who they truly are as a person	0.874			
RT15: Your leaders rarely present a "false" front to others	0.842			
RT16: Your leaders admit their mistakes to others	0.861			
Job Satisfaction JS. Mean(SD) = 4.01 (0.85)				
JS17: You are content with the type of work	0.894	0.882	0.919	0.739
JS18: You enjoying the job	0.825			
JS19: Your learning and growth potential	0.820			
JS20: You feeling important	0.897			
Employee Engagement EE. Mean(SD) = 3.99 (0.87)				
EE21: You feel energized at work	0.875	0.884	0.920	0.741
EE22: You feel determined and excited about the work	0.874			
EE23: You ready to work with more intensity	0.837			
EE24: You try to solve work-related problems	0.857			

Source: Result of data analysis

Table 3: Results of discriminant validity (fornell-larcker criterion)

	BP	EE	IMP	JS	RT	SA
BP	0.873					
EE	0.501	0.861				
IMP	0.240	0.575	0.875			
JS	0.469	0.740	0.659	0.860		
RT	0.535	0.567	0.541	0.692	0.871	
SA	0.119	0.435	0.536	0.648	0.523	0.852

Source: Result of data analysis

Table 4: Results of discriminant validity (heterotrait-monotrait ratio)

	BP	EE	IMP	JS	RT	SA
BP	1					
EE	0.562					
IMP	0.267	0.644				
JS	0.524	0.837	0.738			
RT	0.595	0.638	0.598	0.773		
SA	0.132	0.490	0.599	0.734	0.585	1

Source: Result of data analysis

Table 5: Results of hypotheses testing

Hypotheses	Path	Estimat	S.E	T values	P Values
H1	SA→JS	0.343	0.094	3.643	0.000
H2	IMP→JS	0.296	0.078	3.792	0.000
H3	BP→JS	0.236	0.072	3.295	0.001
H4	RT→JS	0.226	0.082	2.757	0.006
H5	JS→EE	0.740	0.055	13.381	0.000

Source: Result of data analysis

Table 6: Results of the mediating role of job satisfaction

Specific Indirect Effects	Estimat	S.E	T values	P Values
SA→JS→EE	0.254	0.067	3.801	0.000
IMP→JS→EE	0.219	0.065	3.400	0.001
BP→JS→EE	0.175	0.052	3.337	0.001
RT→JS→EE	0.167	0.063	2.651	0.008

Source: Result of data analysis

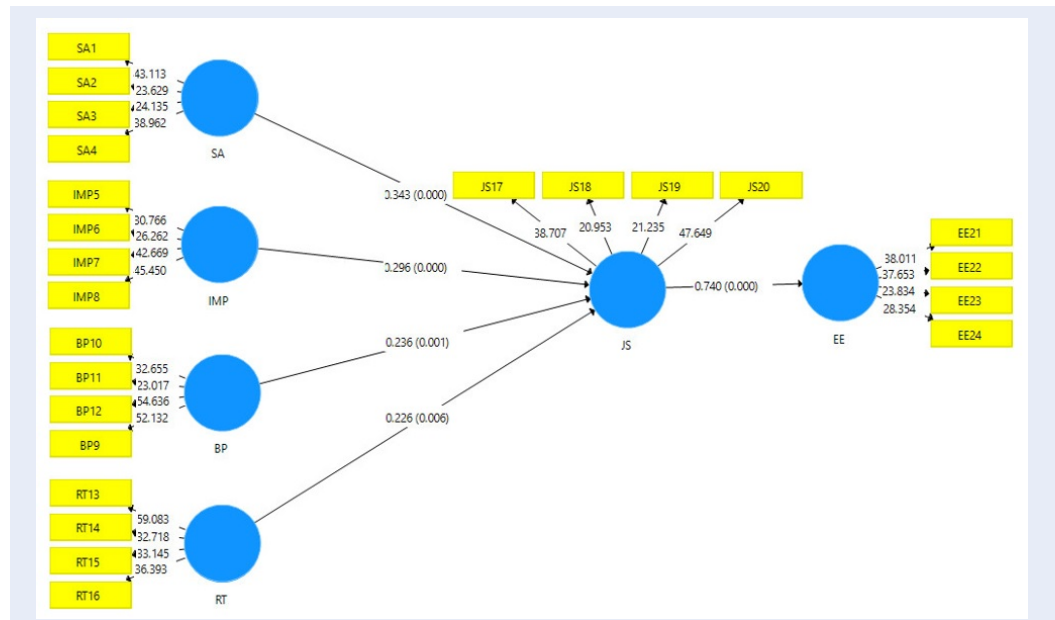


Figure 2: Results of the research model^a

^aSource: Result of data analysis

the mediating role of job satisfaction. The research model had a dependent variable of JS with $R^2=0.685$, meaning that 68,5 % of the variation in JS, which is explained by the variation of the components as follows: SA, IMP, BP, RT. Employee engagement variable with $R^2 = 0.548$ means 54.8% variation of job satisfaction. The results show that all four factors SA, IMP, BP, and RT have an impact on job satisfaction. *Self-awareness positively influences job satisfaction.* The result shows that the relationship between SA and JS was statistically significant at a coefficient of $\beta = 0.343$ ($p=0.000$), thus hypothesis H_1 was supported. This result is also consistent with the study of^{7,20,21,26-28}. This confirms the hypothesis that SA has a positive impact on employees' JS.

H_2 : *Internalized moral positively influences job satisfaction.* Table 5 indicated that the relationship between IMP and JS was significant at a coefficient of $\beta = 0.296$ ($p= 0.000 < 0.01$) hypothesis H_2 accepted. This result is also similar to the study of^{7,20,21,26-28}. This confirms the hypothesis that IMP has a positive influence on employees' JS.

H_3 : *Balanced processing positively influences job satisfaction.* The result indicated that the relationship between BP and JS is significant at a coefficient of $\beta = 0.236$ ($p= 0.001 < 0.01$) and hypothesis H_3 was accepted. This result is also consistent with the study of^{7,20,21,26-28}. This confirms the hypothesis that BP has a positive influence on employees' JS.

H_4 : *Relational transparency positively influences job satisfaction.* The relationship between RT and JS was statistically significant at a coefficient of $B= 0.226$ ($p= 0.006 < 0.01$), thus hypothesis H_4 is supported. Thus, the hypothesis that RT significantly affects JS is accepted. This result is consistent with the study by^{7,20,21,26-28}. This confirms the hypothesis that RT has a positive influence on employees' JS.

H_5 : *Job satisfaction positively influences employee engagement.* The result is similar to those of Baumruk³⁵, Djoemadi et al³⁴, and Sabir and Khan³⁶. Table 5 clearly reveal that JS significantly influence EE ($\beta=0,740 =0.000$). This confirms the hypothesis that JS has a positive influence on employee engagement.

CONCLUSIONS AND IMPLICATIONS

The purpose of this study investigated and tested affecting AL on employees' JS at Tan Son Nhat Operation Center – Vietnam Airlines JSC. To promote the development of the aviation sector, firms operating in the aviation sector in Vietnam need to improve the quality of all resources, especially human resources. The third outbreak of COVID-19 in Vietnam caused the aviation sector's revenue to decrease by 80% from 2020. Air transport is forecasted to continue to face difficulties in 2021. If the COVID-19 epidemic is contained, it will take until 2024 for the aviation sector to recover to the way it was before the epidemic. In

early 2021, Tan Son Nhat Operation Center also applied a policy of reducing human resources with the temporary suspension of labor contracts with 30% of the center's employees. In addition, the regimes and policies have also changed such as the effective salary was reduced by 50%, the resort welfare regimes are temporarily suspended. The average income of employees in 2020 and the first quarter of 2021 decreased by 53% from 2019, the rate of employees who resigned in the first quarter of 2021 was 83% from 2019 (Statistics of Vietnam Airlines). In today's difficult period, the role of leadership in general and AL in particular is very important in improving employee satisfaction and engagement. Therefore, aviation enterprises should increasingly focus on creating employees' JS in order to positively affect employee engagement. The results of a survey of employees at Tan Son Nhat Operation Center - Vietnam Airlines JSC showed that the components of AL: SA, IMP, BP, RT had a positive effect on employees' JS. This result was consistent with the study by ^{7,20,21,26-28}. Besides, employee's JS (JS) had an impact on employee engagement (EE). This result was consistent with the study by ³⁴⁻³⁶. In addition, the result indicated that job satisfaction has a mediating role between authentic leadership and employee engagement. This result was consistent with the study by ⁴⁵⁻⁴⁸.

Based on the research results, some suggests that improving AL increases JS and employee engagement:

Job Satisfaction had mean=4.01. Enterprises in the aviation sector in Vietnam who want to improve employees' JS need to have a new perspective not only focusing on income, working environment... but also focusing on leadership in general and AL in particular, especially in difficult current Covid-19 pandemic. Managers and leaders are considered as another factor affecting employees' JS. They need attention, support, encouragement, and development of their competence and if leaders plan and strive to comply with the requirements of AL, it is certain that JS of employees is increasingly enhanced, and they will be more engaged with the organization.

Employee Engagement has mean=3.99. Aviation enterprises that want to increase employee engagement need to raise employees' JS because employees are satisfied at work, employees will be more engaged. Authentic leadership increases employee engagement by leveraging an employee's job satisfaction. Enterprises should recognize the value of AL so that they can have an implementation plan and principles to comply with the requirements of AL, especially during difficult times due to the Covid-19 pandemic.

Self-awareness had mean=4.26. Leaders' aviation firms need to know their strengths and weaknesses, it is not just a process of SA but they will know their strengths and weaknesses which its impact on their employees. They must know who they are, what they stand for, and that they have a strong anchor for their decisions and actions. Leaders must look at themselves objectively, record thoughts that help eliminate or erase old ideas and gain new information and ideas, write down goals and plan priorities, perform self-criticism every day, ask trusted employees to comment on them, ask for employee work feedback to reflect leadership strengths and weaknesses, and importantly be always look at yourself.

Internalized Moral Perspective had mean = 4.01. Aviation enterprises leaders need to use internal moral standards and values to guide their behavior rather than allowing external pressures to control them. Leaders must strictly respect moral standards and voluntarily implement them according to internal motivation. Leaders must have moral knowledge and moral beliefs that lead to their moral behavior. In addition, leaders need to have moral motives, moral emotions, energy, and moral habits.

Balanced Processing had a mean = 3.62. Leaders must improve their ability to analyze objective information and explore the opinions of others before making decisions, avoiding bias. Employees are often interested in evaluating what they get from work commensurate with the effort they put in. Therefore, leaders need to be fair in the results, fair in the process of making public, transparent, and clear policies, procedures, and implementation methods. Fairness in the treatment attitude of the leader who always cares and respects the employees.

Relational Transparency had mean = 3.67. Leaders should be honest and transparent in expressing themselves to employees. Leaders communicate and evaluate employees openly and transparently. Leaders should share their feelings, motivations, and core tendencies with employees appropriately. Both positive and negative aspects of leadership for employees must show clear transparency.

The study has certain limitations: Due to time and budget constraints, the study only conducted a research survey with 155 respondents at Tan Son Nhat Operation Center – Vietnam Airlines JSC by convenient sampling method. This leads to limitations in testing the reliability of research scales.

LIST OF ABBREVIATIONS

AL: Authentic Leadership

BP: Balanced processing

EE: Employee Engagement
 ICAO: International Civil Aviation Organization
 IMP: Internalized moral perspective
 JS: Job Satisfaction
 PLS-SEM: Partial Least Square – Structural Equation Modeling
 SA: Self-awareness
 TR: Relational transparency
 SRMR: Root mean squared residuals
 VIF: Variance inflation factor

COMPETING INTERESTS

The author declares that he has no conflicts of interest.

AUTHOR CONTRIBUTIONS

Nguyen Van Thuy is identified the research topic and revised the article.

Van Duc Chi Vu is implemented the content of the article.

REFERENCES

1. ICAO. Effects on Novel Coronavirus (Covid19) on Civil Aviation: Economic Impact Analysis. 2021; Available from: https://www.icao.int/sustainability/Documents/COVID-19/ICAO_Coronavirus_Econ_Impact.pdf.
2. Vietnam Airlines. Annual report. 2020.
3. Hicks H, Gullett R. Organizational and management theories, elements and processes. Tehran: Douran Publication. 1998;.
4. Cooper CD, et al. Looking forward but learning from our past: Potential challenges to developing authentic leadership theory and authentic leaders. *The Leadership Quarterly*. 2005;16(3):475–493. Available from: <https://doi.org/10.1016/j.leaqua.2005.03.008>.
5. George B. Authentic leadership: Rediscovering the secrets to creating lasting value (Vol. 18). John Wiley & Sons. 2003;.
6. Avolio BJ, Gardner WL. Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*. 2005;16(3):315–338. Available from: <https://doi.org/10.1016/j.leaqua.2005.03.001>.
7. Walumbwa FO, et al. Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*. 2008;34(1):89–126. Available from: <https://doi.org/10.1177/0149206307308913>.
8. George B. True north: Discover your authentic leadership (Vol. 143). John Wiley & Sons. 2010;.
9. Harvey P. Promoting authentic behavior in organizations: An attributional perspective. *Journal of Leadership & Organizational Studies*. 2006;12(3):1–11. Available from: <https://doi.org/10.1177/107179190601200301>.
10. Shamir B, Eilam G. "What's your story?" A life-stories approach to authentic leadership development. *The leadership quarterly*. 2005;16(3):395–417. Available from: <https://doi.org/10.1016/j.leaqua.2005.03.005>.
11. Eagly AH. Achieving relational authenticity in leadership: Does gender matter?. *The leadership quarterly*. 2005;16(3):459–474. Available from: <https://doi.org/10.1016/j.leaqua.2005.03.007>.
12. Avolio BJ, et al. Leadership: Current theories, research, and future directions. *Annual Review of Psychology*. 2009;60:421–449. PMID: 18651820. Available from: <https://doi.org/10.1146/annurev.psych.60.110707.163621>.
13. Robbins SP. Organisational behaviour in Southern Africa. Pearson South Africa. 2009;.
14. Chen CF. Job satisfaction, organizational commitment, and flight attendants' turnover intentions: A note. *Journal of Air Transport Management*. 2006;12(5):274–276. Available from: <https://doi.org/10.1016/j.jairtraman.2006.05.001>.
15. Blegen MA. Nurses' job satisfaction: a meta-analysis of related variables. *Nursing Research*. 1993; PMID: 8424066. Available from: <https://doi.org/10.1097/00006199-199301000-00007>.
16. Faragher EB. The relationship between job satisfaction and health: a meta-analysis. *From Stress to Wellbeing Volume*. 2013;1:254–271. Available from: https://doi.org/10.1057/9781137310651_12.
17. Kernis MH. Toward a conceptualization of optimal self-esteem. *Psychological Inquiry*. 2003;14(1):1–26. Available from: https://doi.org/10.1207/S15327965PLI1401_01.
18. Gardner W, et al. Authentic leadership theory and practice: Origins, effects and development. 2005;.
19. Ilies R, et al. Authentic leadership and eudaemonic well-being: Understanding leader-follower outcomes. *The Leadership Quarterly*. 2005;16(3):373–394. Available from: <https://doi.org/10.1016/j.leaqua.2005.03.002>.
20. Irvine DM, et al. Job satisfaction and turnover among nurses: integrating research findings across studies. *Nursing Research*. 1995; PMID: 7624236. Available from: <https://doi.org/10.1097/00006199-199507000-00010>.
21. Cummings GG. Leadership styles and outcome patterns for the nursing workforce and work environment: a systematic review. *International Journal of Nursing Studies*. 2010;47(3):363–385. PMID: 19781702. Available from: <https://doi.org/10.1016/j.ijnurstu.2009.08.006>.
22. McNeese-Smith DK. The relationship between managerial motivation, leadership, nurse outcomes and patient satisfaction. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*. 1999;20(2):243–259. Available from: [https://doi.org/10.1002/\(SICI\)1099-1379\(199903\)20:2<243::AID-JOB888>3.0.CO;2-2](https://doi.org/10.1002/(SICI)1099-1379(199903)20:2<243::AID-JOB888>3.0.CO;2-2).
23. Loke CF. Leadership behaviours: effects on job satisfaction, productivity and organizational commitment. *Journal of Nursing Management*. 2001;9(4):191–204. PMID: 11472508. Available from: <https://doi.org/10.1046/j.1365-2834.2001.00231.x>.
24. Cummings G. Mitigating the impact of hospital restructuring on nurses: the responsibility of emotionally intelligent leadership. *Nursing Research*. 2005;54(1):2–12. PMID: 15695934. Available from: <https://doi.org/10.1097/00006199-200501000-00002>.
25. Hall LM, et al. Nurses' perceptions of hospital work environments. *Journal of Nursing Management*. 2007;15(3):264–273. PMID: 17359426. Available from: <https://doi.org/10.1111/j.1365-2834.2007.00676.x>.
26. Khan S. Effect of Authentic Leadership on Job Satisfaction and. *City University Research Journal*. 2017;07(01):151–166.
27. Darvish H, Rezaei F. The impact of authentic leadership on job satisfaction and team commitment. *Management & Marketing*. 2011;6(3):421.
28. Ayça B. The Impact of Authentic Leadership Behavior on Job Satisfaction: A Research on Hospitality Enterprises. *Procedia Computer Science*. 2019;158:790–801. Available from: <https://doi.org/10.1016/j.procs.2019.09.116>.
29. Wong CA. Authentic leadership, performance, and job satisfaction: The mediating role of empowerment. *Journal of Advanced Nursing*. 2013;69(4):947–959. Available from: <https://doi.org/10.1111/j.1365-2648.2012.06089.x>.
30. Mazutis D, Slawinski N. Leading organizational learning through authentic dialogue. *Management Learning*. 2008;39(4):437–456. Available from: <https://doi.org/10.1177/1350507608093713>.
31. Schaufeli WB, et al. Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior: The International*

- Journal of Industrial, Occupational and Organizational Psychology and Behavior. 2004;25(3):293–315. Available from: <https://doi.org/10.1002/job.248>.
32. Dvir T. Impact of transformational leadership on follower development and performance: A field experiment. *Academy of Management Journal*. 2002;45(4):735–744.
 33. Perrin T. Working today: Understanding what drives employee engagement. Towers Perrin talent report. 2003;.
 34. Djoemadi FR. The effect of work satisfaction on employee engagement. *Polish Journal of Management Studies*. 2019;19(2):101–111. Available from: <https://doi.org/10.17512/pjms.2019.19.2.08>.
 35. Baumruk R. Why managers are crucial to increasing engagement: Identifying steps managers can take to engage their workforce. *Strategic HR Review*. 2006; Available from: <https://doi.org/10.1108/14754390680000863>.
 36. Sabir S, et al. Impact of political stability and human capital on foreign direct investment in East Asia & Pacific and south Asian countries. *Asian Journal of Economic Modelling*. 2018;6(3):245–256. Available from: <https://doi.org/10.18488/journal.8.2018.63.245.256>.
 37. Turkyilmaz A. Empirical study of public sector employee loyalty and satisfaction. *Industrial Management and Data Systems*. 2011;111(5):675–696. Available from: <https://doi.org/10.1108/02635571111137250>.
 38. Ringle CM. *SmartPLS 2.0 (beta)*. Hamburg. 2005;.
 39. Hair JF. *A primer on partial least squares structural equation modeling (PLS-SEM) (2nd ed.)*. 2016;.
 40. Fornell C, Larcker DF. Structural equation models with unobservable variables and measurement error: Algebra and statistics. 1981; Available from: <https://doi.org/10.2307/3150980>.
 41. Henseler J, et al. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*. 2015;43(1):115–135. Available from: <https://doi.org/10.1007/s11747-014-0403-8>.
 42. Henseler J, et al. Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational Research Methods*. 2014;17(2):182–209. Available from: <https://doi.org/10.1177/1094428114526928>.
 43. Henseler J, et al. The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited. 2009; Available from: [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014).
 44. Tortosa V. Internal market orientation and its influence on organizational performance. *European Journal of Marketing*. 2009; Available from: <https://doi.org/10.1108/03090560910989975>.
 45. Wirawan H, et al. The effect of authentic leadership and psychological capital on work engagement: the mediating role of job satisfaction. *Leadership & Organization Development Journal*. 2020; Available from: <https://doi.org/10.1108/LODJ-10-2019-0433>.
 46. Alok K, Israel D. Authentic leadership & work engagement. *Indian Journal of Industrial Relations*. 2012;p. 498–510.
 47. Bamford M, et al. The influence of authentic leadership and areas of worklife on work engagement of registered nurses. *Journal of nursing management*. 2013;21(3):529–540. PMID: 23406200. Available from: <https://doi.org/10.1111/j.1365-2834.2012.01399.x>.
 48. Walumbwa FO, et al. Retracted: Psychological processes linking authentic leadership to follower behaviors. 2010; Available from: <https://doi.org/10.1016/j.jleaqua.2010.07.015>.

Tác động của lãnh đạo đích thực đối với sự gắn kết của nhân viên tại trung tâm khai thác Tân Sơn Nhất trong giai đoạn COVID-19: Vai trò trung gian của sự hài lòng trong công việc

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TÓM TẮT

Nguồn nhân lực là một trong những nguồn lực quan trọng thúc đẩy sự phát triển của các doanh nghiệp trong lĩnh vực hàng không ở Việt Nam. Do đó, các hãng hàng không ngày càng quan tâm đến sự hài lòng trong công việc và sự gắn kết của nhân viên. Hàng không là một ngành có tầm quan trọng đặc biệt trong phát triển kinh tế. Trước đại dịch COVID-19, lĩnh vực hàng không phát triển mạnh mẽ. Tuy nhiên, khi đại dịch COVID-19 bùng phát, nền kinh tế thế giới bị thiệt hại rất lớn, trong đó lĩnh vực đầu tiên bị ảnh hưởng nặng nề nhất là lĩnh vực vận tải hàng không. Ngành hàng không Việt Nam cũng không nằm ngoài tác động của đại dịch COVID-19, theo báo cáo của Bộ Kế hoạch và Đầu tư cho biết, năm 2020 và 5 tháng đầu năm 2021, doanh thu của các doanh nghiệp hàng không giảm 61% so với năm 2019. Tại Báo cáo thường niên của Việt Nam Airlines 2020, Việt Nam Airline có hơn 100 tàu bay tạm ngừng khai thác, Trung tâm khai thác Tân Sơn Nhất là đơn vị thuộc Tổng Công ty Hàng không Việt Nam với vai trò đại diện tại sân bay Tân Sơn Nhất cũng chịu nhiều tác động liên quan. Trong một giai đoạn khó khăn, vai trò của lãnh đạo nói chung và lãnh đạo đích thực nói riêng là rất quan trọng trong việc cải thiện sự hài lòng và gắn kết của nhân viên. Nghiên cứu này đã điều tra và thử nghiệm tác động của sự lãnh đạo đích thực đến sự gắn bó của nhân viên tại Trung tâm khai thác Tân Sơn Nhất trong giai đoạn COVID-19: vai trò trung gian của sự hài lòng trong công việc. Nó sử dụng cả nghiên cứu định tính và định lượng. Nghiên cứu định tính được thực hiện thông qua các cuộc thảo luận nhóm tập trung với 10 nhân viên. Nghiên cứu định lượng được thực hiện với 155 nhân viên tại Trung tâm khai thác Tân Sơn Nhất – Tổng công ty Hàng không Việt Nam thông qua bảng câu hỏi khảo sát theo phương pháp chọn mẫu thuận tiện. Kết quả nghiên cứu được phân tích bằng mô hình phương trình cấu trúc bình phương nhỏ nhất riêng phần (PLS - SEM) chỉ ra rằng: Các thành phần của lãnh đạo đích thực: tự nhận thức, quan điểm đạo đức nội tại, xử lý công bằng và quan hệ minh bạch có tác động tích cực đến sự gắn kết của nhân viên thông qua vai trò trung gian của sự hài lòng trong công việc.

Từ khóa: Lãnh đạo đích thực, Sự hài lòng trong công việc, Sự gắn kết của nhân viên

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Tỉ lệ chấp nhận đăng 2021: 70%

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