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INCUBATING FACTORS IN THE HOME COUNTRY AND JOB SATISFACTION IN A HOST NATION: AN ANALYSIS ON CROSS-BORDER LABOR

Abstract

Understanding the factors that affect labor satisfaction in the home country and their satisfaction in a host nation is very important. Therefore, this study investigates the job satisfaction of Vietnamese workers who frequently travel to China for employment. It utilizes Structural Equation Modeling (SEM) to explore the impact of external factors, particularly the support provided by their home countries. The survey collected data from 317 respondents randomly selected from lists provided by local authorities in three provinces adjacent to China, using a combination of face-to-face interviews and Internet calls. The respondents are individuals who regularly go to China for work. The study uses four main latent variables, consisting of a total of 17 measures that encompass both endogenous and exogenous factors associated with support from the home country. The findings indicate a significant influence of post-return quality of life and the acquisition of work-related skills through training programs on job satisfaction. Additionally, the regression coefficient value reveals a statistically significant negative correlation between job satisfaction and skills acquired through short training courses. However, no statistically significant relationship is found between the latent variable of media and employees' job satisfaction. Based on the findings, this study suggests that policymakers and authorities should always assist migrants in reintegrating into their communities by supporting convenient registration procedures, providing relevant information, and giving necessary livelihood guidance.

Keywords

media, working skills, training, living conditions, happiness, reintegration

JEL Classification

C38, J28, R23

INTRODUCTION

Understanding the experiences of cross-border employees who work abroad, including their job performance, attitudes towards work, and particularly their job satisfaction, is crucial for their home country. By gaining knowledge of employee job satisfaction levels when they work overseas, the home nation can create specific policies to enhance their job satisfaction and ensure their success when they return home. For example, Wodociag et al. (2022) investigated the job satisfaction of workers who cross borders and those who have sedentary jobs, while examining the influence of employability dimensions such as occupational expertise, anticipation/optimization, and personal flexibility. A significant positive relationship was discovered between optimization/anticipation and job satisfaction among cross-border workers. Additionally, autonomy was found to have a positive association with job satisfaction in both groups. The study also confirmed the presence of unique working dynamics among cross-border workers.



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According to Pires and Nunes (2018), the integration of labor markets continues to face challenges due to administrative, legal, and language barriers, hindering cross-border labor mobility. The authors examined the obstacles faced by cross-border workers commuting in the Euroregion Galicia-Norte de Portugal and discovered that traditional push and pull factors continue to play a role in explaining cross-border labor flows. However, the qualitative data provided new perspectives on varying levels of indifference among cross-border workers.

Vietnam and China share a long border, and a significant number of Vietnamese individuals travel to China for work and regularly return home. Studying these respondents can help local authorities identify suitable methods of support and boost job satisfaction levels among cross-border workers. The link between social and economic conditions and job satisfaction has been widely studied in recent decades among cross-border workers. However, aspects such as living conditions, overall well-being, skill development through training programs, and insights derived from local media outlets have not received sufficient attention. Hence, it is beneficial to explore how specific factors impact the job satisfaction of these cross-border employees.

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Media, living conditions and training courses in the home country may play an important role in forming job satisfaction for employees when they go for working in other nations. Media can provide useful information for labor, training courses can be sources of essential skills and meanwhile, living conditions will be a base for higher job satisfaction. Firstly, the relationship between media and job satisfaction will be reviewed.

Before going abroad to work, it is helpful for employees to gather information about the working environment in any host country. This can help them prepare better since the information includes details about the working environment, salary, and even the uncomfortable or unpleasant aspects of the job. According to Zhang et al. (2019) and Robertson and Kee (2017), accessing information from the media can contribute to enhancing employees' level of job satisfaction. Furthermore, based on the organizational commitment theory, a group of authors from China (Zhang et al., 2019) investigated the influence of different goals of social media usage on workers' job satisfaction and turnover intention. Using survey data from 298 respondents, the authors found both work-related and social-related social media usage has a positive relationship with workers' work dedication through their organizational attachment. The

study also showed that the usage of social media can enhance job satisfaction and reduce the intention of turnover among workers by improving their attachment and organizational loyalty. Similarly, Robertson and Kee (2017) explored the relationship between the usage of social media, employment status, and job satisfaction. Specifically, they investigated the links between the hours of time workers spent on Facebook exchanging with colleagues and their job satisfaction. The authors confirmed that workers' job satisfaction had a positive relationship with the hours of time they spent on Facebook exchanging with colleagues. The study emphasizes that contract workers experienced the highest level of satisfaction at work. Based on their findings, the authors suggested that Facebook can serve as a strategic social platform that can enhance job satisfaction, facilitate social integration, and foster professional networking.

Again, investigating a different aspect, Hanna et al. (2017) explored the link between Facebook usage and job happiness among employees at high-tech companies, using an online survey of 70 workers from two high-tech companies in California, USA. The findings indicate that job satisfaction was significantly correlated with the intensity of Facebook usage among employees. The authors suggested that companies could leverage the benefits of social media at work to promote workers' job satisfaction.

In contrast, Liang et al. (2021) carried out a research model to examine whether both public and private social media provide various motivations

that mediate workers' job satisfaction. The authors found that public social media had a positive relationship with workers' job fulfilment, while private social media applied to social-related incentives had a positive link with workers' job satisfaction. The study also confirmed that workers from different gender groups had significantly different levels of job happiness.

The link between the media and work enjoyment has several interesting aspects to explore. For instance, using self-determination theory (SDT), Demircioglu (2018) investigated whether relatedness, autonomy, and perceived competence mediated the link between the usage of social media and workers' job happiness. To test this relationship, the author used a dataset from the Australian Public Service Commission and applied a structural equation model. The results support SDT, suggesting that workers using social media for purposes of work have a higher level of self-determination, which in turn improves their job satisfaction. Therefore, it can be concluded that social media have an indirect impact on job satisfaction. Furthermore, Fu et al. (2019) examined the effects of workers' use of organizational social media on job satisfaction from the social capital outlook by collecting data from 509 interviewees to explore the true relationship between usage of enterprise social media, social capital, and job happiness. The authors concluded that bridging social capital played a different role in job satisfaction compared to bridging social capital. Specifically, bridging social capital enhanced job happiness, while bonding social capital inhibited workers' job satisfaction.

Studies on living conditions and job satisfaction have produced varied results. For example, examining 216,573 respondents and using panel vector autoregression models, Bialowolski and Weziak-Bialowolska (2021) investigated the extent to which job satisfaction impacted subsequent life satisfaction and whether life satisfaction concurrently influenced subsequent job satisfaction. The study recognized a positive and mutually reinforcing link between life satisfaction and job satisfaction. Notably, life satisfaction had a stronger impact on employment fulfilment satisfaction than vice versa. Additionally, the authors noted that age, education, and household member status had varying impacts on the relationship between these two variables.

Research on life satisfaction, Haindorfer (2020) also found that overall health status and living situation had a significant impact on life satisfaction among mobile workers from different countries, including Czechia, Slovakia, and Hungary. The differences in life satisfaction derived from these factors were statistically significant.

A survey of approximately 222 employees was conducted by Daniel and Sonnentag (2016) to examine various factors and their relationship with job satisfaction. The research revealed a noteworthy positive association among employees' preferences for permeability, the enrichment of work-to-family dynamics, and job satisfaction. Moreover, the study identified work-to-family enrichment as a mediator in the connection between perceived flexibility provisions and job satisfaction. Thirdly, Newman et al. (2015) examined the impact of perceived organizational assistance and perceived supervisor assistance on worker life satisfaction. Using a dataset of 393 nurses from two hospitals in China, the authors noted that job satisfaction fully mediated the link between perceived organizational assistance and life satisfaction. Additionally, perceived supervisor support had a direct effect on life satisfaction, more than an indirect effect through job happiness.

Before crossing any border for work, employees may attend or receive training courses by themselves or by authorities to improve their skills. Working skills are essential for enhancing job performance and job satisfaction. For instance, Bercu (2017) examined the views of workers in the wood industry in Romania regarding job satisfaction and training. The study found that high-quality training programs are crucial, as they are positively associated with standards of ethics, acknowledgement of work, supervision, and dedication to the job. The author confirmed that training programs play a vital role in enhancing employees' job satisfaction. Moreover, Schmidt (2007) identified various crucial elements of job training that contribute to job training satisfaction, including the duration of the training, training methods utilized, and the content covered. Furthermore, Schmidt's findings suggested that participants express higher satisfaction with their training experiences when they have the opportunity to select specific areas they wish to learn.

Skills obtained from training courses are very important to employees since the skills from training can help them gain a higher level of job happiness. For instance, Choo and Bowley (2007) investigated the influence of training and development on workers' job happiness at an Australian franchise. The researchers discovered that the success and efficiency of a training program hinged upon the caliber of evaluation, course design, and learning encounters. Moreover, job satisfaction was found to be influenced by factors such as the work environment, organizational values, and job responsibilities. To bolster the job satisfaction of retail franchisers and individual franchisees, the authors recommended that managers implement effective training and development initiatives. Furthermore, Chiang et al. (2005) explored the link between training quality, job satisfaction, and intention to stay. Using t-tests and regression models, the authors found that training had a positive correlation with both training satisfaction and job happiness. They also noted that job happiness was a significant factor of intention to stay among trained employees. The study also indicated that work enjoyment mediated the impact of training quality on the intention to work more.

To test the hypothesis that job satisfaction is positively affected by job training and attitude, Fahed-Sreih (2020) and Gerber et al. (2020) performed an analysis, which determined that well-designed and prepared training activities within a program led to job training satisfaction, which in turn impacted employee job satisfaction in terms of work-related attitudes. The author emphasized the significance of job training satisfaction, which should be kept in mind by human resource managers when delivering any training programs. To investigate the relationship, Leppel et al. (2012) proposed the hypothesis that job training has a significant impact on employee work satisfaction, and as a result, indirectly affects productivity and job satisfaction. To test this hypothesis on US employees from 1964, the authors used ordered logit regression analysis. The study concluded that the quality of training directly influenced job satisfaction. The authors suggested that both managers and the entire economy can benefit from consistently maintaining high-quality training programs.

Job satisfaction is a crucial objective for all organizations (Hanaysha & Tahir, 2016). To examine the connection between employee empowerment,

teamwork, and employee training with job satisfaction in the higher education sector, data were gathered from 242 employees in public universities in Malaysia through an online survey. The findings of the research revealed that both employee empowerment and teamwork had a notable and favorable influence on job satisfaction. Similarly, worker training was also confirmed to have a significant positive impact on job satisfaction. In another study, Ravenswood et al. (2017) employed structural equation modelling to assess a group of 574 individuals working in aged-care settings. The researchers discovered that training played a crucial role in enhancing job satisfaction and decreasing instances of abuse. Moreover, the study observed a negative link between job demands and physical as well as verbal abuse, while highlighting the adverse influence of these forms of abuse on job satisfaction and intentions to leave the job. The authors asserted that their findings offer valuable insights into comprehending the influence of work environments on employees' job satisfaction and their inclination to seek alternative employment.

The impact of training on job satisfaction through worker commitment and performance is vital (Nauman et al., 2021). By utilizing a time-lagged two-wave methodology, the researchers collected data from 219 individuals employed in civil society organizations in Pakistan. The results of the study provided confirmation for the hypothesis that training has an indirect influence on job satisfaction through its impact on employee commitment and job performance. The authors affirmed that the training offered by organizations has the potential to improve job performance, leading to a subsequent increase in employees' job satisfaction. By using self-determination theory (SDT) to assess how the usage of social media for work was related to government workers' need satisfaction, Demircioglu and Chen (2019) concluded from the regression results that workers' usage of social media had a positive substantial relationship with workers' needs satisfaction, including autonomy, relatedness, and competence. The authors also proposed that the usage of social media to promote the satisfaction of workers might be an ideal option for two to three days a week only.

In some cases, the job satisfaction level among men is higher than among women after the cours-

es. According to a study (Burgard & Görlitz, 2014), which used German socio-economic panel data, there was a noteworthy positive link between training and job happiness among males, but not among females. Additionally, the authors investigated the influence of training characteristics on job happiness by gender and found that financial resources and career orientation courses had a significant effect only on job happiness among men, but not on women. Depending on these findings, the authors suggested that the government should invest in training programs that benefit both employees and employers, in addition to promoting gender equality. Furthermore, using data from the British Household Survey, Tabvuma et al. (2015) explored the effect of various types of job training on workers' job satisfaction, finding that orientation training had a considerable positive effect on job happiness for female newcomers in both private and public sectors. Nevertheless, the training had a positive impact on job satisfaction exclusively for female employees within the public sector. Based on their findings, the authors deduced that orientation training serves as a significant predictor of employees' job satisfaction.

On the other hand, the connection between skills and job satisfaction has been examined in various studies. In a study by Shimizu and Nagata (2003), the focus was on investigating the correlation between coping skills and job satisfaction among full-time occupational physicians in Japan. A total of 716 questionnaires were distributed to full-time occupational physicians, with 351 (49%) responding to the analysis. Using multiple regression analysis, the researchers identified several significant factors, including age, work simplification, consultations, and communication, that contributed to job satisfaction. Furthermore, by employing structural equation modelling (SEM), the study's findings demonstrated that age and coping skills, specifically improvements in the work system, consultations, and communication, exerted a positive influence on job satisfaction. In addition, Paksoy et al. (2017) investigated the connection between communication skills and job commitment and job satisfaction. They used t-tests, cross tables, and multiple regression models to demonstrate a positive, moderate, and bi-directional correlation between managerial communication skills, job happiness, and job commitment levels. The

study confirmed that training programs can aid in the development of managerial communication skills. With the same method of SEM, Fernández-Salineró et al. (2020) assessed the relationships between job involvement, job satisfaction, and the mediating role of professional skill utilization. Using a sample size of 420 employees, the researchers discovered a robust association between job involvement and skill use. However, no statistically significant correlation was found between job involvement and job satisfaction. Notably, the utilization of professional skills exhibited a significantly positive connection with job satisfaction. Most of the studies mentioned above confirm that employee training, media information, and living conditions have a positive impact on job satisfaction or job happiness in organizations. However, there have been few studies on job satisfaction among migrants who frequently move between border areas. The present study aims to investigate whether these variables affect job satisfaction among Vietnamese migrants working in China and regularly return home. Consequently, the following hypotheses for this study are proposed:

H1: The information employees receive from public media before going abroad has a statistically significant impact on their job satisfaction.

H2: Working skills that employees acquire through short training courses have a statistically significant impact on their job satisfaction.

H3: Living conditions in the employees' home country upon returning from abroad significantly affect their job satisfaction.

2. RESEARCH METHODS AND DATA

This study gathered data from three large cross-border provinces in Vietnam that share a border with China. These provinces are known for having a high number of Vietnamese and Chinese laborers who frequently cross over to work and make a living, making them ideal cases for examining the conditions that can influence their job satisfaction in the host country. The main objective of this study was to

assess the job satisfaction levels of Vietnamese employees who had worked in China and returned regularly. Trained interviewers administered pre-printed questionnaires to these cross-border employees via face-to-face conversations and Internet callings. The list of participants who go abroad was provided by local authorities. To evaluate the interactions among variables, Stata 16.1 was used to assess reliability, and validity, and run statistical models.

Before further analyzing data, it is necessary to know the demographic information of respondents. The total number of respondents is 317, with males accounting for 55.52%, while females account for 44.16% of observations. In terms of age, different age groups are represented in the observations. Young persons aged 26-34 make up 32.8% of the respondents. The number of persons in the 35-44 age range who participated in the survey is 32.5%. There are a few workers among the observations who are aged 16-25 and over 45. Since the number of younger persons is higher among the respondents, any policies aimed at enhancing job satisfaction from authorities should pay attention to the characteristics of age.

Regarding the educational level, the quality of human resources is not high, as most respondents have a primary school and secondary school education level, accounting for 47.32% and 31.55% respectively. There are a few individuals among the observations who have vocational or undergraduate degrees, with 0.63% and 0.95%, respectively. It is inevitable that with the current educational level if workers want to improve their performance at work, they need to attend training courses to acquire additional work skills.

Table 1. A primary information of the respondents

	Item	Frequency	Percentage (%)
Gender	Male	176	55.52
	Female	140	44.16
	Other	1	0.32
Age	16-25	53	16.79
	26-34	104	32.85
	35-44	103	32.48
	≥ 45	57	17.88
	≤ Primary school	150	47.32
Education level	Secondary school	100	31.55
	High school	62	19.56
	Vocational degree	2	0.63
	≥ Undergraduate	3	0.95

Source: Data from the survey in 2022.

To uncover the impact of specific factors on job satisfaction, this study employs a quantitative method known as covariance-based structural equation modelling (SEM). This method allows us to investigate and identify the most influential elements among exogenous variables that could affect job satisfaction among employees working abroad, particularly Vietnamese citizens working in China. According to M. F. Zhang et al. (2021), this advanced analytical technique is well-suited for organizational and management research and can effectively handle multiple econometric equations simultaneously, as required in certain academic fields. This method can help determine the best model based on critical values, including the root mean square error of approximation (RMSEA), comparative fit index (CFI), the Tucker-Lewis index, and others.

3. RESULTS

Firstly, exploratory factor analysis with a method of principal component analysis was conducted to eliminate any unqualified variables by ensuring that the individual factors had loading values greater than 0.5. The factor loading values for each index ranged from 0.623 to 0.926, all of which met the necessary threshold of 0.5, as shown in Table 2. Additionally, to assess whether the scales of the questions were suitable for factor analysis, the Kaiser-Meyer-Olkin (KMO) and Bartlett tests of adequacy were performed using statistical software. The KMO values for the variables of information from public media, working skills, life in the home country, and job satisfaction were 0.828, 0.824, 0.735, and 0.730, respectively, all of which exceeded the minimum threshold of 0.6. Furthermore, the Bartlett Chi-squared values for all latent varia-

Table 2. Exploratory factor analysis-Principal component analysis (PCA)

KMO test	Manifest in order	Factor loadings
Received information from public media before going abroad		
Bartlett's test, Chi2 = 1290.407***; Kaiser-Meyer-Olkin Measure of Sampling Adequacy KMO = 0.828	c171a. I received information about the likelihood of human trafficking	0.9064
	c172a. I heard about slave labor and labor exploitation	0.8952
	c173a. I heard that one may be solicited to engage in illegal business activities	0.9141
	c174a. I heard about laws that foreign labor can accidentally and easily violate	0.8909
	c175a. I was told who to contact and what to do if I found myself in trouble with the law when working abroad	0.8242
Working skills provided from short training courses		
Bartlett's test, Chi2 = 753.759***; Kaiser-Meyer-Olkin Measure of Sampling Adequacy KMO = 0.824	c174b. I was trained how to escape in emergency situations when working abroad	0.9259
	c172b. I have participated in courses to improve my managerial skills	0.9080
	c173b. I have been trained in first aid and safety skills	0.8970
	c171b. I have participated in courses to improve my professional skills	0.7779
Life at home after being from abroad		
Bartlett's test, Chi2 = 344.668***; Kaiser-Meyer-Olkin Measure of Sampling Adequacy KMO = 0.735	a313. Community reintegration	0.8427
	a314. Health status	0.8307
	a312. Family happiness	0.8077
	a311. Family living conditions	0.6237
Satisfaction with a job abroad		
Bartlett's test, Chi2 = 677.118***; Kaiser-Meyer-Olkin Measure of Sampling Adequacy KMO = 0.730	a301. Salary, income	0.8414
	a302. Working time	0.8813
	a303. Compensation	0.8914
	a304. Working environment	0.8431

bles were significant at $p = 0.000$ (accepted values $p < 0.05$), indicating that the measuring model was suitable for factor analysis.

In addition to the KMO and Bartlett tests, Table 3 also presents Cronbach's alpha coefficients as a measure of the internal consistency of the data. The Cronbach's alpha coefficients for the latent variables of information from public media, working skills, life in the home country, and job satisfaction were 0.931, 0.862, 0.768, and 0.886, respectively. All these coefficients exceeded the minimum acceptable threshold of 0.6, indicating that the Likert scale was sufficiently reliable to be included in the model.

The maximum likelihood method was employed for the SEM analysis, utilizing Stata 16.1 for support. The initial model was built upon the factors proposed in Table 2. However, this model was not optimized and had low goodness of fit indices, as shown in Table 4. Specifically, the RMSEA was high at 0.086 (preferably < 0.08), and the CFI and TLI values were below 1, at 0.955 and 0.908, respectively. To improve the model's fit, the research followed the method described by Chen et al. (2012) to rebuild and optimize the model. The optimized model had better goodness of fit indices, with a lower RMSEA of 0.067 and CFI and TLI values of 0.960 and 0.932, respectively. These indices met

the requirements, indicating that the model was reliable for hypothesis testing (see Figure 1).

During the model optimization process, two covariant links and two correlation coefficients were added to the error terms. The covariant links between e_4 and e_5 , and between e_6 and e_7 , were 0.55 and 0.73, respectively. These covariant links did not violate any theoretical hypotheses and were legitimate to interpret. The standardized coefficients for the covariance, confirmatory factor analysis, and structural equation modelling are presented in Table 5.

Aimed at understanding job satisfaction among laborers in the cross-border area between Vietnam and China, the SEM presents 17 measures. These measures are grouped into four main latent variables, including the endogenous factor that provides information on cross-border workers' job satisfaction, and the exogenous factors related to support from the home country. These exogenous factors include information from public media, working skills from courses, and living conditions in the home country after being abroad.

The optimized SEM model shows whether the working skills provided both officially and unofficially through short training courses are essential elements. This is reflected in the four main component varia-

Table 3. Cronbach's Alpha values of variables

Code	Latent/ Manifest variables	Cronb. alpha
Received information from public media before going abroad		0.931
c171a	I received information about the likelihood of human trafficking	0.909
c172a	I heard about slave labor, and labor exploitation	0.913
c173a	I heard that one may be solicited to engage in illegal business activities	0.908
c174a	I heard about laws that foreign labor can accidentally and easily violate	0.915
c175a	I was told who to contact and what to do if I found myself in trouble with the law when working abroad	0.932
Working skills provided from short courses		0.862
c171b	I have participated in courses to improve my professional skills	0.918
c172b	I have participated in courses to improve my managerial skills	0.800
c173b	I have been trained in first aid and safety skills	0.807
c174b	I was trained how to escape in emergency situations when working abroad	0.797
Life at home after working abroad		0.768
a311	Family living conditions	0.803
a312	Family happiness	0.681
a313	Community reintegration	0.682
a314	Health status	0.688
Satisfaction with job abroad		0.886
a301	Salary, income	0.867
a302	Working time	0.845
a303	Compensation	0.837
a304	Working environment	0.864

Note: Cronbach's Alpha values are accepted between 0.6 and 0.95.

Table 4. Model fit indices

Indices for Goodness of Fit	Proposal model	Optimized model
X2/ degree of freedom	451.996***	452.208***
RMSEA	0.086	0.067
90% CI, lower bound	0.095	0.096
90% CI, upper bound	0.116	0.116
Akaike's information criterion (AIC)	8430.146	8432.358
Bayesian information criterion (BIC)	8639.496	8645.317
CFI	0.955	0.960
TLI	0.908	0.932
CD	0.999	0.999

Note: *** denotes statistical significance probability with $p < 0.001$.

bles as shown in Table 5 and Figure 1. Surprisingly, the standardized regression coefficient value of working skills from the training courses had a negative and significant relationship with cross-border employees' job satisfaction in the host country (-0.247). The items that best explain this latent variable were: I was trained in how to escape in emergencies when working abroad (0.928), I have participated in courses to improve my managerial skills (0.893) and I have been trained in first aid and safety skills (0.850).

The standardized regression coefficient value of the quality of life after returning from abroad had a significantly positive correlation with job satisfaction levels among laborers, with a coefficient of 0.220 at the 1% significance level. The principal variables that

contributed to the latent variable of life after being abroad were community reintegration (0.810), health status (0.803), and family happiness (0.688). The study confirmed that local reintegration policies can effectively support migrants and enhance their job satisfaction levels, particularly in China.

In conclusion, for hypotheses testing results, the living conditions in the employees' home country upon returning from abroad have significantly affected their job satisfaction. The information employees receive from public media in the home country has also affected their job satisfaction but in the opposite sign. Finally, the model does not find any impact from the working skills from employees that significantly impacted their job satisfaction.

Table 5. Results of the optimized model – standardized values

Regressing directions	Estimate	S.E	z	P-value
SEM				
Satisfaction ← Media	-0.099	0.078	-1.27	NS
Satisfaction ← Skills	-0.247	0.078	-3.18	***
Satisfaction ← Life	0.220	0.069	3.18	***
CFA				
a301 ← Satisfaction	0.853	0.026	32.40	***
a302 ← Satisfaction	0.881	0.025	35.29	***
a303 ← Satisfaction	0.754	0.032	23.71	***
a304 ← Satisfaction	0.666	0.040	16.73	***
c171a ← Media	0.812	0.024	33.13	***
c172a ← Media	0.799	0.026	31.01	***
c173a ← Media	0.897	0.017	51.82	***
c174a ← Media	0.892	0.017	51.03	***
c175a ← Media	0.824	0.024	35.06	***
c174b ← Skills	0.928	0.013	69.54	***
c172b ← Skills	0.893	0.016	56.51	***
c173b ← Skills	0.850	0.020	42.57	***
c171b ← Skills	0.668	0.036	18.57	***
a313 ← Life	0.810	0.033	24.89	***
a314 ← Life	0.803	0.033	24.48	***
a312 ← Life	0.688	0.041	16.69	***
a311 ← Life	0.466	0.055	8.420	***
Covariance				
Media & Skills	0.532	0.048	10.97	***
Media & Life	0.081	0.069	1.19	NS
Skills & Life	0.177	0.068	2.61	***

Note: P means significant probability. NS denotes no significance. *** denotes statistical significance probability with $p < 0.001$.

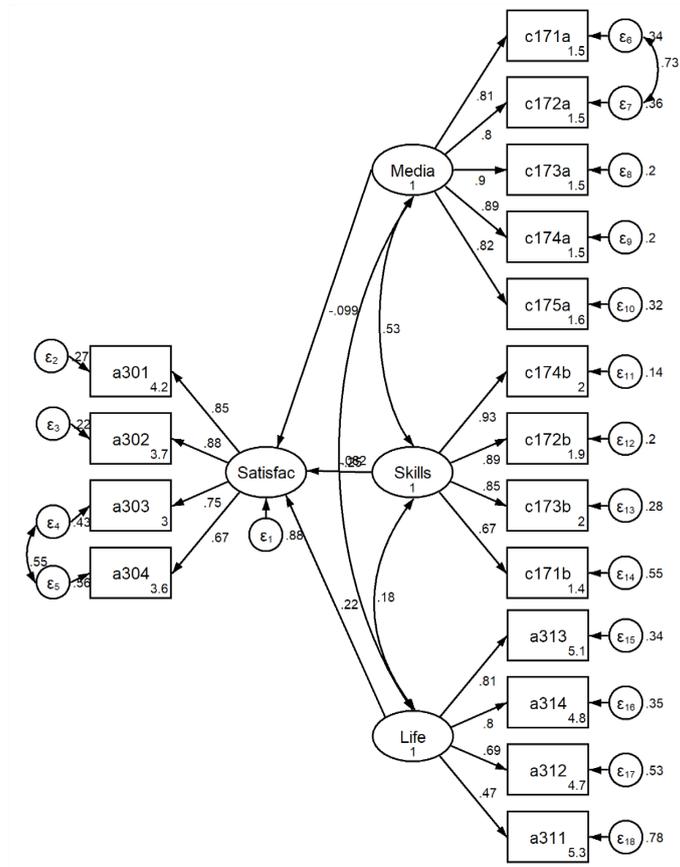


Figure 1. Path coefficients

4. DISCUSSION

Two of the three exogenous variables had a statistically significant impact on job satisfaction, and these variables are below discussed. First, the standardized regression coefficient of working skills obtained from training courses exhibited a significant negative correlation with the job satisfaction of cross-border employees in the host country. The findings from the SEM align with a previous study by Shevchuk et al. (2019), which examined the associations among skill mismatch, work-family conflict, and job satisfaction. By examining data from the British Workplace Employment Relations Survey in 2011, the researchers discovered that employees who were both over-skilled and under-skilled reported reduced satisfaction in areas such as achievement and autonomy, opportunities for growth, and compensation and job stability. Moreover, their study affirms that skill mismatch adversely affects work-life conflict, and this relationship is influenced by job satisfaction acting as a mediator.

However, the finding in the current study differs from those of Lee et al. (2014). To examine the direct associations between various types of training opportunities aimed at skill enhancement and factors such as job satisfaction, work engagement, and organizational commitment, the researchers conducted a survey involving 823 employees from two Japanese and three American companies. Additionally, they explored the connections between training opportunities and performance orientation, job security, and age. The results underscore the significance of skill-improvement training in relation to factors such as job satisfaction and work engagement. The authors suggested that training opportunities should be provided for cross-national organizations so that employees would be satisfied and more engaged with the organization. Besides, the outcomes obtained in this present study do not align with the findings of Tian et al. (2018) either. The latter researchers examined a nationally representative sample of Australian employees to investigate the impact of job characteristics, job security, and skill utilization on job satisfaction among skilled migrants and Australian-born employees. Their study emphasized the importance of examining the connection between crucial job characteristics and job satisfaction. According to their findings, the authors recommended that organ-

izations enhance their human resource management policies and approaches to promote effective skill utilization among skilled migrants. They further highlighted that appropriate skill utilization contributes to higher levels of job satisfaction among skilled migrants.

From the results, it is understandable that working skills obtained from short training courses, provided officially or unofficially, are not effective because of their limited duration. Such training courses do not always play an important role when cross-border employees work abroad if the training courses are not well-designed. In some cases, such training courses may not significantly contribute to employees' job satisfaction as expected. It is natural that if individuals do not have sufficient working skills, they will not work effectively and may struggle in a difficult or hazardous working environment in the host nation. Therefore, local authorities and higher-level managers in the home nation may consider longer and more comprehensive training courses focused on work skills for citizens before they go abroad.

When migrants return home from abroad, they often use their income to improve their living conditions, which can reflect on their quality of life. In addition, factors such as family happiness, health status, and successful community reintegration can significantly impact their job satisfaction. The standardized regression coefficient of the quality of life upon returning from abroad showed a significantly positive association with job satisfaction levels among labourers.

Looking at the result from a different perspective, the finding of this study is in line with those of Ocampo et al. (2022), which showed that career adaptability among Filipino migrant workers led to enhanced work and general adjustment, ultimately promoting work performance, retention, and psychological health, including satisfaction of life. Among migrant employees with high levels of cultural intelligence, the researchers discovered that the indirect impacts of career adaptability on work performance and psychological health, mediated through work and general adjustment, were more pronounced. Likewise, the current study has the same direction as research conducted by Y. Zhang et al. (2021), validating the significance of the optimal selection of international employees as a crucial determinant of success for

cross-border workers, encompassing task outcomes and manufacturing efficiency. The authors also demonstrated the need for optimal matching between success factors and external variables among employees working abroad. The research indirectly found that factors from an expatriate's home country can contribute to their success and job satisfaction.

The current findings are also compatible with those of Haist and Novotný (2023), who examined cross-border workers (CBWs) in Germany and the Czech Republic during the COVID-19 pandemic. The authors identified three significant sources of support for CBWs, which included managers, families, and friends in their home country. The authors also highlighted how many CBWs received support from their employers, such as flexibility, accommodation, and subsidies, when they were working in Germany.

Supported by the empirical findings, it is evident that advocating for employees on the local side in their home country and promoting individual well-being can significantly impact their job satisfaction. Authorities should assist migrants in reintegrating into their communities by facilitating registration procedures, providing relevant information, and guiding livelihoods if necessary. Additionally, provincial officials should offer healthcare services to migrants to identify any health issues before they can spread to the local community. These healthcare services not only help to control diseases in the home areas but also support the health status of migrants. In the future, when migrants return to China, they will be able to work effectively, maintain job satisfaction, and contribute to the living conditions of their families and regional development in their province with their income.

CONCLUSION

This study aimed to explore the relationship in the presence of information from public media, working skills from training courses, living conditions and job satisfaction among Vietnamese workers in the cross-border area between Vietnam and China. The study concluded that two exogenous latent variables associated with support from the home country, including skills obtained from short training courses, and living conditions, had statistically significant impacts on job satisfaction, but in opposite directions.

The practical applications of the study's results are considerable for policymakers by simplifying registration procedures, providing relevant information, and guiding livelihoods if necessary. In addition, local authorities find ways to provide more effective training courses so that cross-border workers can improve their working skills and then their job satisfaction will be higher when they go abroad for work. In sum, although the results were confined to three provinces only, they are still relevant to other regions in Vietnam near the border with China and other nations in terms of enhancing employee job satisfaction. Future research could investigate additional measures such as work performance, attitude, and productivity to gain deeper insights into Vietnamese employees' job satisfaction when working in China and the nearby nations.

AUTHOR CONTRIBUTIONS

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REFERENCES

1. Bercu, A.-M. (2017). Impact of employees' training programmes on job satisfaction. *Current Science*, 112(7), 1340-1345. Retrieved from <http://www.jstor.org/stable/24912676>
2. Bialowolski, P., & Weziak-Bialowolska, D. (2021). Longitudinal Evidence for Reciprocal Effects Between Life Satisfaction and Job Satisfaction. *Journal of Happiness Studies*, 22(3), 1287-1312. <https://doi.org/10.1007/s10902-020-00273-1>
3. Burgard, C., & Görlitz, K. (2014). Continuous training, job satisfaction and gender. *Evidence-Based HRM: A Global Forum for Empirical Scholarship*, 2(2), 126-144. <https://doi.org/10.1108/EBHRM-11-2012-0016>
4. Chen, Y. Q., Zhang, Y. B., Liu, J. Y., & Mo, P. (2012). Interrelationships among Critical Success Factors of Construction Projects Based on the Structural Equation Model. *Journal of Management in Engineering*, 28(3), 243-251. [https://doi.org/doi:10.1061/\(ASCE\)ME.1943-5479.0000104](https://doi.org/doi:10.1061/(ASCE)ME.1943-5479.0000104)
5. Chiang, C.-F., Back, K.-J., & Canter, D. D. (2005). The Impact of Employee Training on Job Satisfaction and Intention to Stay in the Hotel Industry. *Journal of Human Resources in Hospitality & Tourism*, 4(2), 99-118. https://doi.org/10.1300/J171v04n02_06
6. Choo, S., & Bowley, C. (2007). Using training and development to affect job satisfaction within franchising. *Journal of Small Business and Enterprise Development*, 14(2), 339-352. <https://doi.org/10.1108/14626000710746745>
7. Daniel, S., & Sonnentag, S. (2016). Crossing the borders: the relationship between boundary management, work-family enrichment and job satisfaction. *The International Journal of Human Resource Management*, 27(4), 407-426. <https://doi.org/10.1080/09585192.2015.1020826>
8. Demircioglu, M. A. (2018). Examining the Effects of Social Media Use on Job Satisfaction in the Australian Public Service: Testing Self-Determination Theory. *Public Performance & Management Review*, 41(2), 300-327. <https://doi.org/10.1080/15309576.2017.1400991>
9. Demircioglu, M. A., & Chen, C.-A. (2019). Public employees' use of social media: Its impact on need satisfaction and intrinsic work motivation. *Government Information Quarterly*, 36(1), 51-60. <https://doi.org/10.1016/j.giq.2018.11.008>
10. Fahed-Sreih, J. (2020). *Career Development and Job Satisfaction*. IntechOpen. Retrieved from <https://books.google.com.vn/books?id=jpUtEAAAQBAJ>
11. Fernández-Salineró, S., García Collantes, Á., Rodríguez Cifuentes, F., & Topa, G. (2020). Is Job Involvement Enough for Achieving Job Satisfaction? The Role of Skills Use and Group Identification. *International Journal of Environmental Research and Public Health*, 17(12). <https://doi.org/10.3390/ijerph17124193>
12. Fu, J., Sawang, S., & Sun, Y. (2019). Enterprise Social Media Adoption: Its Impact on Social Capital in Work and Job Satisfaction. *Sustainability*, 11(16). <https://doi.org/10.3390/su11164453>
13. Gerber, P., Thériault, M., Enaux, C., & Carpentier-Postel, S. (2020). Links between Attitudes, Mode Choice, and Travel Satisfaction: A Cross-Border Long-Commute Case Study. *Sustainability*, 12(21). <https://doi.org/10.3390/su12219203>
14. Haindorfer, R. (2020). Impacts of negative labor market experiences on the life satisfaction of European East-West mobile workers: Cross-border commuters from the Czech Republic, Slovakia and Hungary in Austria. *Journal of Industrial Relations*, 62(2), 256-277. <https://doi.org/10.1177/0022185619897087>
15. Haist, J., & Novotný, L. (2023). Moving across Borders: The Work Life Experiences of Czech Cross-border Workers during the COVID-19 Pandemic. *JCMS: Journal of Common Market Studies*, 61(1), 124-142. <https://doi.org/10.1111/jcms.13362>
16. Hanaysha, J., & Tahir, P. R. (2016). Examining the Effects of Employee Empowerment, Teamwork, and Employee Training on Job Satisfaction. *Procedia – Social and Behavioral Sciences*, 219, 272-282. <https://doi.org/10.1016/j.sbspro.2016.05.016>

17. Hanna, B., Kee, K. F., & Robertson, B. W. (2017). Positive Impacts of Social Media at Work: Job Satisfaction, Job Calling, and Facebook Use among Co-Workers. *SHS Web Conf.*, 33. <https://doi.org/10.1051/shsconf/20173300012>
18. Lee, H., McNamara, T. K., Pitt-Catsouphes, M., & Lee, J. (2014). Opportunities to improve skills and to teach and train others: employee outcomes in the United States and Japan. *International Journal of Training and Development*, 18(3), 204-222. <https://doi.org/10.1111/ijtd.12024>
19. Leppel, K., Brucker, E., & Cochran, J. (2012). The Importance of Job Training to Job Satisfaction of Older Workers. *Journal of Aging & Social Policy*, 24(1), 62-76. <https://doi.org/10.1080/08959420.2012.629136>
20. Liang, M., Xin, Z., Yan, D. X., & Jianxiang, F. (2021). How to improve employee satisfaction and efficiency through different enterprise social media use. *Journal of Enterprise Information Management*, 34(3), 922-947. <https://doi.org/10.1108/JEIM-10-2019-0321>
21. Nauman, S., Bhatti, S., Jalil, F., & Bint E Riaz, M. (2021). How training at work influences employees' job satisfaction: roles of affective commitment and job performance. *International Journal of Training Research*, 19(1), 61-76. <https://doi.org/10.1080/14480220.2020.1864444>
22. Newman, A., Nielsen, I., Smyth, R., & Hooke, A. (2015). Examining the Relationship Between Workplace Support and Life Satisfaction: The Mediating Role of Job Satisfaction. *Social Indicators Research*, 120(3), 769-781. <https://doi.org/10.1007/s11205-014-0613-y>
23. Ocampo, A. C. G., Restubog, S. L. D., Wang, L., Garcia, P. R. J. M., & Tang, R. L. (2022). Home and away: How career adaptability and cultural intelligence facilitate international migrant workers' adjustment. *Journal of Vocational Behavior*, 138, 103759. <https://doi.org/10.1016/j.jvb.2022.103759>
24. Paksoy, M., Soyer, F., & Çalık, F. (2017). The impact of managerial communication skills on the levels of job satisfaction and job commitment. *Journal of Human Sciences*, 14(1 SE-Behavioral Sciences), 642-652. Retrieved from <https://www.j-humansciences.com/ojs/index.php/IJHS/article/view/4259>
25. Pires, I., & Nunes, F. (2018). Labour mobility in the Euroregion Galicia-Norte de Portugal: constraints faced by cross-border commuters. *European Planning Studies*, 26(2), 376-395. <https://doi.org/10.1080/09654313.2017.1404968>
26. Ravenswood, K., Douglas, J., & Haar, J. (2017). Physical and verbal abuse, work demands, training and job satisfaction amongst aged-care employees in the home and community sector. *Labour and Industry*, 27(4), 302-318. <https://doi.org/10.1080/10301763.2018.1427846>
27. Robertson, B. W., & Kee, K. F. (2017). Social media at work: The roles of job satisfaction, employment status, and Facebook use with co-workers. *Computers in Human Behavior*, 70, 191-196. <https://doi.org/10.1016/j.chb.2016.12.080>
28. Schmidt, S. W. (2007). The relationship between satisfaction with workplace training and overall job satisfaction. *Human Resource Development Quarterly*, 18(4), 481-498. <https://doi.org/10.1002/hrdq.1216>
29. Shevchuk, A., Strebkov, D., & Davis, S. N. (2019). Skill mismatch and work-life conflict: the mediating role of job satisfaction. *Journal of Education and Work*, 32(2), 181-195. <https://doi.org/10.1080/13639080.2019.1616281>
30. Shimizu, T., & Nagata, S. (2003). Relationship between coping skills and job satisfaction among Japanese full-time occupational physicians. *Environmental Health and Preventive Medicine*, 8(4), 118-123. <https://doi.org/10.1007/BF02897915>
31. Tabvuma, V., Georgellis, Y., & Lange, T. (2015). Orientation Training and Job Satisfaction: A Sector and Gender Analysis. *Human Resource Management*, 54(2), 303-321. <https://doi.org/10.1002/hrm.21650>
32. Tian, A. W., Wang, Y., & Chia, T. (2018). Put My Skills to Use? Understanding the Joint Effect of Job Security and Skill Utilization on Job Satisfaction Between Skilled Migrants and Australian Born Workers in Australia. *Social Indicators Research*, 139(1), 259-275. <https://doi.org/10.1007/s11205-016-1404-4>
33. Wodociag, S., Dolce, V., & Molino, M. (2022). Cross-border and sedentary workers' job satisfaction. *Personnel Review*, 51(4), 1314-1335. <https://doi.org/10.1108/PR-04-2020-0303>
34. Zhang, M. F., Dawson, J. F., & Kline, R. B. (2021). Evaluating the Use of Covariance-Based Structural Equation Modelling with Reflective Measurement in Organizational and Management Research: A Review and Recommendations for Best Practice. *British Journal of Management*, 32(2), 257-272. <https://doi.org/10.1111/1467-8551.12415>
35. Zhang, X., Ma, L., Xu, B., & Xu, F. (2019). How social media usage affects employees' job satisfaction and turnover intention: An empirical study in China. *Information & Management*, 56(6), 103136. <https://doi.org/10.1016/j.im.2018.12.004>
36. Zhang, Y., Zhu, J., Xu, N., Duan, S. X., & Huang, X. (2021). Optimal selection of expatriates for cross-border assignment to enhance manufacturing efficiency. *International Journal of Production Economics*, 232, 107926. <https://doi.org/10.1016/j.ijpe.2020.107926>