# THE RELATIONSHIP BETWEEN SATISFACTION, ENGAGEMENT, AND ORGANIZATIONAL PERFORMANCE IN SECURITIES COMPANIES

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## Abstract

The stock market is a medium and long-term capital channel for the economy. The stock market only operates effectively when market participants operate effectively. As a core subject, the activities of securities companies have a great influence on the stable and sustainable development of the stock market, as well as on the existence and development of the securities companies themselves. Up to now, research on theoretical and empirical frameworks to clarify the relationship between satisfaction and engagement with performance in securities companies is still limited, especially research on securities companies on the stock market have the goal of upgrading the market from frontier to emerging market like Vietnam. This study proposes solutions to help top managers in Vietnamese securities companies enhance satisfaction, engagement, and organizational effectiveness. The research model was developed based on data collected from 1,250 survey responses from securities companies. By employing quantitative research using partial least squares structural equation modeling (PLS-SEM) in SPSS 20 and SPSS Amos 20 software, the results identified four factors influencing the satisfaction, engagement, and effectiveness of Vietnamese securities companies: 1) reliable and ethically driven top-level management; 2) appropriate job assignments, positions, and core technology systems supporting work; 3) employees' income significantly affects the company's effectiveness. Based on the research findings, this paper provides recommendations for securities companies in constructing management policies.

**Keywords:** Organizational Effectiveness, Employee Engagement, Employee Satisfaction, ROA, ROE

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## 1. INTRODUCTION

Vietnam is increasingly integrating deeply into the global economy, the stock market is increasingly developing, and Vietnamese securities companies are facing intertwined opportunities and challenges. If they want to survive and develop, they first need to upgrade. High operational efficiency is an urgent requirement. Improving operational efficiency will help securities companies increase their scale of operations, thereby being able to apply modern technology, and improve service quality, stock brokerage staff quality, and product deployment. New branches, opening more branches, investing in technology and expanding markets, from which securities companies will achieve the goal of sustainable development and minimize business risks. To meet this requirement, securities companies need to expand their business operations and enhance the quality-of-service delivery. By expanding and ensuring effective business operations, Vietnamese securities companies can maintain stability and compete in a larger-scale stock market. Upgrading and investing in core software technology systems to provide services to investors is crucial. Enhancing risk management capabilities is also essential. Importantly, improving the quality of human resources to meet employee satisfaction and foster engagement within the securities team is a key aspect.

Historically, scholars and organizational behavior researchers have been interested in and sought answers about whether human resource factors affect organizational performance or not. There are still major differences in the concepts, theories, influencing factors, and outcomes of employee engagement, and there are still no formal standards (Sun & Bunchapattanasakda, 2019). Most people believe that satisfaction and engagement have a strong influence on organizational performance, such as Clark and Oswald (1996), Ostroff (1992), Deci and Ryan (2000), Harter et al. (2002), Macky and Boxall (2007), Bakker et al. (2014), Shmailan (2016), Guiso et al. (2015), Kazimoto (2016), Sun and Bunchapattanasakda (2019), Noercahyo (2021), Na-Nan et al. (2021), Yandi and Havidz (2022), Susanto et al. (2023), and others. On this basis, researchers have provided suggestions for the board of directors to improve organizational performance through behavioral management activities on individual and group behavior (Kostyuk & Barros, 2018). Indeed, in context, the post-COVID-19 pandemic has had impacts and responses to employee changes that have had a significant adverse effect on employee performance. Employees' concentration, communication, and attention to work are all adversely affected by these "new normal" changes. Emotional labor can bring positive results for businesses, such as enhancing worker satisfaction as well as performance, on the other hand, causing burnout and poor job performance when people are forced to express emotions other than their own, these findings highlight the most consistency between surface activity and employee performance. However, the impact of human resources on organizational effectiveness is not absolute. There is an interesting finding that with good human resource management, employee satisfaction does not necessarily have an impact on organizational performance (Boselie et al., 2005).

The effectiveness of human resource utilization is reflected in various aspects, with one of the critical aspects being the activities that meet the needs and foster bonding among the workforce. The business performance of securities companies depends significantly on the efficiency of individual labor. Meanwhile, the effectiveness of individual labor relies heavily on two factors: competence and work motivation. Competence in performing tasks depends on education, knowledge, work skills, and personal experience gained through practical exposure. Work motivation, on the other hand, is derived from individual factors and those arising during work. When employees are motivated to work, they exhibit high levels of enthusiasm and dedication to their tasks, ultimately leading to high labor productivity, which contributes to achieving the business goals of the securities company.

The stock market plays an important role in economic development in countries around the world, and Vietnam is no exception. This is an important capital channel for the economy in addition to bank credit channels and is also a potential investment channel for investors in the market. Any fluctuations in the stock market can have a profound impact on the economy as well as the activities of businesses and investors in the market. To operate, the stock market first needs intermediaries, which are securities companies — a financial institution in the market to perform the role of intermediary between buyers and sellers of securities, investment consulting and a number of other services for both investors and issuers. Thanks to securities companies, securities are circulated from issuers to investors and have liquidity, thereby mobilizing capital from idle places to allocate to effective uses. Through the operations of the securities company, it will promote the development of the stock market, thereby promoting economic development. To perform this role well, securities companies are required to be efficient to meet market requirements. Over more than 20 years, the Vietnamese stock market has made progress in both market scale and depth with a full range of market components and participating members. From the beginning only 7 securities companies to now there are nearly 80 securities companies that are members of the stock exchange with many large-scale companies participating in both the base market and the derivatives market. But many of them still exist, many operating companies are not really effective, have prolonged losses, operate moderately, do not meet technology requirements, as well as participate in operations that affect the economy. general development of the market.

The constant innovation of products on the stock market requires the brain matter content of securities company staff to be constantly improved, especially the brain matter content in securities consulting activities. The knowledge content of employees in securities companies is an important factor that helps securities companies be able to meet customer needs and thereby develop their activities. With the characteristic of securities business being the provision of intangible services, this service can only be of quality when customers clearly feel the results that the securities company brings to them. The activities of a securities company require very high analytical abilities of its

staff to make the right investment decisions. To do so, inevitably, securities companies must first have solutions to meet satisfaction, and thereby create a long-term connection between the staff and the securities company's organization.

The structure of this article is as follows. In Section 2, the authors explore relevant literature, as well as learn about previous research methods, including foundational theories as well as empirical studies on satisfaction, engagement and effectiveness, operating in related organizations or securities companies around the world, thereby providing the research hypotheses of the article. Section 3, based on the article's documents, provides methods and proposes a research model. In Section 4 through experimental research, the authors analyze the results and have discussions about the research results. Section 5 concludes the research content and solutions to improve the operational efficiency of securities companies in the coming time.

## 2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

In his theory of the system of human needs, Maslow (1943) arranged human needs in a hierarchical system. If higher-level needs appear, lower-level needs must appear (Maslow, 1943). The lower level must be satisfied first. Maslow's hierarchy of needs is often shown as a pyramid, with lower-level needs placed below.

Maslow's hierarchy of needs theory has an important implication for managers: if they want to motivate employees to improve performance, they need to understand where their employees are. What level of need? That understanding allows administrators to come up with appropriate solutions to satisfy employees' needs while ensuring the achievement of organizational goals.

Expectancy theory by Vroom (1964) proposes that motivation will depend on individuals' expectations about their ability to perform tasks and about receiving desired rewards. Expectancy theory is best known for the work of Victor Vroom, although many scholars have also contributed to the field. Expectancy theory is not only concerned with determining the type of need but also studies the process by which individuals receive rewards.

Vroom (1964) argued that people will be motivated to perform tasks to achieve a goal if they believe in the value of that goal, and they can see that the work they do will help them. achieve the goal.

According to classical theory, motivating people by nature (lazy, not wanting to take responsibility, doing work forced by others) is called theory X. Managers need to have solutions to improve operational efficiency. with materials, assign specific tasks and supervise.

According to McGregor's (1960) theory, motivate people with Y nature (diligent, accept responsibility, creative at work) by giving them many decisions at work, respecting initiatives, and creating conditions. They demonstrate competence rather than urging or checking.

Equity theory developed by Adams (1965) holds that people are motivated to seek fairness in society through the rewards they want to achieve. According to equity theory, if people receive equal treatment with others at the same level of contribution, they will believe that they have been treated fairly. People evaluate fairness through the ratio between the contribution to the job (including qualifications, experience, effort and skills) and the results received (including pay, recognition, and benefits). profit, promotion). This ratio can be compared to others in the same workgroup or as a group average. Inequality creates tension in each person and this stimulates them to restore fairness.

Herzberg's (1993) motivation theory suggests that two groups of factors affect employee motivation at work: normal factors and motivational factors. Normal working factors (such as working conditions, salaries, organizational policies, relationships with superiors, supervision, etc.) are measures taken by managers that do not bring about more enthusiasm. while working. But if normal work factors are not satisfied, employees will be dissatisfied and less enthusiastic about work. Motivation factors (such as appreciating employees' contributions, delegating responsibilities to them, creating conditions for them to develop, and letting them do work they like and have meaning) are management measures that motivate them. Push workers to work more enthusiastically to increase productivity. If the motivating factors are not there, they will work normally.

Some experimental studies include the following theories.

According to Clark and Oswald (1996), based on data collected from 5,000 employees in the United Kingdom, employee satisfaction is inversely related to their income. When income remains unchanged, employee satisfaction decreases significantly with their level of education.

Ostroff (1992) suggests that job satisfaction is a stable individual trait and can be satisfied in various ways through intrinsic or extrinsic factors, and job-related attitudes (commitment, adjustment, and psychological stress). According to the researcher, job satisfaction and work attitudes have a positive relationship with organizational effectiveness (Ostroff, 1992). To support this conclusion, Ostroff (1992) collected data from 13,808 teachers in 298 schools, using correlation and regression analysis.

Deci and Ryan (2000) propose a self-determination theory to understand employee work motivation, emphasizing psychological needs for competence, autonomy, and relatedness. The concept of needs forms the basis for various management processes, as it relates to different goal pursuits with varying relationships to effectiveness and happiness. Social context and individual differences facilitate the satisfaction of basic needs, fostering intrinsic motivation and integrating external motivations, while factors hindering autonomy, competence, or relatedness negatively affect motivation, performance, and happiness.

Harter et al. (2002) aimed to examine the business-level relationship between employee satisfaction, employee engagement, and business performance. The authors collected data from 7,939 business units across 36 companies, employing quantitative analysis. Organizational performance was reflected in: 1) financial effectiveness (revenue, profit on assets, return on equity, etc.); 2) product marketing effectiveness (sales, customers, market share, etc.); 3) employee

income; 4) high market and societal recognition. The results showed a significant positive relationship between employee satisfaction and business performance.

Macky and Boxall (2007) sought to enhance management capability in organizations through high-performance work systems (HPWS). Researchers examined the relationship between HPWS and employee attitudes, using a randomly selected national population as their data set (Macky & Boxall, 2007). Findings indicated clear evidence of a positive relationship between HPWS practices and employee job satisfaction, trust in management, and organizational commitment, suggesting that HPWS can yield mutually beneficial outcomes for both companies and employees.

Boeve (2007) conducted research on motivational factors among employees in a university in the United States (Boeve, 2007). Boeve based his study on Herzberg's (1993) two-factor theory and supplemented it with a job descriptive index. Employee job satisfaction was divided into two groups: intrinsic factors, including the nature of the job and opportunities for advancement, and extrinsic factors, including salary, supervisor support, and peer relationships.

Bakker et al. (2014) introduced the job demands-resources (JD-R) model to enhance human resource management in organizations. The JD-R model can be used as a tool to assess individual, team, departmental, and organizational strengths and weaknesses. Job resources (autonomy, feedback, social support) stimulate work engagement, which positively influences employee motivation and ultimately leads to positive innovation (Bakker et al., 2014).

Shmailan (2016) emphasized the significant impact of employee satisfaction, engagement, and performance on the success of organizations. However, organizations often struggle to understand what will satisfy employees, whether it be job fit, effective communication, high appraisal, or clear promotion goals. The top motivators for employee engagement include trust and integrity (employees believe their leaders are listening, trustworthy, and lead by example), caring and attending to their needs, the employee-organization relationship (employees understand what the organization expects of them), career development opportunities, pride in the company, and the relationship between employees and leaders.

According to Guiso et al. (2015), corporate culture represents the unwritten rules of communication among members of an organization, similar to how we navigate while driving on the road. The authors conclude that publicly announced corporate values seem to have no significant relation to organizational effectiveness. However, when employees perceive top-level management as trustworthy and ethical, the company's performance is significantly enhanced. The study examines how different management structures affect the ability to maintain integrity as a company value. Companies that engage in less public disclosure are less likely to maintain it. Traditional corporate governance measures seem to have little influence.

Kazimoto (2016) points out that many managers do not fully understand how to motivate employees for their activities and job performance. Using descriptive statistics and inference methods, data was collected from 120 individuals in the city of Wabulenzi-Luwero (Kazimoto, 2016). Findings showed that employee engagement and job satisfaction were high. However, employees struggled to balance work experience with family life. The study found evidence of a relationship between employee engagement and job satisfaction but found no connection between engagement and task assignment. The results highlighted the importance of task allocation in attracting and retaining employees to ensure the organization's longevity and profitability.

According to Sun and Bunchapattanasakda (2019), empirical studies on satisfaction, engagement and performance still have mixed results. Based on the results of empirical research, the authors have grouped factors affecting employee engagement including: one is management style factors, two is work factors, and three is personal factors of the employee. Employee engagement has a positive relationship with individual performance, as well as business performance.

Noercahyo et al. (2021) found that job engagement had a significant positive effect on job satisfaction but did not significantly impact organizational performance. Job satisfaction, on the other hand, had a positive impact on organizational performance. To reach this conclusion, the authors conducted a survey with 121 respondents, including managers, supervisors, and workers, using random sampling, and received responses from 93 employees. Data were processed using the partial least squares structural equation modeling (PLS-SEM) model.

According to Na-Nan et al. (2021), employee qualifications affect engagement, commitment to the business, and job satisfaction. The above results were obtained by a group of scientists using self-efficacy theory to influence organizational employee behavior, through a survey of 400 employees of the business (Na-Nan et al., 2021). Based on the research results, the authors recommend that businesses need mediators, which can be the labor relations department, to coordinate the relationship between businesses and employees. Appropriate motivational programs will improve organizational performance.

According to Yandi and Havidz (2022), encourage employees to participate in work, projects, etc., thereby increasing the level of employee satisfaction. To do this, companies need to build and implement a clear reward and punishment system and make employees trust them so they can improve operational efficiency and expect the company to create more job opportunities. Good managers need to develop feasible and detailed goals, taking goals as standards in assigning tasks, and also need to have specific instructions to solve assigned tasks. Encourage employees to participate in the management process such as setting goals and sharing responsibility for common work. Flexible working mechanisms through the management of target implementation standards are very important in attaching employees to the company, thereby improving operational efficiency.

Susanto et al. (2023) emphasized that companies always seek ways to enhance employee productivity, as employee performance reflects the ability to accomplish tasks and enables the organization to achieve its goals. Employee performance is vital for

any organization, as high-performance organizations can reduce absenteeism and employee wasted time, while low performance negatively impacts an organization's ability to meet its plans. High performance fosters employee engagement and satisfaction, which, in turn, benefits both the company and its employees. Employee performance can be evaluated based on an employee's ability to complete specific tasks. Setting motivational goals for employees, such as improving employee performance, can be achieved through technical performance indicators implemented annually, enhanced by the company's, especially department heads', attention to and fulfillment of employee needs. High employee engagement can be achieved through surveys of all employees within the company.

From these various perspectives, the author of the article draws a general assessment that previous studies have established a systematic relationship between satisfaction, employee engagement, and operational effectiveness. However, this relationship has not been thoroughly explored in the securities brokerage industry, and the solutions presented so far lack specificity in meeting employee needs. The study also lacks a systematic examination of the factors, particularly within the context of securities brokerage companies in Vietnam, a unique business type that affects many other entities in the market economy.

Based on the literature review, the article proposes the following hypotheses:

*H1: Opportunities for promotion training have a positive correlation with job satisfaction.*

*H2: Corporate culture has a positive correlation with job satisfaction.*

*H3: The income of brokers has a positive correlation with job satisfaction.*

*H4: Employee job satisfaction has a positive correlation with employee engagement.*

*H5: Employee engagement has a positive correlation with business performance.*

All variables in the model are measured using a 5-level Likert scale (Likert, 1932), which consists of a series of responses related to attitudes in the survey questions. Brokers will choose only one of the provided responses. Each response is assigned a score that reflects the level of interest, and the corresponding scores can be aggregated to measure the attitudes of the responding employees. Number the survey forms to facilitate data entry without confusion, and code the scale for each question: from 1 to 5, corresponding to 1 — Completely disagree, 2 — Disagree, 3 — Neutral, 4 — Agree, and 5 — Completely agree.

## 3. RESEARCH METHODOLOGY AND MODEL

The study employs a PLS-SEM approach.

### 3.1. Quantitative research objective

To examine the PLS-SEM model determining the relationships among job satisfaction, broker employee engagement, and operational effectiveness in Vietnamese securities companies. This analysis was conducted using SPSS 20 and SPSS Amos 20 software (Arbuckle, 2011).

According to Anderson and Gerbing (1988), the process of analyzing the linear structural model includes the following steps:

1. Scale test: This step involves assessing the quality of the measurement scales. To test the reliability of the scale in the survey, the author relied on two indicators: Cronbach's alpha coefficient and total variable correlation coefficient. These two standards help measure the level of strictness with which important variables are used. close to each other on a scale that correlates with each other. The author presents in detail two indicators:

- First, Cronbach's alpha coefficient. In this study, the authors only used scales whose Cronbach's alpha coefficient reached a value of 0.6 or higher (Hair et al., 2006). For scales with Cronbach's alpha coefficients less than 0.6, which are inappropriate scales, the authors proceed to consider inappropriate types of observed variables to achieve better Cronbach's alpha coefficients. For observed variables for Cronbach's alpha testing, it is necessary to ensure that there are 3 or more variables before testing the scale. If it is smaller, testing the scale is not appropriate, then the software will not give any results.
- Second, item-total correlation. The total variable correlation coefficient shows the correlation between an observed variable and all other variables in the scale. Therefore, the higher the coefficient, the higher the correlation of the variable with other variables. Variables with a correlation coefficient > 0.3 are considered appropriate, if < 0.3 are inappropriate and removed from the scale (Nunnally & Bernstein, 1994). Therefore, in the study, the authors used variables with correlation coefficients > 0.3, and for variables with correlation coefficients < 0.3, the authors eliminated variables.

2. Exploratory factor analysis (EFA): This phase aims to determine the appropriateness of measurement items. The Kaiser-Meyer-Olkin (KMO) is an index used to consider the appropriateness of factor analysis. In the thesis, with values of KMO large enough (between 0.5 and 1), it is a sufficient condition for factor analysis to be appropriate, but if this value is less than 0.5, factor analysis is possible. not suitable for the data and not eligible for analysis. Bartlett's test of sphericity should have a significance level (Sig.) of less than or equal to 0.05. Additionally, the extraction of at least 50% of the variance and eigenvalues exceeding 1 is required. The factor loadings should also be greater than 0.3 for sample sizes larger than 350 (Hair et al., 2006).

3. Confirmatory factor analysis (CFA): This involves assessing the fit of the model. Several fit indices should meet specific criteria, such as a chi-squared to degrees of freedom ratio (Cmin/df) of less than or equal to 5 (Bentler, 1980), a Tucker-Lewis index (TLI) greater than 0.9, a comparative fit index (CFI) greater than 0.9, a normal fit index (NFI) greater than 0.9 (Hu & Bentler, 1998), and a root mean square error approximation (RMSEA) less than 0.05 (Browne & Cudeck, 1992).

4. Structural equation modeling (SEM): In this final step, the structural model is analyzed to understand the relationships between variables.

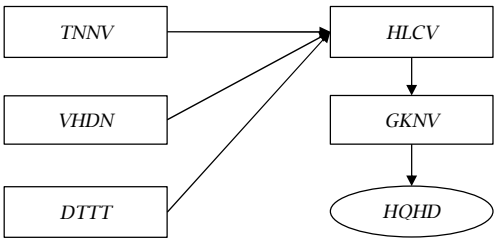
The model takes the following form:

$$HQHD = f(GKNV) \quad (1)$$

$$GKNV = f(HLCV) \quad (2)$$

$$HLCV = f(TNNV, VHDN, DTTT) \quad (3)$$

**Figure 1.** Research model




### 3.2. Research data

The study collected 1,250 questionnaires from all three survey rounds, and the data were cleaned before being input into the SPSS 20 and SPSS Amos 20 software for model analysis.

### 3.3. Survey respondent demographics

The results of the 1,250 questionnaires are from employees of various securities companies in Vietnam. The specific breakdown is as follows.

**Table 1.** Survey respondent demographics

| *Demographic group* | *Number of respondents* | *Percentage (%)* |
|---|---|---|
| Securities brokerage employees | 665 | 53.20 |
| Market research specialists | 90 | 7.20 |
| Financial analysts | 125 | 10.00 |
| Investment portfolio managers | 23 | 1.84 |
| Customer relationship specialists | 66 | 5.28 |
| Trading and custodial specialists | 65 | 5.20 |
| Risk management specialists | 45 | 3.60 |
| Marketing specialists | 45 | 3.60 |
| Analysts and research specialists | 88 | 7.04 |
| General office employees | 38 | 3.04 |

*Source: Authors' elaboration.*

The results of collecting subjects are structured as follows: there are 665 people with the title of stock broker staff (accounting for 53.20%), including subjects with contracts of 12 months or more; 90 people are market research specialists (7.20%); 125 people are financial analysts (10.00%); 23 people are portfolio administrators (1.84%); 66 people are customer care specialists (5.28%); 65 people are transaction and custody specialists (5.20%); 45 people are risk management specialists (3.60%); 45 people are marketing specialists (3.60%); 88 people are analysts and research specialists analysis and research specialists (7.04%) and finally 38 people are general department staff (3.04%).

The constant innovation of products on the stock market requires the brain matter content of securities company staff to be constantly improved, especially the brain matter content in securities consulting activities. The knowledge content of employees in securities companies is an important factor that helps securities companies be able to meet customer needs and thereby develop their activities. With the characteristic of securities business being the provision of intangible services, this service can only be of quality when customers clearly feel the results that the securities company brings to them. The activities of a securities company require very high analytical abilities of its staff to make the right investment decisions. Therefore, 100% of survey subjects have a university degree or higher and have worked for more than 6 months at a securities company.

Based on theory, the authors of the paper constructed the following measurement scale. The model consists of 6 measurement scales and 20 observations.

**Table 2.** Measurement scale and variables in the PLS-SEM model (Part 1)

| *No.* | *Code* | *Internal category of survey questions* | *Source* |
|---|---|---|---|
| ***Effectiveness of operations (HQHD)*** | | | |
| 1 | *HQHD1* | Employee brokers' annual salary and benefits increase | Harter et al. (2002) |
| 2 | *HQHD2* | The company has more investors and partners increasing each year | |
| 3 | *HQHD3* | The company's service supply volume grows annually | |
| ***Job satisfaction (HLCV)*** | | | |
| 4 | *HLCV1* | Appropriate workload | Ostroff (1992), Deci and Ryan (2000), Macky and Boxall (2007), Shmailan (2016), Sun and Bunchapattanasakda (2019), Noercahyo et al. (2021), Na-Nan et al. (2021) |
| 5 | *HLCV2* | Work-life balance | |
| 6 | *HLCV3* | Willingness to make voluntary efforts to improve expertise and skills | |
| ***Employee engagement (GKNV)*** | | | |
| 7 | *GKNV1* | Employees want to have a long-term commitment to the company | Shmailan (2016), Sun and Bunchapattanasakda (2019) |
| 8 | *GKNV2* | Employees will stay with the company even when offered attractive incomes by other companies | |
| 9 | *GKNV3* | Employees remain committed to the company even under difficult conditions | |
| 10 | *GKNV4* | Employees remain committed to the company even in the case of relocating the headquarters or office | |
| ***Broker's income (TNNV)*** | | | |
| 11 | *TNNV1* | High and competitive income corresponding to educational level | Clark and Oswald (1996), Sun and Bunchapattanasakda (2019), Na-Nan et al. (2021) |
| 12 | *TNNV2* | Average income corresponding to educational level | |
| 13 | *TNNV3* | Low and insufficient income corresponding to educational level | |

**Table 2.** Measurement scale and variables in the PLS-SEM model (Part 2)

| No. | Code | Internal category of survey questions | Source |
|---|---|---|---|
| ***Company culture (VHDN)*** | | | |
| 14 | *VHDN1* | High-level managers are trustworthy and have ethical business practices | Guiso et al. (2015) |
| 15 | *VHDN2* | Organizes movements, cultures, sports | |
| 16 | *VHDN3* | Always emphasizes superiors' commands and follows procedures and regulations | |
| 17 | *VHDN4* | Members naturally unite for common work objectives | |
| ***Training and advancement opportunities (DTTT)*** | | | |
| 18 | *DTTT1* | Reasonable job assignment and position | Bakker et al. (2014), Kazimoto (2016), Sun and Bunchapattanasakda (2019) |
| 19 | *DTTT2* | Proper training programs, knowledge, and skills for the job | |
| 20 | *DTTT3* | Core securities technology system supports high-level professional tasks | |

*Source: Authors' elaboration.*

## 4. REGRESSION MODEL TESTING AND DISCUSSION OF THE RESULTS

### 4.1. Scale reliability analysis

Cronbach's alpha test was conducted to assess the quality of the scale. The results of the scale reliability analysis for the constituent variables of the scale showed that the overall alpha coefficient is > 0.7, and the corrected item-total correlation coefficients are > 0.3. The *HQHD* scale has a Cronbach's alpha of 0.841 > 0.7, and the total variable correlation coefficient is greater than 0.637 — good scale quality. The *HLCV* scale has a Cronbach's alpha of 0.942 > 0.7, and the total variable correlation coefficient is greater than 0.735 — good scale quality. The *GKNV* scale has a Cronbach's alpha of 0.879 > 0.7, the total variable correlation coefficient is greater than 0.735 after eliminating *GKNV4* (total variable correlation < 0.3) — good scale quality. The *TNNV* scale has a Cronbach's alpha of 0.874 > 0.7, and the total variable correlation coefficient is greater than 0.692 — good scale quality. The *VHDN* scale has a Cronbach's alpha of 0.835 > 0.7, the total variable correlation coefficient is greater than 0.614 after eliminating *VHDN4* (with total variable correlation < 0.3) — good scale quality. The *DTTT* scale has a Cronbach's alpha of 0.867 > 0.7, and the total variable correlation coefficient is greater than 0.614 after removing the *DTTT4* scale (with total variable correlation < 0.3) — good scale quality. Table 3 below shows the details.

**Table 3.** Results of quality testing of each scale in the research model

| Item | Scale mean if item deleted | Scale variance if item deleted | Corrected item-total correlation | Cronbach's alpha if item deleted |
|---|---|---|---|---|
| ***Reliability coefficient alpha = 0.841, indicating good measurement scale quality*** | | | | |
| *HQHD* | Testing the quality of the scale: Operational efficiency (*HQHD*) of securities companies | | | |
| *HQHD1* | 7.83 | 2.209 | 0.728 | 0.768 |
| *HQHD2* | 7.78 | 1.609 | 0.785 | 0.707 |
| *HQHD3* | 7.73 | 2.247 | 0.637 | 0.842 |
| ***Reliability coefficient alpha = 0.942, indicating good measurement scale quality*** | | | | |
| *HLCV* | Testing the quality of the measurement scale: Job satisfaction (*HLCV*) of securities company employees | | | |
| *HLCV1* | 4.75 | 2.067 | 0.735 | 0.871 |
| *HLCV2* | 4.66 | 2.238 | 0.778 | 0.823 |
| *HLCV3* | 4.29 | 2.351 | 0.810 | 0.803 |
| ***Reliability coefficient alpha = 0.879, indicating good measurement scale quality*** | | | | |
| *GKNV* | Testing the quality of the scale measuring: Employee engagement (*GKNV*) of securities company employees | | | |
| *GKNV1* | 11.53 | 5.129 | 0.574 | 0.639 |
| *GKNV2* | 11.36 | 5.295 | 0.524 | 0.672 |
| *GKNV3* | 11.36 | 5.078 | 0.642 | 0.699 |
| *GKNV4* | 11.32 | 6.404 | 0.185 | 0.798 |
| ***Reliability coefficient alpha = 0.874, indicating good measurement scale quality*** | | | | |
| *TNNV* | Testing the quality of the scale: Income of broker employees (*TNNV*) at securities companies | | | |
| *TNNV1* | 10.58 | 4.181 | 0.718 | 0.852 |
| *TNNV2* | 10.20 | 5.168 | 0.692 | 0.856 |
| *TNNV3* | 10.37 | 4.511 | 0.829 | 0.801 |
| *TNNV4* | 3.45 | 2.704 | 0.214 | 0.245 |
| ***Reliability coefficient alpha = 0.835, indicating good measurement scale quality*** | | | | |
| *VHDN* | Testing the quality of the scale: Company culture (*VHDN*) at securities companies | | | |
| *VHDN1* | 11.87 | 4.562 | 0.648 | 0.791 |
| *VHDN2* | 11.83 | 4.792 | 0.614 | 0.806 |
| *VHDN3* | 11.96 | 4.024 | 0.718 | 0.757 |
| *VHDN4* | 12.02 | 2.952 | 0.169 | 0.184 |
| ***Reliability coefficient alpha = 0.867, indicating good measurement scale quality*** | | | | |
| *DTTT* | Testing the quality of the scale: Training and promotion opportunities (*DTTT*) at securities companies | | | |
| *DTTT1* | 8.3123 | 5.089 | 0.774 | 0.807 |
| *DTTT2* | 8.2145 | 4.985 | 0.794 | 0.798 |
| *DTTT3* | 8.5047 | 6.118 | 0.647 | 0.858 |
| *DTTT4* | 2.6120 | 2.991 | 0.170 | 0.149 |

*Source: Authors' elaboration using SPSS 20 software.*

### 4.2. Exploratory factor analysis

Because the sample size is larger than 370, the absolute value below the index chosen by the study will be 0.3. Experimental results show that with the KMO measure of sampling adequacy = 0.660 is in the range 0.5 < KMO < 1, the measure meets the requirements. Bartlett's test of sphericity is 0.000, a satisfactory measure. Appropriate factor loading coefficients of observed variables (factor loading coefficients) > 0.3, a satisfactory measure. Test of variance extracted, cumulative coefficient % = 74.496% > 50%, satisfactory measure. Thus, the EFA analysis results meet the requirements.

**Table 4.** Summary of exploratory factor analysis (pattern matrix)

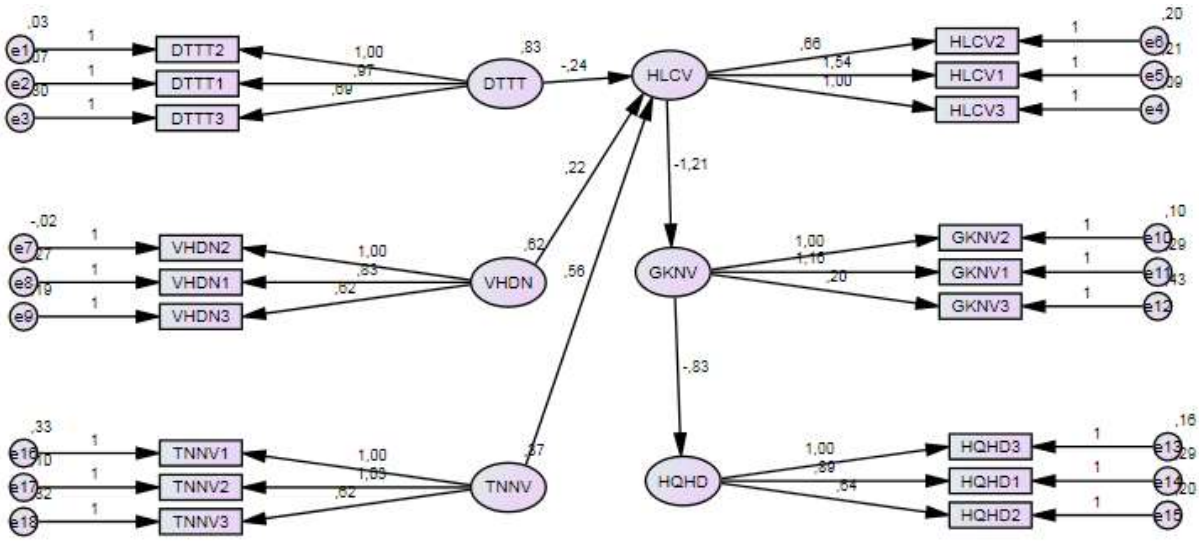
| *Component* | *Group* | | | | | |
|---|---|---|---|---|---|---|
| | *1* | *2* | *3* | *4* | *5* | *6* |
| *HLCV3* | 0.909 | | | | | |
| *HLCV2* | 0.868 | | | | | |
| *HLCV1* | 0.841 | | | | | |
| *DTTT1* | | 0.942 | | | | |
| *DTTT2* | | 0.938 | | | | |
| *DTTT3* | | 0.730 | | | | |
| *VHDN2* | | | 0.901 | | | |
| *VHDN1* | | | 0.836 | | | |
| *VHDN3* | | | 0.791 | | | |
| *GKNV2* | | | | 0.878 | | |
| *GKNV1* | | | | 0.854 | | |
| *GKNV3* | | | | 0.832 | | |
| *HQHD3* | | | | | 0.920 | |
| *HQHD1* | | | | | 0.840 | |
| *HQHD2* | | | | | 0.751 | |
| *TNNV1* | | | | | | 0.844 |
| *TNNV3* | | | | | | 0.822 |
| *TNNV2* | | | | | | 0.769 |
| Kaiser-Meyer-Olkin measure of sampling adequacy | | | | | | 0.660 |
| Bartlett's test of sphericity | | | | | | 0.000 |
| Cumulative % | | | | | | 74.496 |

*Source: Authors' elaboration using SPSS 20 software.*

### 4.3. Linear structural analysis

The standard for the measurement model to fit real data must be consistent with five measures, respectively, Cmin/df, TLI, CFI, NFI, and at the end of the arc is the RMSEA measure. The goodness of fit of the model is determined by meeting the measurement standards, which must be satisfied with five measures: first — the square index adjusted for degrees of freedom (Cmin/df) is the smaller value or equal to 5; second is a TLI with a value greater than 0.9, a value greater than 0.95 is a good fit; third — CFI with a value greater than 0.9, a value greater than 0.95 is a good fit; four are NFI with a value greater than 0.9, a value greater than 0.95 is a good fit; and finally RMSEA with a value less than 0.05 the model fits well, less than 0.08 is appropriate, the smaller the better.

**Figure 2.** Model regression estimation results




*Note: Chi-square = 4.86, TLI = 0.902, CFI = 0.967, NFI = 0.889, RMSEA = 0.042.*
*Source: Authors' elaboration using SPSS Amos 20 software.*

Table 5 shows that the values include: Cmin/df value of 4.86 is within a value of 5 or less, TLI value is 0.902 — greater than 0.9, CFI value is 0.967 — greater than 0.9, NFI value is greater than 0.9, RMSEA value is greater than 0.042. In conclusion, the integrated model is suitable for real data because it meets the testing criteria.

**Table 5.** Model fit assessment

| *No.* | *Measure* | *Symbol* | *Reference value* | *Model value* |
|---|---|---|---|---|
| 1 | Experimental results, Cmin/df measure | $x^2$/df (Cmin/df) | $x^{2/d.f} \leq 5$ Cmin/df ≤ 5 | 4.86 |
| 2 | Experimental results, TLI measure | TLI | TLI > 0.90 | 0.902 |
| 3 | Experimental results, CFI measure | CFI | CFI > 0.90 approaching 1 is good | 0.967 |
| 4 | Experimental results, NFI measure | NFI | NFI approaching 1 is good | 0.889 |
| 5 | Experimental results, RMSEA measure | RMSEA | RMSEA < 0.05 | 0.042 |

*Source: Compiled by the Authors from the SEM model report.*

Through Table 6, statistics of the above empirical criteria/measures are presented, with the significance level of the estimated coefficients: p-value is less than or equal to 0.05, corresponding to a confidence level of greater than or equal to 95%, the factors statistical significance was included in the research model and the initial hypotheses were accepted.

**Table 6.** Hypotheses testing results

| *Hypothesis* | *Effect* | *Estimate* | *Std. error* | *Critical ratio* | *P* | *Conclusion* |
|---|---|---|---|---|---|---|
| *H1* | *HLCV ← DTTT* | 0.243 | 0.02 | 13.2 | *** | Accepted |
| *H2* | *HLCV ← VHDN* | 0.22 | 0.02 | 10.795 | *** | Accepted |
| *H3* | *HLCV ← TNNV* | 0.564 | 0.03 | 16.673 | *** | Accepted |
| *H4* | *GKNV ← HLCV* | 1.209 | 0.06 | 20.95 | *** | Accepted |
| *H5* | *HQHD ← GKNV* | 0.829 | 0.04 | 23.89 | *** | Accepted |

*Note: *** p < 0.05.*
*Source: Authors' elaboration using SPSS Amos 20 software.*

The variables *DTTT, VHDN,* and *TNNV* have the same impact on *HLCV* (positive regression coefficient), statistically significant with p-value ≤ 0.05.

The variable *HLCV* has a positive impact on *GKNV* (positive regression coefficient), statistically significant with p-value ≤ 0.05.

The *GKNV* variable has a positive impact on *HQHD* (positive regression coefficient), statistically significant with a p-value ≤ 0.05.

Hypotheses *H1, H2, H3, H4, H5* are all appropriate. This test result is appropriate in Vietnam. With the specific nature of human resources in the financial securities industry, there is a very high level of job turnover due to the sensitive nature of the securities sector, most of whom are young workers, so the characteristics of human resources are different. Employees of securities companies belong to a group of workers with high professional capacity, they are only truly satisfied with their work when they are assigned work that meets their expertise and strengths, are trained, recognized and promoted, the working environment of the company's culture is favorable and suitable, creativity is promoted, and income is commensurate. Thereby, long-term employee engagement with the company and increased operational efficiency for the securities company.

## 5. CONCLUSION

Based on the results of the PLS-SEM regression analysis, the article proposes several solutions to help securities companies improve their operational efficiency through employee satisfaction and attachment.

Firstly, upgrading and investing in core software systems to provide services to investors. The position of a securities company in the stock market is reflected clearly in the core software system it uses. Currently, there are a number of securities companies that have deployed core software systems, such as SSI Securities Company's internal portal system built on Microsoft's Sharepoint platform, which has promoted technological superiority and software automation. the company's current operations. The Oracle Finance System was also successfully deployed to improve operational efficiency. With VPS Securities, the company has launched a modern and reliable trading platform WebTrader, SmartOne and SmartPro phone applications, both of which are highly appreciated by customers for their superiority and processing speed. Fast, stable and reliable transaction processing. Investing in the core software system not only affirms the securities company's long-term strategy but also demonstrates the securities company's ability to use capital, bringing business efficiency. System deployment is inevitable for Vietnamese securities companies because the core software system will meet the current and future needs of customers. In addition, the government needs to increase investment to modernize physical and technical facilities to serve market activities, ensuring that securities trading and control activities are carried out quickly, safely and effectively. From there, we ensure that the securities company operates effectively and reduces risks.

Currently, Vietnam's information technology system and database used to operate the stock market have received investment attention, but still do not meet the development and integration requirements of the stock market. New applications are only built at a basic level; there are still many risks to security, safety, and network security. The database is richer but still fragmented, not updated synchronously, not arranged or stored systematically and scientifically international standard.

Secondly, enhancing the quality of human resources, especially the team of securities brokers. Human resources are the most important asset for a securities company and are the center of its business in the securities service industry. Company management needs to have a strategy for developing both the quantity and quality of human resources to meet the requirements of the securities market and upgrade to emerging markets. Some proposed solutions include:

- developing a human resource development strategy suitable for each stage;
- establishing personnel competency standards;
- implementing regular training programs;
- improving the quality of market research human resources;
- designing appropriate salary policies for securities brokers;
- enhancing and elevating the code of conduct for the securities company.

Thirdly, improving risk management capabilities. Securities companies need to enhance their risk management capabilities, which are fundamental when entering larger stock markets than the current peripheral market (moving into emerging markets). Urgent measures include establishing a modern, efficient risk management system through a clear division of functions and responsibilities, building a control system, and setting risk limits for each department and employee. Developing quantitative risk models for timely risk mitigation is also necessary.

Thus, the scientific article has contributed to expanding the theoretical framework and providing empirical evidence for improving the operational efficiency of securities companies through activities that meet employee satisfaction, linking them long-term with the securities company. The solutions offered can be applied to securities companies in different stock markets globally. However, the limitation of the study is that there is no classification of survey subjects working in securities company groups of different sizes because these factors have more or less influence on employee satisfaction. member at securities companies.

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