THE EFFECT OF TRADE UNION FINANCE ON EMPLOYEE SOCIAL SECURITY: AN EMPIRICAL RESEARCH FROM ENTERPRISE GOVERNANCE PRACTICES

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Abstract

The purpose of this paper is to examine the impact of trade union finance on ensuring social security (SS) for workers in enterprises based on the five pillars of SS (namely: ensuring a minimum income level, enhancing risk management capabilities, ensuring income distribution, promoting sustainable employment, developing labor market, and improving social management efficiency for workers). This study utilizes structural equation modeling (SEM) to test hypotheses in the proposed research model using survey data collected from 770 workers who pay union dues at enterprises with established trade unions. The findings indicate that the trade union financial spending policies and union financial spending ratios ensuring SS both have a positive impact on the five pillars of SS. Supervising trade union financial spending positively influences the enhancement of risk management capabilities and ensures income distribution. The competency of trade union officials affects enhancing risk management capabilities, income distribution, and ensuring a minimum income level for employees. Based on the research results, the authors propose several suggestions to improve the efficient use of trade union financing to guarantee SS for workers in Vietnamese enterprises.

Keywords: Social Security, Vietnamese Enterprises, Workers, Trade Union Finance

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1. INTRODUCTION

Social security (SS) plays a dual role as both a driver of development and a goal for nation-building. SS creates an equitable environment for all social strata, the poor, workers, and those unexpected risks. Therefore, developing a diverse, comprehensive SS system, gradually expanding coverage, and promoting shared responsibilities among the state, society, and individuals, as well as among different social groups within and across generations, is the objective for countries worldwide, and Vietnam is no exception. Implementing SS is a fundamental and inevitable component of corporate social responsibility (CSR). CSR related to SS is a relatively new issue for developing countries. including Vietnam. The commitment to SS by enterprises reflects their ethical conduct and contributions to economic development, while also improving the quality of life for their workforce and their families, as well as the local community and society at large (Nguyen, 2021). CSR related to SS can be interpreted in various ways, but it generally includes the following components: 1) responsibility towards the market and consumers; 2) responsibility for environmental protection; 3) responsibility towards workers (vocational training, employment, wages, insurance, and occupational safety); and 4) general responsibility towards the community (supporting the poor, the elderly, child protection, etc.).

Macdonald and Vandenabeele (1996) and Emmanuel et al. (2020) said that a trade union is an association of workers united to protect and promote their common interests. The role of trade unions in representing and protecting workers has been strongly supported by Johansson and Partanen (2002) and Abdul Majid et al. (2021). Trif et al. (2023) and Abdul Majid et al. (2021) point out that within enterprises, the grassroots trade union (GTU) holds a crucial position within enterprises and among workers. It is considered the backbone, the operational base of the trade union organization, combining and promoting directives from higher trade union levels, and serving as a measure of the overall trade union system's effectiveness.

The GTU, being closer to the union members and workers, can provide the most direct benefits within the enterprise's conditions, embodying the trade union's role, functions, and duties. The GTU is an organization that represents, protects, and promotes workers' rights within the enterprise, established based on the voluntary association of workers and respect for the law. Accordingly, the core functions of the GTU include: 1) protecting workers' interests; 2) organizational communication; 3) representing workers; 4) regulation; and 5) participation in management.

To ensure that trade unions effectively perform their functions, trade union finance must support ensuring SS for workers by focusing on: 1) ensuring a minimum income level; 2) enhancing risk management capabilities; 3) ensuring income distribution; 4) promoting sustainable employment and labor market development; and 5) improving social management efficiency (Vu. 2024).

Well-designed SS systems can positively impact growth while expanding the inclusiveness of that growth (Ostry et al., 2014; Mathers & Slater, 2014; Amlie & Gibney, 2023). In this context, trade union

finance can also bring positive effects on ensuring SS for workers in enterprises through various impact channels at the trade union level. Trade union finance involves the mobilization of monetary capital occurring among all societal entities, reflecting the aggregation of economic relationships arising from the distribution of financial revenues through the creation and use of monetary funds to meet the diverse needs of societal entities (Klec & Mum, 2019; Amlie & Gibney, 2023).

Independent studies on SS or trade union finance have been explored from various perspectives, but the relationship between trade union finance and ensuring SS for workers in enterprises has not been extensively examined. Therefore, researching and testing the influence of trade union finance factors in ensuring SS for workers in enterprises is truly meaningful, exploratory, and pioneering. The purpose of this paper is to address three questions:

RQ1: What aspects should be considered when evaluating the use of union finances at the grassroots trade union level?

RQ2: To ensure social security support for workers in enterprises, which social security pillars should union finances be allocated to?

RQ3: What solutions can be implemented to effectively utilize union finances to ensure social security for workers in Vietnamese enterprises?

The structure of this paper is as follows. Section 2 reviews the relevant literature and hypotheses development. Section 3 analyses the methodology that has been used to conduct empirical research on the impact of trade union finance on ensuring SS for workers in enterprises. Section 4 showcases the analysis and interpretation of gathered data. Section 5 discusses in detail the results and the impact of trade union finance on SS for workers. Lastly, Section 6 provides the study's core insights and findings and offers several suggestions to improve the efficient use of trade union financing to guarantee SS for workers.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Trade union finance is a crucial condition for ensuring the activities, rights, and responsibilities of trade unions and maintaining the operation of the trade union system. According to Amlie and Gibney (2023), financial capacity and performance created incentives for unions to mobilize at the grassroots level and launch major drives to improve their position in society. Understanding how unions raise and spend money provides insight into their administrative orientation and organizational capacity. Therefore, at GTUs, trade union financial impacts SS through expenditure activities for workers, including: 1) trade union financial expenditure policies; 2) trade union financial expenditure ratios; 3) auditing of trade union financial expenditures; and 4) the competence of trade union officials.

1) Trade union financial expenditure policies. According to the Vietnam Trade Union Law No. 12/2012/QH13, trade union financial revenues are allocated to 12 categories, including nine caterers that serve workers, employees, and trade union members, while three cater to the administrative apparatus and specialized trade union officials.

The expenditure policy at GTUs is reflected in the formulation of internal expenditure regulations in compliance with state financial expenditure regimes, the Vietnam General Confederation of Labor (VGCL), and higher-level trade unions. The policies on the use of trade union finances must be complete, timely, and flexible. Moreover, there should be sanctions in place to handle financial fraud in trade union expenditures.

- 2) Public finance spending ratio for SS. According to Decision No. 4290/QD-TLD, the spending ratio for public finance in trade unions is stipulated as follows:
- Spending on salaries and allowances for fulltime trade union officials and allowances for parttime trade union officials should not exceed 45% of the revenue.
- Spending on visiting trade union members should be at least 40%; other expenditures should not exceed 15% of the trade union dues collected by the GTU.
- Spending on SS includes: direct spending on the care, protection, training, fostering, and training of union members and employees effectively, transparently, and openly.
- Reasonable and effective spending on the propaganda and mobilization of union members and employees; and reasonable and effective spending on coordinating activities with other political-social organizations.
- 3) Inspection of trade union financial spending. Inspecting and supervising trade union finances is a crucial function of trade union financial management, involving the establishment of organizational structures at various trade union levels, appropriate mechanisms, policies, processes, and regulations to ensure the prevention, detection, and handling of financial risks. This aims to manage trade union finances transparently, strictly, and effectively, thereby better supporting the activities according to the functions and duties of the trade union organization.
- 4) Competence of trade union officials. One of the critical factors in trade union finances is the competence of the responsible officials. Trade union financial officers with adequate competence and qualifications possess the necessary skills, communication abilities, and practical experience to effectively and easily engage in dialogue with employers and employees.

The research of Vu (2024) indicated that among the nine spending categories of trade union finances currently regulated, five are linked to the pillars of SS, including: 1) ensuring a minimum level of income; 2) enhancing risk management capabilities; 3) ensuring income distribution; 4) promoting sustainable employment and labor market development; and 5) ensuring the improvement of social management efficiency for employees.

2.1. Trade union finances and ensuring workers' minimum income levels

Vietnam is a developing country with a low middleincome status, facing significant challenges in growth and socio-economic development to avoid the "middle-income trap". Trade union finances are allocated for the care, protection, training, fostering, and education of union members and workers. The GTU promptly supports workers to ensure their basic living rights in education, healthcare, housing, and essential services. To ensure these rights, the trade union needs policies to increase spending ratios, thus providing workers with a minimum level of support (Torm, 2014; Mathews, 2024).

Trif et al. (2023) and Abdul Majid et al. (2021) demonstrated that trade unions play a crucial role in ensuring workers' rights and protection under the law. Johansson and Partanen (2002) found that unionized workers receive more healthcare benefits than non-unionized workers and pay 18% less in healthcare deductions and lower costs for insurance. Upon retirement, unionized workers are 24% more likely to receive employer-paid health insurance. The study also revealed that unionized workers have higher incomes than non-unionized workers because they have better access to information, making them more likely to benefit from social insurance programs such as unemployment insurance and worker compensation. Thus, trade unions act as intermediaries that ensure minimum benefits and rights for workers. The spending ratios and policies of trade union finances support workers in securing a minimum income level, ensuring their right to livelihood (Emmanuel et al., 2020; Vu, 2024). Therefore, the following hypothesis is proposed:

H1: Trade union finances have a positive impact on ensuring workers' minimum income levels.

2.2. Trade union finances and income distribution for workers in enterprises

Trade union finances promote fairness in the distribution of wages and income, aligning with labor productivity and job performance through activities such as: providing allowances for workers facing difficulties due to accidents; visiting workers during illness, funerals, and weddings; and supporting workers in job creation through preferential credit loan programs. These allowances and support from the trade union alleviate some of the burdens of life for poor and low-income workers, ensuring SS for them. Additionally, they motivate workers to participate in the development of the company's production and business activities.

Research by Freeman (1980, 1984) indicated that trade unions reduce inequality and provide nonwage benefits. Unions mitigate income redistribution, improve enterprise productivity by representing workers in employer-employee relations, and reduce "standard inequality through negotiated by the unions. Expanding on his research, Freeman (1991) studied 3,000 GTUs with about 500,000 workers, revealing that one of the main goals of unions is to reduce wage dispersion through policies. Through spending policies, unions aim to redistribute income among different groups and reduce "inequality" and individual characteristic differences (Amlie & Gibney, 2023; Vu, 2024). The study also highlighted that unions and their policies significantly impact the wage structure in the economy. Kerr and Wittenberg (2021) analyzed from 1993 to 2019 in South demonstrating that unions reduce wage inequality by standardizing wages in the union sector. Based on this, the following hypothesis is proposed:

H2: Trade union finances have a positive impact on ensuring income distribution for workers in enterprises.

2.3. Trade union finances and promoting sustainable employment and developing labor market

Through activities such as supporting vocational training, aiding job transitions for workers affected by economic crises, and developing labor market information and employment services, trade unions have promoted the labor market's sustainable development (Johansson & Partanen, 2002). Son (2021) argued that trade unions play a crucial role in the labor market, established to protect workers' rights and ensure fair wages, benefits, and working conditions. In today's labor market, unions are increasingly important as they represent workers in negotiations with employers over wages, benefits, working hours, and working conditions. By joining unions, workers can express their concerns and opinions to employers through union representatives. In addition to negotiating with employers, unions provide various services to their members, such as vocational training courses, access to healthcare services, and support during economic volatility or job loss. They also implement training programs tailored to market needs to assist workers in job and career transitions, thereby promoting labor market development (Torm, 2014).

The effectiveness of these union activities heavily depends on the level and ratio of trade union financial spending. Appropriate levels and ratios of trade union financial spending will positively impact ensuring sustainable employment and labor market development for workers in enterprises (Vu, 2024). Based on this, the following hypothesis is proposed:

H3: Trade union finances have a positive impact on promoting sustainable employment and developing labor market.

2.4. Trade union finances and enhancing risk management capabilities

Abdul Majid et al. (2021), Amlie and Gibney (2023), and Vu (2024) asserted that trade union finances are crucial for ensuring the execution of union rights and responsibilities and maintaining the union system's operations. GTU, with their roles and functions, have implemented practical and effective activities to support workers in enhancing their risk management capabilities, including risk prevention, risk mitigation, and risk recovery.

According to Decision No. 4290/QD-TLD, financial spending on training and fostering union members and workers is a key expenditure item at GTU. This includes direct care, protection, training, and education of union members and workers. Through these expenditures, unions have helped workers improve their skills and serve as intermediaries between workers and employers, ensuring job stability and a minimum income level thereby preventing risks (Vu, 2024). Based on these insights, the following hypothesis is proposed:

H4: Trade union finances have a positive impact on enhancing risk management capabilities for workers.

2.5. Trade union finances and enhancing social management efficiency

Research by Torm (2014), Abdul Majid et al. (2021), and Amlie and Gibney (2023) demonstrated that trade unions serve as intermediaries, helping stakeholders manage and develop vocational skills to meet labor market demands and ensure sustainable employment for workers. According to Vu (2024), GTU has the conditions and mechanisms to organize programs for advocacy, mobilization, and creating opportunities for workers to enhance their legal knowledge, educational level, and vocational skills. workers develop independently, helps and proactively, and increases the development opportunities for each union member. Thus, appropriate regulations and guidelines for using trade union finances in enterprises positively impact workers, contributing to enhanced social management efficiency within the company. Based on this, the following hypothesis is proposed:

H5: Trade union finances have a positive impact on enhancing social management efficiency.

2.6. Research model

The proposed research model includes five groups of hypotheses as follows:

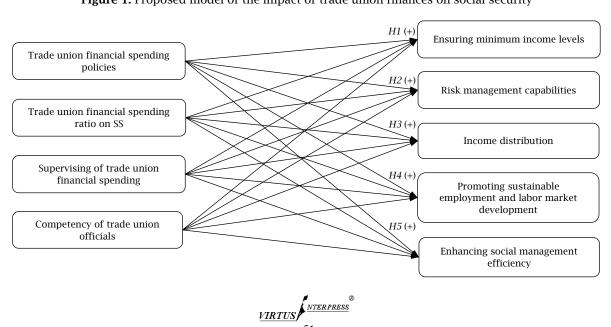


Figure 1. Proposed model of the impact of trade union finances on social security

3. RESEARCH METHODOLOGY

3.1. Qualitative research

The authors conducted the in-depth interview method. The experts selected for discussions and exchanges on issues such as trade union finances, SS, and the impact of trade union finances on ensuring SS for workers in enterprises are specialists in trade union financial accounting, educators in financial accounting, and individuals with deep knowledge of legal policies on trade union finances. These include (heads/deputy heads of finance departments, chief accountants, trade union presidents at provincial labor federations, sectoral labor unions, GTUs, etc.). This selection allows us to gain valuable insights into the issues under study, as well as a deeper understanding of practical situations and challenges in fulfilling the tasks of trade union organizations. Based on this useful information, this research reassesses the impact of trade union finances on ensuring SS for workers in enterprises. We interviewed a total of 30 experts, including: 10 trade union officials (individuals working within trade unions who have practical experience in the field); five experts in financial and SS studies (academics, researchers, and scholars specializing in finance and SS); and 15 workers with experience in enterprises (employees with over five years of experience in various businesses). The results of these in-depth interviews will be used to refine and supplement the draft measurement scales for the research variables. This process will help adjust and improve the survey instruments, leading to the development of a comprehensive and finalized survey questionnaire tailored to the research context.

3.2. Quantitative research

To achieve reliable estimates, the research team determines the sample size using the sample size calculation method proposed by Smith (1983) when the population size is unknown. According to this method, the sample size is calculated as follows:

$$n = \frac{Z^2 p(1-p)}{e^2} \tag{1}$$

where,

- n sample size needed to be determined;
- Z Z-score value based on the chosen confidence level (for a 95% confidence level, Z = 1.96);
- p estimated proportion (to ensure a safe sample size estimate, p = 0.5 is chosen);
- e allowable margin of error (here e = ± 0.05 or 5%).

The sample size according to Smith's method can vary with a margin of error of 1%, 5%, or 10%, depending on the homogeneity of the population and available financial resources. Given the large sample size required and the constraints of time and financial resources, this study uses a margin of error of 5% to determine the sample size and number of survey responses needed. Using the calculation method described above, the number of workers to be surveyed is approximately n = 768.32. In this study, the survey questionnaire is designed with two sections and 34 questions. The research team

employs a 5-point Likert scale to assess the impact of trade union finances on *SS*, where one represents "No impact", two represents "Little impact", three represents "Neutral", four represents "Good impact", and five represents "Very good impact".

The survey targets workers who pay union dues at enterprises with established trade unions. The survey is conducted both in-person and online. Over 800 responses are received. After excluding incomplete or invalid responses, 770 valid responses are used for analysis. The sample structure is as follows:

- by gender: male (41.3%) and female (58.7%);
- by age: 25-29 years old (13.1%), 30-39 years old (50.9%), 39-49 years old (27.2%);
- by experience: 16–20 years (27.5%), 6–10 years (23.2%), under 1 year (3%).

Thus, the sample structure aligns well with the overall population, making it representative and statistically significant.

The data obtained from the survey was cleaned, coded, and entered using SPSS v.25 and AMOS v.25 software. Subsequently, quantitative analysis was conducted using the following techniques:

- 1) Descriptive statistics analysis (used to summarize and describe the main features of the dataset);
- 2) Reliability analysis (evaluated using Cronbach's alpha coefficient to assess the internal consistency of the measurement scales);
- 3) Exploratory factor analysis (EFA) (conducted for each variable to identify the underlying factor structure);
- 4) Confirmatory factor analysis (CFA) (performed to validate the factor structure derived from EFA and confirm the measurement model);
- 5) Structural equation modeling (SEM) (used to analyze the structural relationships between variables and test the proposed hypotheses).

These techniques help ensure the accuracy and reliability of the data and the validity of the research findings.

4. RESEARCH RESULTS

4.1. The results of the qualitative research

The results of the in-depth interviews conducted by the research team identified 28 observations of the variables in the research model, specifically:

- union financial expenditure policies have three observations (*CS1-CS3*);
- union financial expenditure ratios have three observations (*CT1-CT3*);
- union financial expenditure audits have three observations (KT1-KT3);
- competence of union officers has three observations (*NL1-NL3*);
- \bullet ensuring minimum income security has three observations (TN1-TN3);
- enhancing risk management capabilities has three observations (*NL1-NL3*);
- income distribution has three observations (*PP1-PP3*);
- promoting sustainable employment and labor market development has three observations (*PT1-PT3*);
- improving social management efficiency has four observations (*QL1-QL4*) (see Table 1).

Table 1. Measurement scales of the variables in the model

Code	Variable/Scale	Source								
CS	Trade union financial spending policies									
	The issuance of internal spending regulations and the management and use of GTU									
CS1	finances comply with the financial expenditure regime of the state, the VGCL, and									
	superior trade unions.	The results of								
CS2	The policy on the use of union finances ensures SS for employees comprehensively,	the qualitative research								
C32	flexibly, promptly, and specifically in each case.	the quantative research								
CS3	Sanctions for fraudulent use of union finances ensure SS for employees are fully and									
C33	promptly implemented.									
CT	Union financial spending ratios ensuring SS									
CT1	Direct expenditures on caring for, protecting, training, and providing refresher courses									
CII	for union members and employees effectively, openly, and transparently ^b .									
CT2	Expenditures on propagandizing and mobilizing union members and employees	The results of								
C12	reasonably and effectively ^c .	the qualitative research								
СТЗ	Expenditures on coordinating activities with other political-social organizations									
C13	reasonably and effectively.									
KT	Supervising of trade union financial spending ^d									
KT1	Programs and plans for auditing union financial expenditures ensuring SS are issued fully									
KII	and promptly.	The recults of								
KT2	Supervising of union financial expenditures ensuring SS is conducted regularly every year.	The results of the qualitative research								
KT3	The entities conducting audits of union financial expenditures ensuring SS meet	the quantative research								
KIJ	the requirements and works objectively and effectively.									
NL	Competency of trade union officials									
NL1	The professional qualifications of union officers ensure quality and professionalism.									
NL2	Union officers have sufficient skills, communication abilities, and practical experience to	The results of								
	negotiate with employers and employees easily and effectively.	the qualitative research								
NL3	Union officers are objective, honest, and have professional ethics.	_								
TN	Ensuring minimum income security									
TN1	Ensuring the minimum right to live regarding food and health.	Johansson and Partanen								
TN2	Ensuring the minimum right to live regarding education.	(2002), Torm (2014),								
		Mathews (2024), Trif et al.								
		(2023), Abdul Majid								
		et al. (2021), Emmanuel								
TN3	Ensuring the minimum right to live regarding healthcare.	et al. (2020), Amlie and								
		Gibney (2023), Vu (2024),								
		and the results of								
		the qualitative research								
PP	Income distribution									
PP1	Allowances for employees facing difficulties due to work-related accidents or risks	F								
PPI	causing health or property damage.	Freeman (1980, 1984),								
PP2	Visiting and gifting employees who are sick, on maternity leave, have accidents, have	Amlie and Gibney (2023, Kerr and Wittenberg (2021),								
rr2	family bereavements, celebrations, or during holidays and festivals.	Vu (2024), and the results								
PP3	Providing direct employment support for a segment of employees through preferential	of the qualitative research								
rrs	credit loan programs.	of the quantative research								
PT	Promoting sustainable employment and labor market development									
PT1	Developing labor market information and employment services.	Johansson and Partanen								
PT2	Supporting vocational training for employees.	(2002), Torm (2014),								
		Son (2021), Vu (2024), and								
PT3	Supporting job transitions for workers affected by economic crises.	the results of								
		the qualitative research								
RR	Enhancing risk management capabilities									
RR1	Risk prevention: supporting employees to proactively prevent risks in life, health,									
IVIVI	business production, and natural environment fluctuations.	Abdul Majid et al. (2021),								
RR2	Risk mitigation: helping employees have sufficient resources to compensate for income	Amlie and Gibney (2023),								
MZ	shortages due to life, health, business production, and natural environment fluctuations.	Vu (2024), and the results								
	Risk recovery: providing timely support to employees to minimize unforeseeable impacts	of the qualitative research								
RR3	or those beyond control due to life, health, business production, and natural environment	or the quantative rescarcii								
	fluctuations.									
QL	Improving social management efficiency									
QL1	Distribution and redistribution of income.	Torm (2014), Abdul Majid								
QL2	Poverty reduction and inequality reduction.	et al. (2021), Amlie and								
012	Enhancing human capital, increasing human development opportunities, and strengthening	Gibney (2023), Vu (2024),								
QL3	social inclusion.	and the results of								
QL4	Employees are developed independently and proactively.	the qualitative research								
	he Trade Union Law of 2012. b Direct expenses for caring for, protecting, training, fostering,	1 1 1 1 1								

Note: ^a The Trade Union Law of 2012. ^b Direct expenses for caring for, protecting, training, fostering, and coaching union members and employees include: expenses for activities representing and protecting the legitimate rights and interests of union members and employees, expenses for tourism and resort support, expenses for visits and allowances, and expenses for encouragement and rewards. ^c Expenses for propagating and mobilizing union members and employees include: expenses for propaganda and mobilization, expenses for developing union membership and building strong GTUs, expenses for organizing emulation movements, expenses for organizing cultural and sports activities, and expenses for promoting activities related to gender and gender equality. ^d Regulations on the decentralization of trade union financial management.

Source: Authors' elaboration.

4.2. The results of the quantitative research

4.2.1. Cronbach's alpha analysis

The Cronbach's alpha coefficients for all factors are greater than 0.6 (see Table 2). The item-total

correlations for all measurement scales are greater than 0.3 and Cronbach's alpha, if the item is deleted, is lower than the overall Cronbach's alpha value. Therefore, all 28 observation variables meet the reliability criteria for inclusion in EFA (Hair & Alamer, 2022).

Table 2. Reliability testing of the measurement scales

Item	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted	Cronbach's alpha
CS		0.927			
CS1	6.91	4.242	0.780	0.949	
CS2	6.93	4.032	0.881	0.869	
CS3	6.90	3.930	0.892	0.860	
CT	Ti	rade union financial s	pending ratios ensuring	SS	0.903
CT1	8.53	2.681	0.793	0.873	
CT2	8.49	2.570	0.807	0.860	
CT3	8.52	2.552	0.820	0.849	
KT		Supervising of trade	union financial spending		0.827
KT1	7.35	3.198	0.686	0.760	
KT2	7.58	3.536	0.646	0.798	
KT3	7.63	3.294	0.722	0.723	
NL		Competency of t	rade union officials		0.741
NL1	7.06	1.611	0.582	0.639	
NL2	7.02	1.762	0.557	0.667	
NL3	6.98	1.703	0.562	0.662	
TN		Ensuring minim	um income security		0.891
TN1	7.44	4.062	0.740	0.889	
TN2	7.18	3.975	0.868	0.777	
TN3	7.00	4.192	0.760	0.869	
RR		0.912			
RR1	6.28	4.315	nagement capabilities 0.817	0.879	
RR2	6.29	4.254	0.831	0.867	
RR3	6.32	4.273	0.822	0.875	
PP		0.819			
PP1	6.91	2.843	distribution 0.666	0.757	
PP2	6.90	2.487	0.721	0.700	
PP3	6.95	3.019	0.636	0.787	
PT	Promotin	a sustainable emplovi	ment and developing lab	or market	0.869
PT1	7.39	3.703	0.750	0.815	
PT2	7.38	3.625	0.770	0.798	
PT3	7.20	3.637	0.730	0.834	
QL			nanagement efficiency	* * *	0.783
QL1	10.77	5.355	0.552	0.750	
QL2	10.49	5.444	0.582	0.734	
QL3	10.79	5.315	0.610	0.720	
OL4	10.77	5.146	0.614	0.717	

Source: Authors' elaboration.

4.2.2. Exploratory factor analysis

The EFA was conducted to assess the convergence and differentiation of factor groups and reaffirm

the structure of the scales. The results of the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test showed Sig. = 0.000 < 0.05 and a high KMO coefficient (0.798 > 0.5).

Table 3. Results of the factor rotation matrix

74	Factor										
Item	1	2	3	4	5	6	7	8	9		
CS3	0.996										
CS2	0.912										
CS1	0.756										
RR2		0.909									
RR3		0.862									
RR1		0.854									
CT3			0.914								
CT2			0.860								
CT1			0.819								
TN2				0.993							
TN3				0.815							
TN1				0.759							
PT2					0.869						
PT1					0.836						
PT3					0.785						
QL4						0.768					
QL3						0.749					
QL2						0.631					
QL1						0.616					
KT3							0.849				
KT1							0.782				
KT2							0.724				
PP2								0.861			
PP1								0.764			
PP3								0.703			
NL1									0.724		
NL2									0.698		
NL3									0.676		

Note: Extraction method: Principal axis factoring. Rotation method: Promax with Kaiser normalization. Rotation converged in nine iterations. Source: Authors' elaboration.

The loading factor of all observed variables in Table 3 is greater than 0.5. This shows that there is a high correlation between groups of observed variables in each factor (dependent and independent).

The results of KMO indicate that the observed variables in the overall dataset are correlated with each other, and EFA is highly appropriate.

The principal component analysis (PCA) results indicate that the eigenvalues for all nine factors are greater than 1 and are suitable for EFA (Hair & Alamer, 2022), suggesting that these nine factors effectively summarize the information of the research variables for EFA. The total variance explained is 77.094%, which is greater than 50%, meaning that the nine extracted factors account for 77.094% of the variance in the data of the 28 research variables, meeting the required threshold. To enhance the interpretability of the factors, Promax rotation was applied to minimize the number of variables with high loadings on the same factor (see Table 3). After rotation, variables with factor loadings less than 0.4 were removed. The EFA for the 28 observation variables, including both dependent and independent variables, resulted in all variables having factor loadings greater than 0.4.

4.2.3. Confirmatory factor analysis

After ensuring that the observation variables met the criteria through EFA, CFA was conducted, and the results are presented in Table 4. Table 4 demonstrates that the CFA model fits the data well. Specifically, the CFA model fit indices meet all the required conditions: the model has 314 degrees of freedom (df); the Chi-square statistic is 855.54. Chi-square / df = 2.725 (< 3), confirmatory fit index (CFI) = 0.955 (\geq 0.9), root mean square error of approximation (RMSEA) = 0.047 (< 0.05), PCLOSE = 0.871 (> 0.05), goodness-of-fit index (GFI) = 0.926 (\geq 0.9), according to Hair and Alamer (2022).

All factors included in the analysis are unidimensional. All observation variables have a p-value = 0.000, which is less than 0.05, indicating that the variables are significant in the model (see Table 4). The standardized regression coefficients are all greater than 0.7, suggesting a high level of fit for the observed variables.

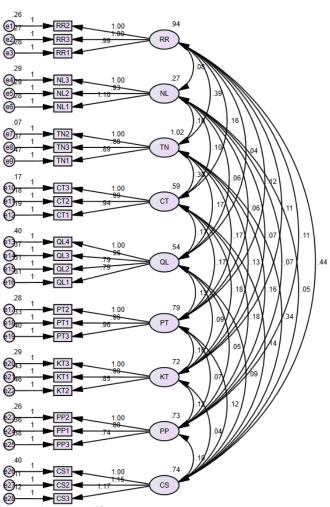


Figure 2. Results of the exploratory factor analysis

Note: Chi-square = 855.540, df = 314, Chi-square /df = 2.725, GFI = 0.926, CFI = 0.955, RMSEA = 0.047, PCLOSE = 0.871. Source: Authors' elaboration.

Table 4. Model fit indices after confirmatory factor analysis

Fit index	Calculated value	Required value
Chi-square / df	2.725	≤ 3
CFI	0.955	≥ 0.9
RMSEA	0.047	< 0.08
GFI	0.926	≥ 0.8
PCLOSE	0.871	> 0.05
TLI	0.945	≥ 0.9

Note: TLI — Tucker-Lewis index. Source: Authors' elaboration.

4.2.4. Composite reliability analysis

After conducting CFA, composite reliability (CR) analysis was performed for each unidimensional factor using the standardized regression coefficients

from the CFA results to further validate the reliability of the measurement scales (see Table 5). A measurement scale is considered acceptable if CR > 0.6, with values greater than 0.7 being preferable.

Table 5. Results of composite reliability analysis

Variable	CR	AVE	MSV	MaxR(H)	RR	NL	TN	CT	QL	PT	KT	PP	CS
RR	0.912	0.776	0.277	0.912	0.881								
NL	0.669	0.502	0.074	0.671	0.194***	0.709							
TN	0.899	0.750	0.156	0.947	0.395***	0.228***	0.866						
CT	0.903	0.756	0.153	0.904	0.218***	0.272***	0.392***	0.870					
QL	0.763	0.525	0.066	0.799	0.039	0.181***	0.197***	0.256***	0.725				
PT	0.870	0.691	0.062	0.872	0.138***	0.114*	0.192***	0.250***	0.195***	0.831			
KT	0.829	0.619	0.081	0.839	0.136**	0.189***	0.153***	0.285***	0.151***	0.130**	0.786		
PP	0.822	0.607	0.073	0.840	0.131**	0.128**	0.183***	0.271***	0.085†	0.097*	0.171***	0.779	
CS	0.930	0.816	0.277	0.951	0.526***	0.125**	0.394***	0.219***	0.149***	0.153***	0.058	0.135***	0.903

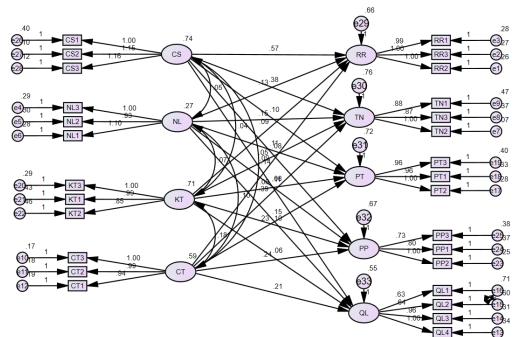
Note: AVE- average variance extracted, MSV- maximum shared variance, * p < 0.1, ** p < 0.05, *** p < 0.001. Source: Authors' elaboration.

The results in Table 5 indicate that: CR for all measurement scales is greater than 0.6, with the highest reliability coefficient being 0.912 and the lowest being 0.669. This confirms that the reliability of the measurement scales is satisfactory. All AVE values are greater than 0.5, ensuring that convergent validity is established for the measurement scales. Additionally, the MSV values are all smaller than the AVE values. The square root of the AVE is greater than the correlation coefficients between the factors, ensuring that the discriminant validity of the scales is also confirmed.

4.2.5. Testing research hypotheses using SEM

The SEM approach is employed to test the research model. Similar to the testing of measurement models, the maximum likelihood estimation method is used to estimate the model parameters. The bootstrap method will be applied to re-estimate the model parameters to verify the reliability of the estimates. The results of the estimation of the model evaluating the impact of union finances on social welfare are presented in Figure 3.

Figure 3. Results of the SEM structural model test



Note: Chi-square = 795.516, df = 323, Chi-square / df = 2.463, GFI = 0.932, CFI = 0.950, RMSEA = 0.044, PCLOSE = 0.997. Source: Authors' elaboration.

The results of the SEM structural model analysis (see Figure 3) show that the model has 323 df with a statistical Chi-square value of 795.516 and p=0.000. When adjusted by dividing the Chi-square value by the df, this criterion

achieves an acceptable level (2.463 < 3). Other evaluation indices also meet the requirements: GFI = $0.932 \ (\ge 0.8)$, CFI = $0.960 \ (> 0.9)$, and RMSEA = $0.044 \ (< 0.08)$. Thus, the research model is deemed appropriate for the collected data.

Table 6. Results of SEM model analysis

Relationship	Std. estimate	p-value	Hypotheses test result
$RR \leftarrow CS$	0.501	***	Supported
$RR \leftarrow CNL$	0.071	0.075	Supported
$RR \leftarrow KT$	0.074	0.046	Supported
$RR \leftarrow CT$	0.075	0.051	Supported
$TN \leftarrow CS$	0.323	***	Supported
$TN \leftarrow NL$	0.075	0.059	Supported
$TN \leftarrow KT$	0.044	0.241	Not supported
$TN \leftarrow CT$	0.292	***	Supported
$PT \leftarrow CS$	0.101	0.011	Supported
$PT \leftarrow NL$	0.065	0.157	Not supported
$PT \leftarrow KT$	0.059	0.173	Not supported
$PT \leftarrow KT$	0.199	***	Supported
$PP \leftarrow CS$	0.077	0.056	Supported
$PP \leftarrow NL$	0.07	0.133	Not supported
$PP \leftarrow KT$	0.096	0.029	Supported
$PP \leftarrow KT$	0.211	***	Supported
$QL \leftarrow CS$	0.203	***	Supported
$QL \leftarrow NL$	0.068	0.133	Not supported
$QL \leftarrow KT$	0.099	0.038	Supported
$QL \leftarrow CT$	0.083	0.044	Supported

Note: *** p < 0.001.

Source: Authors' elaboration.

The SEM model presented in Table 6 shows the following key findings. All proposed factors in the research model are statistically significant, with p-values indicating significance at the 1%, 5%, and 10% levels. This confirms that union finances have a meaningful impact on *SS*. The analysis reveals that all four groups of factors representing union finances positively influence social welfare. This means that increases or improvements in these factors are associated with positive changes in social welfare outcomes.

4.2.6. Bootstrap estimation results

To verify the robustness of the SEM model results, a bootstrap resampling method with n=1000 iterations was performed. The bootstrap method was used to validate the estimates in the SEM model with a resampling size of n=1000. The results indicate that the absolute values of critical ratios are all less than 2. This suggests that the deviations are small and not statistically significant at the 95% confidence level. Therefore, we can conclude that the estimates in the SEM model are reliable.

5. DISCUSSION

Based on the results obtained from the SEM model, union finances significantly impact SS. The extent of the influence of the factors within the union financial group of the dependent variable (SS) is reflected in the magnitude of the standardized regression coefficients. If the absolute value of the estimated regression coefficient for a factor is large, it indicates that the factor has a more significant impact on the dependent variable. The specific impact of each factor within the union financial group of SS can be analyzed as follows.

Firstly, the impact of union finances on ensuring minimum income levels in the union financial

policy (*CS*) is identified as the most significant factor affecting the assurance of minimum income levels for workers, with a standardized regression coefficient of 0.323. This finding aligns with the primary objectives of union finances, which include supporting, inquiring about, encouraging, and rewarding union members to help ensure a minimum income for workers.

Union financial spending ratios ensuring SS (*CT*) are the second most significant factor affecting the assurance of minimum income levels for workers, with a standardized regression coefficient of 0.292. Thus, union branches are required to spend at least 40% on supporting union members and at least 60% on direct care, protection, training, and development of workers.

Union officials' competence (*NL*) is a crucial factor affecting SS, particularly in ensuring that workers achieve a minimum level of income. Competent union officials are instrumental in formulating and implementing appropriate policies and expenditure proportions that support, inquire about, motivate, and encourage union members effectively. This competence plays a key role in fostering a supportive environment for workers.

The research indicates that union finances have a positive impact on *SS*. This result is consistent with many previous studies such as Johansson and Partanen (2002), Trif et al. (2023), Abdul Majid et al. (2021), Amlie and Gibney (2023), and Vu (2024). However, the research results also indicate that there is no evidence of a relationship between the oversight of union financial expenditures and ensuring minimum income levels for workers. This finding is consistent with the studies by Emmanuel et al. (2020).

Secondly, the impact of union finances on enhancing risk management capabilities. The factor that has the greatest impact on enhancing risk management capabilities for employees within a company is the competence of union officials, with a standardized regression coefficient of 0.501. Competent union officials can help the union formulate policies that protect legal and legitimate rights, improve the material and psychological wellbeing of members and workers, and encourage workers on risk prevention through social insurance participation and by engaging in skill development programs and training sessions — strategies that are essential for mitigating risks. This finding aligns with the observations of Abdul Majid et al. (2021), Amlie and Gibney (2023), and Vu (2024).

Union financial spending ratios ensuring SS, trade union financial spending policies and supervising of trade union financial spending are additional factors that help employees enhance their risk management capabilities. An appropriate expenditure ratio and policies enable the union to promptly motivate and support workers, thereby reducing the impact of risks. Besides supporting various motivational activities, flexible expenditure policies allow the union to organize skill development training sessions, which can enhance workers' ability to manage risks. This finding is consistent with the studies of Johansson and Partanen (2002) and Son (2021).

Thirdly, the impact of union finances on ensuring income distribution. It is the most significant factor influencing income distribution for employees, with a standardized regression coefficient of 0.211. In practice, union funds are allocated based on a 2% rate of the total wages that the employer must pay to employees. The fact that a higher allocation ratio allows for increased subsidies, support, and engagement in preferential credit programs for workers.

Trade union financial spending policies are the next significant factor influencing income distribution for employees, with a regression coefficient of 0.098. This policy is reflected in the internal expenditure regulations of each union branch, based on labor laws. Typically, at the branch level, the financial allocation policy clearly defines the objectives and roles of the union in supporting employees, which aligns with the positive impact of union financial policies on social welfare. These findings are consistent with the observations of Freeman (1980, 1984), Kerr and Wittenberg (2021), and Amlie and Gibney (2023). However, the research results indicate that the monitoring of financial allocation and the competence of union officials do not have an impact on income distribution.

Fourthly, the impact of union finances on promoting sustainable employment and developing labor market. Union financial spending ratios ensuring SS are the most influential factor, with standardized regression coefficient of 0.199. Currently, if union officials rely solely on salary and allowances, it will be difficult to meet their living needs. Based on the permissible financial expenditure ratio under the law, GTUs will plan to organize training courses, develop professional skills, and enhance the quality of human resources, especially high-quality human resources. This will facilitate workers in studying, improving their professional skills, and obtaining national vocational skill certificates. These activities will ensure the promotion of sustainable employment and the development of the labor market for workers.

The next factor influencing the promotion of sustainable employment and the development of the labor market for workers in enterprises is spending policy, with a standardized regression coefficient of 0.101. Based on spending policies, GTU have been able to develop programs to help workers adapt to the ever-changing and increasingly demanding labor market: organizing vocational training courses, providing access to healthcare services, supporting union members during times of economic fluctuation or when they lose their jobs, and implementing training programs that meet market demands to assist workers in job transitions, which promotes labor market development. This research outcome aligns with the findings of Johansson and Partanen (2002) and Son (2021). The results also indicate that there is no clear evidence of a relationship between the financial auditing of unions and the capacity of union officials to ensure the promotion of sustainable employment and the development of the labor market.

Finally, the impact of union finances on improving social management efficiency. The factors within the union financial group that influence SS, aiming to ensure the improvement of social management effectiveness for workers in enterprises, are ranked in order of importance as follows: 1) trade union financial spending policies with a standardized regression coefficient of 0.203; 2) supervising of trade union financial spending (0.099); and 3) union financial spending ratios ensuring SS (0.083), while the competency of trade union officials does not have an impact. Through union spending policies, GTUs organize timely support activities using aid from governmental levels and socialized sources for workers who have lost their jobs or are in difficult circumstances, helping to regulate and redistribute income. The research results are consistent with those of Torm (2014), Abdul Majid et al. (2021), and Amlie and Gibney (2023).

6. CONCLUSION

The core value of SS work in union activities is to assist workers in improving their employment, and income, and ensuring their basic rights at the workplace and living conditions, aiming to achieve sustainable development for workers, enterprises, and a society based on promoting social justice and social responsibility. Based on the research results, the study proposes several recommendations to enhance the use of union finances to ensure SS for workers in enterprises as follows.

First, improving the capacity of GTU officials. VGCL and GTU, in particular, should invest in and consider improving the capacity of GTU officials as one of the core solutions to create a competitive advantage for GTUs. Union officials themselves need to innovate their perceptions, change their mindset, especially regarding their role in representing and protecting workers, and proactively learn, update knowledge, and develop their resilience.

Second, enhancing the autonomy of GTUs. The level of autonomy for GTUs needs to be improved in both human resources and finances. To achieve this goal, the following actions are necessary: 1) complete regulations related to the autonomy of GTU and 2) conduct frequent and comprehensive inspections and audits of union finances and assets to ensure proper management and adherence to regulations.

Third, developing strong financial resources for GTU by enhancing trade union financial revenue, minimizing losses and increasing financial spending for workers. Increase the proportion of union financial spending dedicated to supporting workers within enterprises. A higher expenditure ratio contributes to better SS for workers, ensuring that their needs are met more effectively.

Fourth, enhancing the core functions of GTU for workers — enhance representation and protection capabilities. The capacity to protect workers can only be enhanced if union officials and leaders fully understand their roles and responsibilities. They must be well-informed and proactive in leading activities that are in line with

protecting and advancing workers' rights, improving quality in management participation and welfare development, and enhancing communication quality for GTU.

The study is limited to a sample of enterprises with established GTU that are part of the Vietnam trade union system and the first study in Vietnam on this topic, the research overview is not yet extensive, which means the proposed factors may not be entirely comprehensive. Future research could extend the study period and explore the impact of additional factors. Furthermore, it would be valuable to broaden the dataset to include worker organizations in enterprises outside the Vietnam trade union system.

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