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# Factors affecting vocational training activities for unemployed workers laid off by businesses in Ho Chi Minh City, Vietnam

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**Abstract:** The objective of the article is to determine and measure the influence of factors on vocational training activities for unemployed workers laid off by businesses in Ho Chi Minh City. Based on data collected from 340 unemployed workers fired by businesses, processed with SPSS 27.0 software, including assessing the reliability of the scales using Cronbach's Alpha coefficient; EFA exploratory factor analysis with Bartlett and KMO tests; and regression analysis of factors and their influence on vocational training activities using the F test and significance level to test the hypotheses. Research results show that there are five factors affecting vocational training activities for unemployed workers: (i) State support policies; (ii) Labor market; (iii) Factors belonging to the business; (iv) Factors belonging to vocational education institutions; and (v) Training program content. On that basis, the article proposes management implications to improve the effectiveness of vocational training activities for unemployed workers laid off by businesses.

***Keywords:*** *Influencing factors, Laid-off businesses, Training activities, Unemployed workers, Vocational training, Workers in Ho Chi Minh City.*

## 1. Introduction

According to the Law on Vocationnal Education [1] vocational training is a teaching and learning activity aimed at equipping learners with the necessary knowledge, skills and professional attitudes to be able to find a job or create their own job after completing the course or to improve career qualifications. Ho Chi Minh City (HCMC) is a special urban area of Vietnam, a major center of economics, finance, services, culture, education - training, science - technology, with an important political position of the whole country. According to the General Statistics Office [2] the gross regional domestic product in Ho Chi Minh City (GRDP) in 2022 is the highest in the country reaching 1,479,227 billion VND, the GRDP growth rate is 9.03% (a sharp increase compared to with 5.36% in 2021 and higher than the general growth rate of the country), the population accounts for 9.3% of the country's population and contributes about 21.8% of the country's GDP; Per capita income ranks third in the country with 6,392 million VND/person/month. However, the labor and employment situation of HCMC in recent years, especially after the Covid-19 pandemic, has had a strong impact on the labor and employment market such as: workers are reduced working hours, reduce salary/income, stop working, lose jobs by Trang [2]. According to the HCMC Statistics Department, in the past 5 years, over 4.5 million people were employed over the past 5 years, except for the peak year of the Covid-19 epidemic. In 2021, employed workers aged 15 and older will decrease to about 4.3 million people; In 2022, there will be 4.5 million employed workers aged 15 and older, an increase of nearly 200,000 people compared to 2021. However, if compared to 2019 (when there was no Covid-19 epidemic), the number The number of employed workers is still lower than 220,000 people; In 2022, there will be


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146,285 people who lose their jobs and receive unemployment benefits, accounting for 3.25% of the total number of workers aged 15 and over. Of the nearly 150,000 people who lost their jobs, 82,839 were unskilled workers without qualifications (accounting for 56.62%). People with university degrees or higher are 45,543 cases (accounting for 31.14%). Meanwhile, 2,869 workers with certificates and primary vocational certificates lost their jobs (only 1.96%). People with intermediate vocational and professional secondary degrees are 6,816 (equivalent to 4.66%). People with vocational college or professional college degrees are 8,218 people (accounting for 5.62%). The above numbers show that workers with vocational qualifications have a low unemployment rate. Meanwhile, workers with university degrees or higher and unskilled workers have a very high rate of job loss by Trang [3]. This shows that, along with the speed of scientific and technological development, many workers are laid off by businesses due to technological changes, so the unemployment rate in the following years in HCMC will be very difficult to improve. According to the Department of Labor, War Invalids and Social Affairs of HCMC, the rate of trained workers will reach 87% by 2025 and 89% by 2030; maintain the urban unemployment rate below 4% by 2025 and reach below 3% by 2030. This target shows that, in the period 2021-2030, HCMC needs to build a flexible and effective employment and vocational training policy system at all levels and subjects participating in vocational training. However, it can be said that this is a challenging issue, especially policies to deal with unemployment through vocational training. Specifically, the current legal policy system has not effectively managed and regulated human resource training activities to cope with the current unemployment situation. To support vocational education institutions, policies to stimulate investment, improve education quality, and increase demand for vocational training have also been issued and applied by the State. However, the issue of apprenticeship, vocational training, and vocational training still has many shortcomings. This operational efficiency has not developed enough to meet current social needs, leading to unimproved unemployment, especially in specific target groups.

The necessity of the topic not only comes from the practical context of vocational training activities for unemployed workers laid off by businesses in HCMC, Vietnam, but also from the actual research context. and research trends on the topic of vocational training for unemployed workers by domestic and foreign authors. Specifically, foreign studies such as the study of Chan and Suen [4] on human resource retraining in Hong Kong, evaluate the long-term impact. Research results show that training policies are very important, no one denies the role of human resource training, but without appropriate, synchronous, and effective training policies, it will bring insignificant results. Experience with the human resource training model in Hong Kong shows that the important factor to note to ensure the building of an effective model is the training subject and content; Research by Elman and Angela [5] on evaluating the training process for middle-aged workers to adapt to the labor mobility process. The author believes that training before joining the workforce can affect the process of accessing work, but skills and social status are greatly influenced by training during middle age. Therefore, mid-life training may not be effective in improving the quality of national human resources. Therefore, it is very necessary for the State's management and regulation process; Research by Deissinger, et al. [6] compared full-time and part-time training models for students after graduation in Germany and Australia. The study also shows that students who do not attend university will receive emphasis on vocational skills training to avoid high unemployment, with the desire to link youth skills with the needs of the local economy and national economy; Research by Piwowar-Sulej [7] has made a general assessment of human resource management activities in the context of the 4.0 technological revolution. The author believes that the 4.0 technological revolution entails changes in daily life and the way work is done. Therefore, human resource management can be considered a key management area, including activities such as recruitment and selection, training and development, personnel assessment, and career management; and Puhovichova and Jankelova [8] research on changing the way human resource management is implemented in the context of Industry 4.0. The author believes that improving knowledge and skills is a necessary requirement for workers to access job opportunities.

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In Vietnam, studies on the topic of vocational training for unemployed workers have also been mentioned, such as research by Hang [9] on vocational training management in vocational schools in the direction of meeting the needs of society. The author affirms the important role in vocational training management to meet social needs; Research by Nga and Binh [10] on the vocational training system in Vietnam and career development for workers. The authors believe that vocational schools have been implementing strong innovations and achieving significant successes. However, the limitation of current vocational training in Vietnam is the lack of strategic career development orientation for workers; Research by Minh [11] on orientations and solutions for developing professional skills in Vietnam in the context of integration has clearly shown a number of concepts related to developing professional skills; position, role and factors affecting career skills development in Vietnam; Research by Minh [11] on improving the quality of vocational training to meet labor requirements in industrial zones; Research by Ngoc [12] on improving the effectiveness of links between training institutions and businesses in training and employing trained workers, providing solutions to improve the effectiveness of links between training institutions, businesses in training and employing trained workers; Research by Hung [13] on building a coordination mechanism among relevant partners in vocational education has provided a more comprehensive assessment of partners involved in vocational education; Research by Hai [14] on improving the quality and effectiveness of vocational training through links between training institutions and businesses in Ninh Binh of Vietnam, has clearly analyzed the factors affecting quality of vocational training; Research by Huong [15] on vocational training policies for ethnic minority workers in the Northwest region of Vietnam has affirmed the important role of vocational training for ethnic minority workers; and research by Sam [16] on vocational education models in businesses. The author also analyzed the advantages and limitations of current vocational education models in businesses.

Thus, foreign and domestic research mainly focuses on improving the quality of labor resources, vocational training or vocational training models for workers in general, but there are no specific research projects on factors affecting vocational training activities for unemployed workers laid off by businesses; and especially there is no work that has delved into the factors affecting vocational training activities for unemployed workers laid off by businesses in HCMC, Vietnam. Therefore, this research topic is completely new and has a great scientific contribution, serving as a scientific basis for managers and local government agencies to have reasonable strategies and policies to deploy appropriate vocational training activities for unemployed workers laid off by businesses. The research uses mixed research methods, combining qualitative and quantitative methods. Specifically, qualitative analysis is demonstrated through in-depth interviews and questionnaires. The sampling method is convenient but based on the characteristics of unemployed workers, the characteristics of businesses, and the characteristics of vocational training facilities to ensure that the selected survey sample is highly representative; Quantitative analysis is shown through analysis of secondary data and primary data from questionnaire surveys.

## 2. Literature Review

### *2.1. Training*

According to the International Labor Organization (ILO), training is the main activity aimed at providing the knowledge, skills and attitudes needed for employment in a related occupation or occupational group or for the performance of tasks in a certain field or economic activity; According to Quan and Diem [17] training is learning activities to help employees perform their duties more effectively. That is the learning process that makes workers better understand their work, and activities to improve workers' qualifications and skills to perform labor tasks more effectively [18].

### *2.2. Vocational Training*

According to ILO, vocational training is aimed at providing learners with the necessary skills to perform all tasks related to assigned jobs and occupations; According to the Law on Vocationnal

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Education [1] vocational training is a teaching and learning activity aimed at equipping vocational learners with the necessary knowledge, skills and attitudes to be able to find a job or create their own job after completing the course or to improve career qualifications. Thus, there are many different views on vocational training. According to Klotz, et al. [19] vocational training is an activity that equips workers with the capacity (knowledge, skills and attitudes) to practice their profession so that they can practice their profession or self-employment.

*2.3. Unemployment*

According to ILO, unemployment is the cessation of income due to the inability to find a suitable job in case the person is able and willing to work; According to Keynes [20] writing in the work "General Theory of Employment, Interest Rates, and Money", unemployment is a phenomenon that occurs when the economy's aggregate demand falls too low, while salaries are stiff. This forces businesses to shrink production and cut staff; According to Samuelson, unemployed are people who do not have a job, who are waiting to return to work or who are actively looking for work.

*2.4. Unemployed Workers*

According to ILO, unemployed people include all people of working age according to regulations during the survey period, capable of working, but not working and still looking for work; According to the annual labor and employment survey documents of the Ministry of Labor, War Invalids and Social Affairs, unemployed people are people aged 15 years or older in the economically active population group who do not have a job during the survey week but have a need to work and are willing to work but cannot find a job, determined based on the following factors: (i) have been active in looking for work in the past 4 weeks; or have not had job searching activities in the past 4 weeks for reasons like not knowing where to find a job or looking for work without success; and (ii) or in the week before the survey the total number of working hours is less than 8 hours. These people want to work more but cannot find work.

*2.5. Unemployed Workers Due to Layoffs from Businesses*

In the context of global economic decline, demand for goods and services decreases, leading to production stagnation and contraction. The fact that businesses have narrowed production has led to a part of workers being laid off. In addition, the process of technological change in businesses leads to the trend of replacing manual labor with modern machinery, equipment, and technological lines, leading to a part of the workforce being fired due to not being able to meet the technology requirements. The current trend of technological change is an inevitable trend for every country and every business facing the impact of the 4.0 industrial revolution, of which Vietnam is no exception. In that context, jobs change every day with the loss and appearance of a series of jobs that require new expertise and skills. Because of this change, current jobs and other new jobs that will be formed in the near future will require specific skills such as teamwork skills, communication skills, problem solving skills, and thinking skills. criticism and other soft skills such as perseverance, cooperation, empathy... Therefore, to maintain jobs at the enterprise, workers must have skills to meet the new requirements of businesses in the context of the 4.0 industrial revolution. Workers who do not meet the requirements of businesses can be retrained to change jobs or be laid off.

*2.6. Vocational Training Model*

The vocational training model is a method of cooperation (or joint training) between parties in the training process to improve knowledge, skills, and professional working attitudes for learners [1]. Within the scope of the study, the research team focused on studying training models with the participation of three parties: (i) the State; (ii) Vocational education institutions; and (iii) Enterprises. The tripartite training model is shown in Figure 1:

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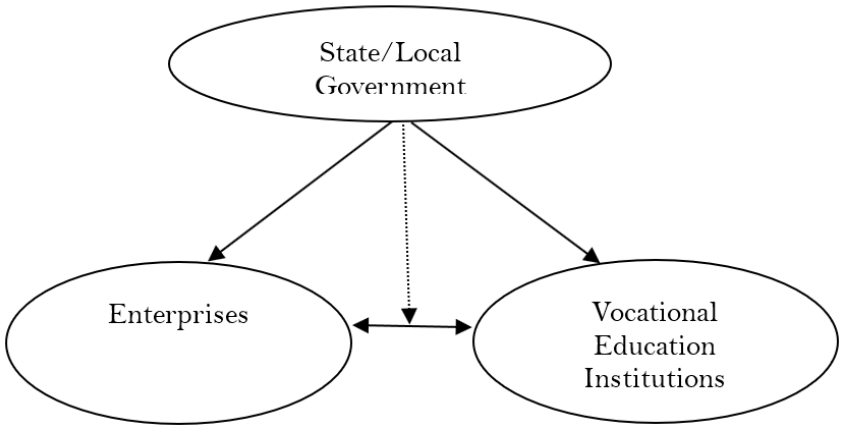


**Figure 1.**
Tripartite vocational training model.

## 3. Research Hypotheses and Models

*3.1. Research Hypothesis*

(i) State support policy (SSP)

The State promulgates mechanisms and policies regulating training and training support policies for vocational education institutions (VEI) and businesses to conduct training and joint training, improve skills for workers, thereby increasing the ability to find a job and create self-employment, reducing the unemployment rate [21]. Thus, the State will have a direct impact on VEI and businesses through training regulation policies and training support policies for each subject (enterprises, VEI, workers), impacting linkages and cooperation to promote cooperative relationships between VEI and businesses in vocational training in general and vocational training for unemployed workers in particular [16].

*Hypothesis H1: State support policies have a positive influence on vocational training activities.*

(ii) Labor market (LAM)

The labor market is the exchange of labor between those who own labor and those who need to hire labor. Basically, the labor market is also affected by the law of supply and demand, the law of competition, the law of monopoly... The labor market is the largest and most important market in the market system because labor is the activity takes up the most time and the result of the exchange process is paid employment [22]. Pursuant to Article 23, the 2013 Employment Law stipulates the content of labor market information as follows: employment status and trends; information on labor supply and demand, fluctuations in labor supply and demand in the labor market; information about foreign citizens working in Vietnam and Vietnamese workers working abroad under contract; and information about salaries and wages. There is a close relationship between the labor market and vocational training, in which the labor market will determine the formation and development of the training market [23] Accordingly, partners and coordination mechanisms in vocational training activities are greatly influenced by market mechanisms [16].

*Hypothesis H2: The labor market has a positive influence on vocational training activities.*

(iii) Factors belonging to the business (BUS)

Businesses can access state support policies from the state's training support funding, proactively train skills for workers to meet job requirements, and minimize discharged from production and business due to lack of knowledge, skills, and failure to meet job requirements [14]. In addition, businesses also coordinate with vocational education institutions to develop appropriate content and skills training programs for workers and receive and use them after training [24].

*Hypothesis H3: Factors belonging to the business have a positive influence on vocational training activities.*

(iv) Factors belonging to vocational education institutions (VEI)

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Based on the legal framework, training policies and training support of the state, vocational education institutions will proactively link with businesses to develop training content and programs suitable to the needs of businesses, create links for learners to access businesses, experience the corporate environment, increase practical skills and the ability to find jobs [8]. In addition, training facilities also carry out training activities according to the State's direct support policies for vocational education institutions and workers [12, 25].

*Hypothesis H4: Factors belonging to vocational education institutions have a positive influence on vocational training activities.*

(v) Content of the training program (TPC)

To be able to deploy training effectively, training facilities need to coordinate with businesses to identify training needs to develop appropriate training content and programs, meeting first and foremost the needs of businesses and more broadly, the needs of society, including freelance workers in the market [21]. The content of vocational training programs that meet the needs of society need to equip learners with full knowledge, skills and professional working attitudes [8]. Specifically: Knowledge includes general knowledge about law, profession, work...; Professional and technical knowledge: different occupations will require different professional knowledge. Skills: specialized skills, depending on the specific training profession, and require different professional skills; soft skills, including: teamwork skills, communication skills, and problem solving skills... Attitude: community awareness, responsibility for work, and civic ethics; attitude towards career and work; attitude towards the organization [12].

*Hypothesis H5: Training program content has a positive influence on vocational training activities.*

*3.2. Research Model*

From the literature review, theoretical basis above, and the specificity of vocational training activities for unemployed workers laid off by businesses, the author decided to propose a research model, including 5 factors affecting vocational training activities for unemployed workers due to layoffs from businesses (Figure 2).

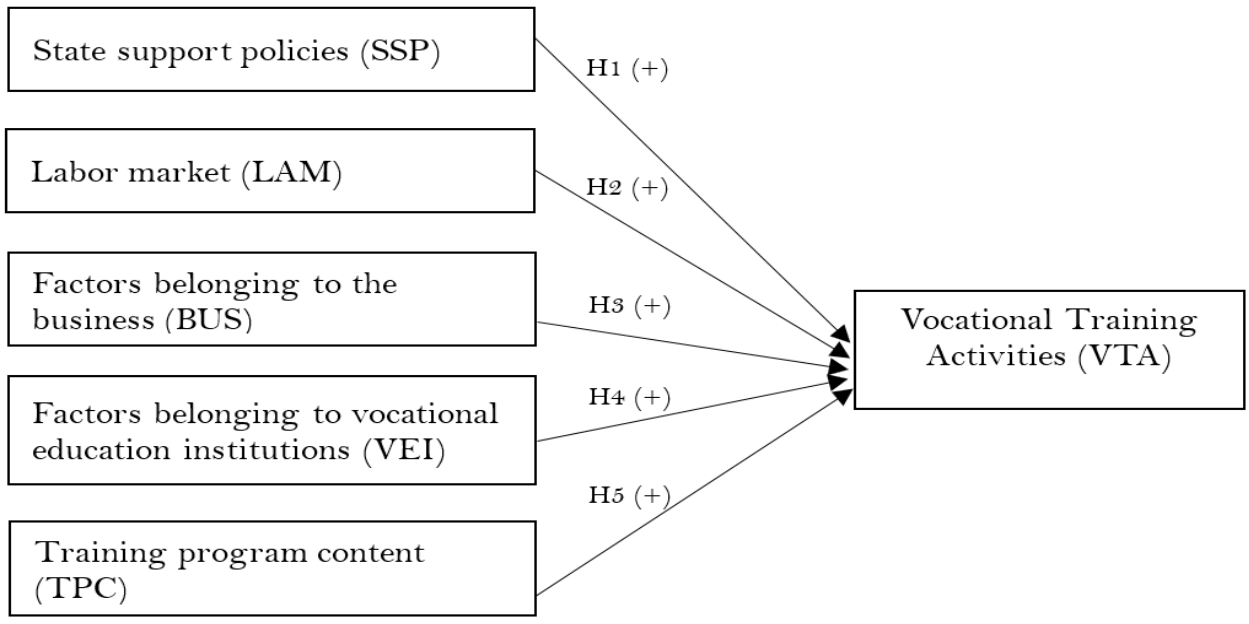


**Figure 2.**
Research model.

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## 4. Research Methodology

*4.1. Qualitative and Quantitative Research Methods*

(i) Qualitative research methods

The author conducted in-depth interviews and focus group discussions with 30 experts (representing leaders at the city, district, and district levels, vocational education institutions, and businesses) in 14 cities, district and 2 districts of HCMC to explore factors affecting vocational training activities for unemployed workers laid off by businesses; and readjust the scale of factors in the research model to suit the practical research context. Before collecting information, the research team conducted a trial survey of 5 questionnaires for unemployed workers fired by businesses to check the logic of the questionnaire; make adjustments and supplemented to suit research purposes. Then, the author conducted direct interviews with 340 unemployed workers laid off by businesses to collect data for quantitative analysis.

(ii) Quantitative research methods

Information is collected and processed through SPSS 27.0 software. Preliminary research was conducted by sending survey questionnaires to 30 unemployed workers laid off by businesses. After collecting 30 valid answer sheets, the author coded and analyzed the data using SPSS 23.0 software to test the reliability of Cronbach's Alpha (CA). After that, the author began to do formal quantitative research. The author analyzed descriptive statistics of the survey sample, variables and tested Cronbach's Alpha to evaluate the reliability of the scale; EFA exploratory factor analysis with Barlett and KMO tests; and regression analysis of factors and their influence on vocational training activities for unemployed workers laid off by businesses using F test and Sig significance level to test the hypotheses.

*4.2. Survey Form*

According to Hair, et al. [26] be able to perform exploratory factor analysis, it is necessary to collect data with a sample size of 5:1 ratio of observations to each measured variable, meaning that for every 1 variable Measurement requires a minimum of 5 observations. In the research model, there are a total of 29 observed variables, according to the above sampling formula: 5*29 = 145 samples. To increase the reliability of the research, the author plans to survey 340 unemployed workers laid off by businesses.

*4.3. Build a Scale*

The study uses a Likert scale with 5 levels: (1) Completely unreasonable, (2) Unreasonable, (3) Normal, (4) Reasonable, and (5) Completely reasonable to measure factors affecting vocational training activities for unemployed workers laid off by businesses.

## 5. Research Results

*5.1. Descriptive statistics of the survey sample*

The study collected data from 340 unemployed workers laid off by businesses in HCMC. The results obtained 324 valid votes, with the following general information:

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**Table 1.**
Survey sample characteristics.

| Details | Categories | Frequency | Percent (%) |
|---|---|---|---|
| Gender | Male | 198 | 61.1 |
| | Female | 126 | 38.9 |
| | Total | 324 | 100.0 |
| Age | 20 – 30 years old | 135 | 41.7 |
| | Over 30 – 40 years old | 109 | 33.6 |
| | Over 40 – 50 years old | 63 | 19.5 |
| | Over 50 years old | 17 | 5.2 |
| | Total | 324 | 100.0 |
| Educational level | Elementary | 15 | 4.6 |
| | Junior high shool | 107 | 33.1 |
| | High shool | 202 | 62.3 |
| | Total | 324 | 100.0 |
| Technical and professional qualifications | Primary vocational level | 28 | 8.6 |
| | Intermediate/intermediate vocational level | 127 | 39.2 |
| | College/vocational college | 102 | 31.5 |
| | University | 35 | 10.8 |
| | Untrained | 20 | 6.2 |
| | Other | 12 | 3.7 |
| | Total | 324 | 100.0 |

Table 1 shows that there are 324 valid survey forms corresponding to 324 unemployed workers fired by businesses in HCMC, specifically, in terms of gender, of which 198 are male, accounting for 61.1%; and 126 women, accounting for 38.9%. Regarding age, there are 135 people aged 20 - 30 years old, accounting for 41.7%; 109 people over 30 - 40 years old, accounting for 33.6%; 63 people over 40 - 50 years old, accounting for 19.5%; and 17 people over 50 years old or older, accounting for 5.2%. Regarding education level, 15 of them are primary school students, accounting for 4.6%; 107 people in junior high school, accounting for 33.1%; and 202 people in high school, accounting for 62.3%. Regarding technical and professional qualifications, there are 28 people at primary vocational level, accounting for 8.6%; 127 people at intermediate/intermediate vocational level, accounting for 39.2%; 102 people from college/vocational college, accounting for 31.5%; 35 university students, accounting for 10.8%; 20 untrained people, accounting for 6.2%; and another 12 people, accounting for 3.7%.

*5.2. Evaluate the Reliability of the Scale*

The results of Table 2 show that the Cronbach's Alpha (CA) coefficient of the remaining observed variables is > 0.6 and the total variable correlation coefficient > 0.3, so the remaining observed variables are all reliable and tested in the next step.

**Table 2.**
Results of reliability assessment.

| Variables | Cronbach's Alpha | Corrected item-total Correlation |
|---|---|---|
| State support policies (SSP) | 0.887 | 0.442 – 0.833 |
| Labor market (LAM) | 0.766 | 0.525 – 0.660 |
| Factors belonging to the business (BUS) | 0.879 | 0.573 – 0.794 |
| Factors belonging to vocational education institutions (VEI) | 0.926 | 0.732 – 0.783 |
| Training program content (TPC) | 0.866 | 0.707 – 0.782 |
| Vocational training activities (VTA) | 0.788 | 0.634 – 0.642 |

*5.3. Exploratory Factor Analysis (EFA)*

In Table 3, KMO = 0.844 > 0.5 shows that the factors in the study are reliable. Sig = 0.000 < 0.05 on Bartlett's test, the independent factors are statistically significant. The total variance extracted = 68.549% shows that independent factors explain 68.549% of the variability of the data. The 5th factor

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gives the Eigenvalues = 1.933 > 1 indicates the convergence of 5 independent factors and stops at the 5th factor. The observed variables representing the 5 independent factors that all give a load factor of > 0.5, so the observed variables are meaningful and represent the factor they represent. After EFA testing, there are 25 observed variables of 5 independent factors retained.

**Table 3.**
Results of exploratory factor analysis of independent variables.

| KMO and Bartlett's test | |
|---|---|
| Kaiser-Meyer-Olkin (KMO) | 0.844 |
| Bartlett's test | 0.000 |
| Eigenvalues | 1.933 |
| % of total variance | 68.549% |

In Table 4, KMO = 0.685 > 0.5 shows that the factors in the study are reliable. Sig = 0.001 < 0.05 when Bartlett's test shows statistically significant dependencies. The total variance extracted = 66.051% shows that dependent factors explain 66.051% of the variability of the data. The 1st factor for Eigenvalues = 1.982 > 1 indicates the convergence of 1 dependent factor and stops at the 1st factor. The observed variables representing the dependent factors all have loading factors > 0.7, so the observed variables are all significant and represent the factor they represent. After EFA testing, there are 3 observed variables of the dependent factor that are retained.

Thus, the results of factor analysis with scales measuring the effectiveness of vocational training activities for unemployed workers laid off by businesses show high reliability.

From the analysis results, the factors are in turn calculated the average value of the observed variables' assessment scores to determine a factor representing the observed variables used in correlation and regression analysis.

**Table 4.**
Results of exploratory factor analysis of dependent variables.

| KMO and Bartlett's test | |
|---|---|
| Kaiser-Meyer-Olkin (KMO) | 0.685 |
| Bartlett's test | 0.001 |
| Eigenvalues | 1.982 |
| % of total variance | 66.051% |

*5.4. Multivariate Regression Analysis and Hypothesis Testing*

Table 5 below, simulates the independence between the dependent variable and the independent variables. Correlation reaches a significance at a value of 0.05, all independent variables are correlated with the dependent variable [27].

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**Table 5.**
Correlation test between independent and dependent factors.

| Correlations | | SSP | LAM | BUS | VEI | TPC | VTA |
|---|---|---|---|---|---|---|---|
| SSP | Pearson Correlation | 1 | 0.095 | 0.122* | 0.210** | 0.199** | 0.406** |
| | Sig. (2-tailed) | | 0.087 | 0.029 | 0.000 | 0.000 | 0.000 |
| LAM | Pearson Correlation | 0.095 | 1 | 0.083 | 0.041 | 0.121* | 0.215** |
| | Sig. (2-tailed) | 0.087 | | 0.134 | 0.465 | 0.029 | 0.000 |
| BUS | Pearson Correlation | 0.122* | 0.083 | 1 | 0.195** | 0.111* | 0.411** |
| | Sig. (2-tailed) | 0.029 | 0.134 | | 0.000 | 0.045 | 0.000 |
| VEI | Pearson Correlation | 0.210** | 0.041 | 0.195** | 1 | 0.136* | 0.409** |
| | Sig. (2-tailed) | 0.000 | 0.465 | 0.000 | | 0.014 | 0.000 |
| TPC | Pearson Correlation | 0.199** | 0.121* | 0.111* | 0.136* | 1 | 0.385** |
| | Sig. (2-tailed) | 0.000 | 0.029 | 0.045 | 0.014 | | 0.000 |
| VTA | Pearson Correlation | 0.406** | 0.215** | 0.411** | 0.409** | 0.385** | 1 |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |

**Note:** *. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).
c. Listwise N=324

Table 5 shows that the correlation coefficient of dependent and independent factors ranges from 0.215 to 0.411, which is quite high. The Sig of all factors is < 0.05, showing that there is a correlation between dependent and independent factors. It can be concluded that 5 independent factors influence the dependent factors in the research model.

In Table 6, the result for the adjusted R2 is 0.444, showing that 5 independent factors explain 44.4% of the significance of factors affecting the effectiveness of vocational training activities for unemployed workers laid off by businesses.

**Table 6.**
Testing the model's level of explanation.

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin -Watson |
|---|---|---|---|---|---|
| 1 | 0.673a | 0.453 | 0.444 | 0.49144 | 1.066 |

In Table 7, the ANOVA analysis results show that the Sig. = 0.000, so it can be concluded that the regression model is suitable for the research data.

**Table 7.**
ANOVA test results.

| Model | | Sum of Squares | Df | Mean Squared | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 63.482 | 5 | 12.696 | 52.570 | <0.001b |
| | Residual | 76.802 | 318 | 0.242 | | |
| | Total | 140.284 | 323 | | | |

In Table 8, the results of regression analysis to determine the level of influence of each factor in the model with the dependent variable being the effectiveness of vocational training activities for unemployed workers laid off by businesses.

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**Table 8.**
Results of multivariate regression analysis

| Model | | Unstandardized Coefficients | | Standardized Coefficient | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | Beta | Std. Error | Beta | | | Tolerance | Variance inflation factor (VIF) |
| 1 | (Constant) | -0.780 | 0.232 | | -3.363 | <0.001 | | |
| | SSP | 0.190 | 0.032 | 0.254 | 5.862 | <0.001 | 0.918 | 1.090 |
| | LAM | 0.130 | 0.043 | 0.126 | 2.994 | 0.003 | 0.976 | 1.025 |
| | BUS | 0.252 | 0.037 | 0.291 | 6.822 | <0.001 | 0.946 | 1.057 |
| | VEI | 0.231 | 0.039 | 0.259 | 5.988 | <0.001 | 0.920 | 1.087 |
| | TPC | 0.222 | 0.038 | 0.252 | 5.872 | <0.001 | 0.937 | 1.068 |

Table 8 shows that the factors affecting the effectiveness of vocational training activities for unemployed workers laid off by businesses include 5 factors: SSP, LAM, BUS, VEI, and TPC. These factors impact in the same direction on the effectiveness of vocational training activities for unemployed workers laid off by businesses and are all statistically significant < 0.05. Tolerance and VIF of the variables do not exceed 10, proving that multicollinearity does not occur. Thus, the multivariable regression model is appropriate.

The standard regression equation has the following form:

VTA = - 0.780 + 0.254*SSP + 0.126*LAM + 0.291*BUS + 0.259*VEI + 0.252*TPC

In Table 9, the results of testing the difference in the effectiveness of vocational training activities for unemployed workers laid off by enterprises classified by technical and professional qualifications.

**Table 9.**
Results of testing differences classified by technical and professional qualifications.

| **Tests of Homogeneity of Variances** | | | | | |
|---|---|---|---|---|---|
| | | **Levene Statistic** | **df1** | **df2** | **Sig.** |
| VTA | Based on Mean | 3.289 | 5 | 318 | 0.007 |
| **ANOVA** | | | | | |
| **VAT** | **Sum of Squares** | **df** | **Mean Square** | **F** | **Sig.** |
| Between Groups | 8.739 | 5 | 1.748 | 4.225 | <0.001 |
| Within Groups | 131.545 | 318 | 0.414 | | |
| Total | 140.284 | 323 | | | |

In Table 9, the Levene test results show that Sig value = 0.007 < 0.05, so the variance between groups classified according to technical and professional qualifications is different.

The ANOVA test results show that the Sig value is < 0.001, so there is a basis to confirm that there is a difference in the effectiveness of vocational training activities for unemployed workers laid off by businesses classified according to technical and professional qualifications.

## 6. Discussions

The research results show that business factors (BUS) affect the effectiveness of vocational training activities for unemployed workers laid off by businesses. This hypothesis is accepted because the Sig value is less than 0.05, with the standardized Beta coefficient of this factor being 0.291, proving the relationship between the effectiveness of vocational training activities for unemployed workers laid off by enterprises and factors belonging to the business are in the same direction. So, when the factors belonging to the enterprise increase by 1 unit, the effectiveness of vocational training activities for unemployed workers laid off by the enterprise increases by 0.291 units and is the strongest influencing factor. The results of this study are in agreement with the research of Olazaran, et al. [24] and Hai [14].

Factors belonging to vocational education institutions (VEI) also affect the effectiveness of

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vocational training activities for unemployed workers laid off by businesses. This hypothesis is accepted because the Sig value is less than 0.05, with the standardized Beta coefficient of this factor being 0.259, proving the relationship between the effectiveness of vocational training activities for unemployed workers laid off by enterprises and vocational education institutions are in the same direction. So, when the vocational education facility factor increases by 1 unit, the effectiveness of vocational training activities for unemployed workers laid off by businesses increases by 0.259 units and is the second strongest influencing factor. The results of this study are in agreement with the research of Puhovichova and Jankelova [8]; Chen, et al. [25]; Hung [13] and Ngoc [12].

Similarly, the state support policy (SSP) factor affects the effectiveness of vocational training activities for unemployed workers laid off by businesses. This hypothesis is accepted because the Sig value is less than 0.05, with the standardized Beta coefficient of this factor being 0.254, proving the relationship between the effectiveness of vocational training activities for unemployed workers laid off by enterprises and state support policies are in the same direction. So, when the state's support policy factor increases by 1 unit, the effectiveness of vocational training activities for unemployed workers laid off by businesses increases by 0.254 units and is the third strongest influencing factor. The results of this study are in agreement with the research of Fürstenau, et al. [21] and Sam [16].

In addition, the training program content (TPC) factor affects the effectiveness of vocational training activities for unemployed workers laid off by businesses. This hypothesis is accepted because the Sig value is less than 0.05, with the standardized Beta coefficient of this factor being 0.252, proving the relationship between the effectiveness of vocational training activities for unemployed workers laid off by enterprises and training program content are in the same direction. So, when the training program content factor increases by 1 unit, the effectiveness of vocational training activities for unemployed workers laid off by businesses increases by 0.252 units and is the fourth strongest influencing factor. The results of this study are in agreement with the research of Fürstenau, et al. [21]; Puhovichova and Jankelova [8] and Ngoc [12].

Finally, labor market factors (LAM) affect the effectiveness of vocational training activities for unemployed workers laid off by businesses. This hypothesis is accepted because the Sig value is less than 0.05, with the standardized Beta coefficient of this factor being 0.126, proving the relationship between the effectiveness of vocational training activities for unemployed workers laid off by enterprises and the labor market are in the same direction. So, when the labor market factor increases by 1 unit, the effectiveness of vocational training activities for unemployed workers laid off by businesses increases by 0.126 units and is the fifth strongest influencing factor. The results of this study are in agreement with the research of Muja, et al. [23]; Bui [22] and Sam [16].

## 7. Conclusions and Implications

### *7.1. Conclusions*

Research results show that there are 5 factors that affect the effectiveness of vocational training activities for unemployed workers laid off by businesses in order of influence from high to low: (i) Factors factor belonging to the business; (ii) Factors belonging to the vocational education institution; (iii) State support policy; (iv) Content of the training program; and (v) Labor market. In addition, the research results also show that there is a difference in the effectiveness of vocational training activities for unemployed workers laid off by businesses classified by technical and professional qualifications such as: primary vocational level, intermediate vocational training/intermediate vocational level, college/vocational college, university, untrained and other.

### *7.2. Implications*

Firstly, business factors (BUS) are the factors that have the strongest influence on the effectiveness of vocational training activities for unemployed workers laid off by businesses. The results showed that unemployed workers felt and were satisfied with the training content at the enterprise. "Enterprises have built training programs consistent with business goals" with 3.01 points, "Activities

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to identify training subjects and content have been implemented effectively" with 3.01 points, "The trainers that businesses choose are suitable for the content and training goals" with 3.46 points, "The training materials that businesses provide to learners are very practical" with 3.31 points, "The enterprise's facilities have met the training needs of the enterprise well" with 3.02 points, "The enterprise provides all necessary information for learners before training" with 2.88 points. points, and "The current post-training quality assessment and inspection process at enterprises is reasonable and effective" with 2.80 points. Most unemployed workers highly appreciate vocational training activities such as lecturers, facilities, and training materials. In addition, unemployed workers also do not appreciate content such as necessary information for learners before training; post-training assessment and quality control process; Identify training subjects and content; and develop training programs. This shows that businesses have not really paid attention to vocational training activities for unemployed workers. Therefore, to increase the ability to find a job or create a job and reduce the unemployment rate, businesses need to identify training needs, clearly define the purpose of post-training use and knowledge and necessary skills. Enterprises proactively conduct training and carry out joint training in many different forms so that training meets the requirements of enterprises and the labor market such as developing training program content, order training, invite lecturers from vocational training establishments to participate in training such as guiding internships, evaluating and checking quality after training. Besides, to do this well, the state has better support mechanisms and policies, especially simple and quick legal and administrative procedures to encourage businesses to proactively train and linking training and employment after training for specific groups of workers, including unemployed workers fired by businesses.

The second factor that affects the effectiveness of vocational training activities for unemployed workers laid off by businesses is the factor of vocational education institutions (VEI). The results show that unemployed workers have quite good awareness and the majority highly appreciate vocational training activities of vocational education institutions. "Most vocational training institutions have determined training program objectives in accordance with market needs" with 3.52 points, "Most vocational training institutions have implemented enrollment activities, organized exams, and tested in accordance with regulations and quality" with 3.53 points, " Most vocational training institutions have ensured the quality of teaching staff in accordance with state standards" with 3.43 points, "Most vocational training institutions have developed complete training curriculum to meet the requirements of the training program" with 3.50 points, "Most vocational training establishments have modern facilities helps ensure the quality of vocational training" with 3.51 points, "Most vocational training institutions have provided necessary information for learners" with 3.59 points, and "Most vocational training institutions have developed quality assessment and monitoring processes to ensure…" with 3.44 points. This shows that, in recent times, vocational education institutions have performed well vocational training activities, especially training quality. To carry out vocational training activities better, vocational education institutions coordinate with businesses to survey training needs and advise businesses on the knowledge and skills that need to be trained for workers at risk of being fired due to not meeting job requirements; It is necessary to pay attention to enrollment work to attract many types of vocational training workers, especially attracting unemployed workers to participate in vocational training in regular (short-term) training programs commensurate with scale and development potential of vocational education institutions; In addition, vocational education institutions need to improve the quality of lecturers, modernize facilities, update and improve appropriate training program content to meet business requirements as well as cooperate with businesses in vocational training for unemployed workers.

Thirdly, state support policy (SSP) is the third factor affecting the effectiveness of vocational training activities for unemployed workers laid off by businesses. The results show that unemployed workers participating in the survey rated it quite low. Specifically, "The State's support policy is widely disseminated to businesses, training facilities and workers" with 2.73 points, "The State's support policy fully covers all subjects in need of vocational training support" with 3.00 points, "The State's

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policy has ensured timeliness when supporting subjects participating in vocational training" with 2.66 points, "State support policy ensures stimulation for subjects participating in vocational training" with 2.74 points, and "State support policy ensures ease of understanding when developing policies" with 2.91 points. This shows that, although the state's support policies for unemployed workers have been promulgated, the level of implementation of the policies to workers is still limited, especially for unemployed workers due to layoffs from businesses. Therefore, it is necessary to build a vocational training model with the combination of the state, vocational education institutions and businesses suitable for groups of unemployed workers. At the same time, promote communication with businesses about state support policies on training and improving skills for workers, creating conditions for workers to access preferential credit sources; Simplify legal and administrative procedures and promptly handle vocational training participants at vocational education establishments and businesses to attract more workers to participate in vocational training.

Fourth, training program content (TPC) is the fourth factor affecting the effectiveness of vocational training activities for unemployed workers laid off by businesses. The results show that unemployed workers participating in the survey highly appreciated the content of the training program. Specifically, "The training program meets the needs of learners" with 3.68 points, "The training program meets the needs of the market" with 3.66 points, and "The training program is high reality" with 3.58 points. This shows that the training program content meets learner needs and market needs. However, the content "highly practical training program" was rated lowest. Therefore, there needs to be close cooperation and coordination between vocational education institutions and businesses in developing quality and highly practical training program content. Vocational training units regularly update and improve training programs to suit the needs of businesses and the market; orientation on quality stratification and characteristics of training sectors and professions. Encourage vocational education institutions to use and develop joint training programs with foreign countries. Apply powerful information technology to diversify training organization methods.

Fifthly, labor market factors (LAM) are the fifth factor affecting the effectiveness of vocational training activities for unemployed workers laid off by businesses. The research results also show that, "The demand of the labor market has stabilized after the Covid-19 pandemic" with 3.40 points, "The ability to connect labor supply and demand in HCMC is timely and effective" with 3.46 points, and "Information of the labor market in HCMC is transparent and clear" with 3.57 points. This result is not high, consistent with the actual context of HCMC's labor market because many businesses withdrew and narrowed their production scale. Therefore, local leaders should strengthen monitoring and grasping the situation of production, business and labor, accurately forecasting the labor supply and demand situation; continue to promote the connection between labor supply and demand, organize a job exchange; adjust the structure of industries and occupations to suit the local socio-economic development situation, improve the quality of vocational training to meet the human resource needs of the labor market, ensure social security, and improve local competitiveness. On that basis, training units analyze the labor market, forecast labor needs and training needs to channel learners according to appropriate training programs and training levels such as elementary, intermediate, college levels or carry out regular training programs (short-term training courses on specific topics), linking training with post-training use.

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## Institutional Review Board Statement:

Review and/or approval by an ethics committee was not necessary for this study because it was based on a proprietary database, and no personal information of the participants was used and participants voluntarily provide information without pressure or risk; it does not require ethical approval.

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## Transparency:
The authors confirm that the manuscript is an honest, accurate and transparent account of the study that no vital features of the study have been omitted and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

## Competing Interests:
The authors declare that they have no competing interests.

## Authors' Contributions:
All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.



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