

# THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

## Study on Factors of Investment Environment Affecting the Satisfaction of Private Enterprises in Thai Nguyen Province, Vietnam

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### **Abstract:**

*Private economy is considered as one of the key constituent parts of national economy. The Document of the 6th National Party Congress stated: 'Completing the policies to develop the private economy becomes one of the motivations of national economy.' In the 5th national party congress, the 12th Central Committee of Party determined: 'Developing the private economy becomes an important motivation of socialist-oriented market economy.' With that important position, it is necessary to study the fulfillment of investment environment to motivate the development of private investment. In this writing, the author used the method of Exploratory Factor Analysis (EFA) in order to test the factors affecting and recognize the factors supposed to be fit to put into the Confirmatory Factor Analysis (CFA). Finally, the Structural Equation Modeling (SEM) is used to determine the influences of each factor on the investor's satisfaction. The result of authors showed that the service variables, legal institutions, labors, land access, infrastructure and transparency that are statistically meaningful to the satisfaction of enterprises. Therefore, it's important to boost the role of the government in creating investment environment in order to motivate the investment development of private enterprises.*

**Keywords:** *Factors affecting, local authorities, investment environment, private enterprises, and Thai Nguyen province in Vietnam*

### **1. Introduction**

In the condition of market economy in Vietnam, the private economy is getting more and more important roles that play and motivate for the process of promoting and developing the national economy. Private economy continuously remains the good speed, which accounts for the average proportion around 39%-40 % GDP; attract about 85% of labor force of the national economy (according to Resolution 10-NQ/TW, 2017). With that essential role, the Resolution no.10-NQ/TW dated on the July 3rd 2017 in the fifth Conference, the 12th Central Committee of Party determined the aims of developing private economy is 'Develop private economy healthily, effectively and stably that will become a big motivation of socialist-oriented market economy. Also, it contributes to developing the eco-socio quickly, stably, and improving the standards of living, advancement, equal society, ensure national defense and security, and soon turn our country into a modern industrialized country' (Resolution 10-NQ / TW, 2017). Therefore, building an investment environment to attract private investment is an important and necessary job for the country in general, for each locality in particular.

Thai Nguyen province is the political and economic center of the Viet Bac region in particular, of the northeastern mountainous midland area in general. And it is the gateway for socio-economic exchange between the mountainous midlands and the Northern Delta. Over the past years, Thai Nguyen province's socio-economy has recorded remarkable developments. At the Conference 'Reviewing 15 years of implementation of the Politburo's Resolution 37-NQ / TW dated July 1, 2004 on the Thematic of the Northern Trio to 2020 in Thai Nguyen Province' showed: speed growth, annual economic growth (GRDP); 12, 2018 economic structure changed rapidly in the direction of increasing the proportion of the company, construction, services and reducing the proportion of forestry. In 2004, the ratio of industry and construction reached 32.6%; services reached 41.9%; agriculture, forestry and forestry reached 25.5%. By 2018, the proportion of industry and construction increased to 57.2%; service sector 31.9%; the agriculture, forestry and fishery sector decreased to 10.9%; GRDP military growth from 5.9 million VND (2004) to 77.7 million VND (2018), 13 times equivalent to 3,370 USD / year (2019)

However, the conference also pointed out that one of the limitations in the province's economic development is 'low quality, efficiency and competitiveness of the economy; the domestic business sector is still facing many difficulties'. Therefore, the local government needs to create an investment environment to help private businesses develop, contributing to promoting private economic development is a necessary job today. Starting from that fact, the authors

selected the topic 'Research on factors of the investment environment affecting the satisfaction of private enterprises in Thai Nguyen province' for research and analysis.'

## 2. Theoretical Basis

### 2.1. Personal Economic

The private economy is an economic component based on the private ownership of the means of production. The basic types of business organizations are: private enterprises, limited liability companies, joint stock companies, partnerships. The private economy in the transition period in Vietnam not only existed objectively but was very interested in by the Party and State of Vietnam. Document of the XI National Party Congress stated: *'Improving mechanisms and policies to strongly develop the private economy to become one of the driving forces of the economy'*. At the fifth meeting, the XII Party Central Committee has determined: *'Healthy, efficient and sustainable private economic development has really become an important driving force of the market economy. orienting socialist, contributing to rapid and sustainable socio-economic development, constantly improving people's lives, implementing social progress and equity, ensuring national defense and security, early to turn our country into a modern industrial country'*.

The private economy is considered as one of the important constituents of the national economy, treated and operated equally as other economic sectors. In order for the economy to operate smoothly and bring high economic efficiency, the construction of an investment environment for the development of the private economy plays a particularly important position because the private economy is identified by the Party as one of the key drivers of the economy. Completing the investment environment for private economic development is to ensure the necessary conditions for the private economy to operate in the right direction according to the socialist orbit in a socialist-oriented market economy.

### 2.2. Investment Environment

According to World Bank: Investment environment is a set of local specific factors that are shaping opportunities and motivations for businesses to invest effectively, create jobs and expand production (World Bank, 2005). The investment environment reflects the specific factors of the location, thereby creating opportunities and motivations for businesses to invest effectively, create jobs and develop. From the point of view of Win P.M. Vijverberg (2012): The investment environment includes all economic, political, and administrative and infrastructure conditions affecting investment activities and business performance. Thus, investment environment is the set of factors affecting investment activities of enterprises. A good investment climate encourages businesses to invest, reducing costs and risks. A good investment environment not only brings high profits for businesses but also improves efficiency across the society.

### 2.3. The Role of the Local Government in Creating an Investment Climate to Attract Private Enterprise Investment

The role of local authorities in creating an investment climate to attract private investment includes the following contents:

#### 2.3.1. The Role of Government in Promoting Local Advantages

- The advantages of a locality in terms of geographical location: the locality has an advantageous geographical location, adjacent to large-scale markets, with good infrastructure capable of enhancing its competitiveness compared to other localities.
- The advantages of a locality in terms of the dynamism of local government: it is the dynamics of local government that will bring competitive advantages to the locality, not advantages in short term. Therefore, enhancing the competitiveness of the investment environment must be associated with the dynamism of the local government.

The dynamism of the local government is the decisive factor in promoting the local advantages. Strong resources do not create a competitive advantage. It is the dynamism of the local government in applying flexibly the mechanisms and policies that will create competitive advantages for the locality. Flexible application of local mechanisms and policies will make differences in the short and long term in attracting investment.

#### 2.3.2. The Role of the Local Government in Promoting Production Factors

This role is reflected in the flexible application of local government policies of the Government to build a mechanism to create production factors to promote production and business development such as: skilled human resources, basic scientific knowledge, economic information systems, infrastructure, education system, and carry out major research projects that are of great interest to society to serve production.

#### 2.3.3. The Role of the Local Government in Stimulating Production Demand

Besides promoting the competitive advantages of the investment environment, the production stimulus plays an important role in attracting investors to the locality. The stimulus for production means that the locality enables investors to participate in production as much as possible locally through flexible policies of the local government. The demand stimulus policies within the locality need to be specifically applied such as:

- Orientation of manufacturing industries, in which determine the list of key products, identity categories of industries to be prioritized for production, and create motivation and direction for investors.
- Building the structure of the industry: the locality builds the structure of the industry, the internal supply chains within the locality, domestically or participates in the global supply chain on the basis of building a system of supporting industries, system of small businesses as satellites for large enterprises. In the above conditions, the

industry structure that makes up the output of one business will be the input of another. The above process forms the sustainability of the industrial production in particular and the local economy in general.

- Building technical standards: parallel to building industry structure, encouraging enterprises to participate in supply chains, building and shaping standard system of production and business to meet standards. Standards of modern markets to increasingly integrate deeply into international markets, opening up opportunities for local businesses to develop sustainably.
- Building a program to stimulate consumption, enhance local consumption, and build the locality to become a big market is also one of the factors that increase the attractiveness of the investment environment to investors' investment according to the local level.

### 3. Research Method

#### 3.1. Theoretical Basis

##### 3.1.1. In Terms of the Investment Environment

In this study, the author inherits the views of previous studies, especially Word Bank's view '*The investment environment is a set of specific local factors that are shaping giving opportunities and motivations for businesses to invest effectively, create jobs and expand production*'; the point of view of Win P.M. Vijverberg (2012) '*The investment environment includes all economic, political, administrative and infrastructure conditions affecting investment activities and operating results of enterprises*' and Montserrat Alvarez (2003): '*Companies are able to invest if there is a large market, cheap labor cost, less risk and position with many commercial advantages*'.

##### 3.1.2. In Terms of the Factors Constituting and Environmental Investment

The author inherits the points of Zdenek Drabek and Warren Payne (2001), Nguyen Dinh Tho et al (2005), Nguyen Ngoc Anh & Nguyen Thang (2007) and especially inherits the views of the Vietnam Chamber of Commerce and Industry on constituent factors and environmental investment, including: (1) Market entry costs; (2) Access to land and stability in land use; (3) Transparency and access to information; (4) Cost of time to implement State regulations; (5) Unofficial fees; (6) Priority for state-owned enterprises (competitive environment); (7) The features and pioneering style of provincial leaders; (8) Policy to develop private economic sector; (9) Labor training and (10) Legal institutions.

##### 3.1.3. On the Role of the Local Government in the Construction of the Investment Environment

The study analyzes the role of the local government in the construction of the investment environment, promoting the traditional factors mentioned. Based on Michael Porter's theory of promoting local competitiveness under Dunning's expansion, analysis of the role of local government is done through qualitative research i.e., surveying what local government has done in building investment climate.

#### 3.2. Recommended Model

Inheriting previous studies and practical application of factors of the investment environment affecting the satisfaction of private enterprises, the study proposes the model as follows:

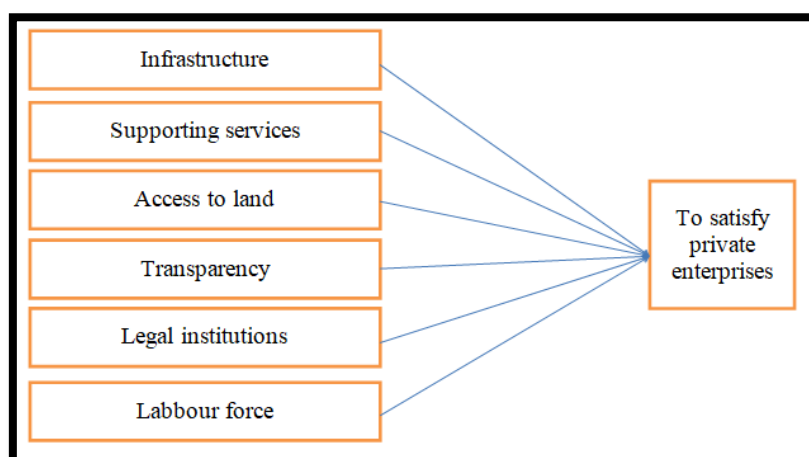


Figure 1: Model Research  
Source: The Authors' Suggestions

The constituent variables of factors in research model are presented in the following table

Codes	Definitions	Authors
Infrastructure		
HT1	Electricity system	VCCI, Nguyen Dinh Tho (2005), Michael Porter (2008);Nguyen Manh Toan (2010); LeTan Loc và Nguyen ThiTuyet (2013)
HT2	Water supply and drainage system	
HT3	Contact system	
HT4	Transportation system	
Supporting services		
DV1	Public administrative services resolved quickly	VCCI; Michael Porter (2008); Nguyễn Đình Thọ (2005); Dương Thị Bình Minh và Hà Thị Ngọc Oanh (2010);
DV2	Copyright and goods brand supporting services	
DV3	Export supporting services	
DV4	Local authorities support carefully whenever the enterprises need	
DV5	Good financial services	
Access to land		
DD1	The cost of renting land suitable	VCCI; Michael Porter (2008); Nguyen Dinh Tho (2005); Vu Thi Thu Hang (2010); Duong Thi Binh Minh and Ha Thi Ngoc Oanh (2010);
DD2	Expenses for site clearance and compensation	
DD3	Arranged site	
Transparency		
MB1	Documents of the laws deployed quickly	VCCI; Michael Porter (2008); Nguyen Trong Hoai(2007); Pham Van Hung (2010); Vu Thi ThuHang(2010);
MB2	Information about promotional policies timely	
MB3	Policies on taxes updated by the authorities	
Legal institutions		
PL1	Policies for promotion attractively	Nguyen Trong Hoai (2007)Pham Van Hung (2010)Vu Thi Thu Hang (2010)Duong Thi Binh Minh and Ha ThiNgoc Oanh (2010
PL2	Administrative procedure	
PL3	The simplicity of loan procedure	
PL4	Taxing and Custom system	
Labour		
LD1	Lao động dồi dào splendid labour	VCCI; Michael Porter (2008); Nguyen Dinh Tho (2005);Vu Thi Thu Hang (2010); Duong Thi Binh Minh and Ha Thi Ngoc Oanh (2010); Nguyen Manh Toan (2010); LeTan Loc and Nguyen Thi Tuyet (2013);
LD2	Skilled labours	
LD3	Expenses for labours is cheap	
LD4	Training centres can make the requirements of enterprises	
Private enterprises' satisfaction		
TM1	The efficiency of companies	(Nguyen Dinh Tho, 2011)
TM2	Continuous investment and business	
TM3	Satisfy with investment environment	
TM4	Advertise with other companies	

Table 1: Construct the Scale for the Research Variables in the Model

Source: Collection from Different Sources

### 3.3. Research Methods

The study used primary data including 27 observed variables with the convenient non-probability sampling method combined with sampling according to the germination method. Respondents are private enterprises in Thai Nguyen province. According to Hair et al. (2006), the sample size for exploratory factor analysis (EFA) is at least 5 times the total number of observed variables. The research model has proposed 27 observed variables, so the sample size is at least 135. The study uses SEM for a model with 7 concepts or less, the total variance is low - less than 0.45 or has concepts. With less than 3 observed variables, the minimum sample has 300 observations (Hair et al., 2006). Therefore, the proposed model has 7 concepts, so the sample size should be towards 300. Due to the time and conditions for the research, 300 enterprises were surveyed, after screening, there were 260 satisfactory votes and put the model to run for analysis. The study uses exploratory factor analysis (EFA) to test influencing factors and identifies factors that are considered suitable for inclusion in confirmatory factor analysis (CFA). Finally, a linear structure model (SEM) is used to determine the impact of individual factors on the satisfaction of private enterprises. Before analyzing discovery factors, Cronbach's Alpha coefficients are used to test the rigor of the scale in the model.

## 4. Research results

### 4.1. Cronbach's Alpha Test Results

To conduct factor analysis, first of all, it is necessary to test the reliability of the scale through Cronbach's Alpha coefficients and total variable correlation coefficients. For scales with Cronbach's Alpha coefficients  $\geq 0.6$  we can accept

and variables with total variable correlation coefficients less than 0.3 will be disqualified. Research results show that, Cronbach's Alpha coefficient for the scale of the largest components is 0.876 and the smallest is 0.691. Thus, all Cronbach's alpha's coefficients are > 0.6 and variables with total variable correlation coefficients > 0.3. Thus, the variables ensure the requirements to conduct factor analysis to discover EFA.

#### 4.2. Factor Analysis Results (EFA)

We have, coefficient KMO = 0.817, this shows that the data is suitable to be able to conduct EFA analysis. Besides, we have Pvalue value of Bartlett test equal to 0, that is, the variables are correlated on the overall scale. Also, through the exploratory factor analysis EFA, we have the variance extracted to reach 63.825%, this means that the extracted factor explains 63.825% of the v after rotating the factor we have 7 groups of factors:

	Factor						
	1	2	3	4	5	6	7
DV1	,903						
DV3	,869						
DV5	,716						
DV2	,656						
DV4	,527						
PL4		,906					
PL3		,812					
PL2		,721					
PL1		,635					
LD3			,834				
LD2			,734				
LD1			,684				
LD4			,518				
DD1				,852			
DD3				,735			
DD2				,726			
TM2					,681		
TM3					,613		
TM1					,583		
TM4					,565		
HT1						,680	
HT4						,653	
HT3						,586	
HT2						,525	
MB3							,863
MB1							,545
MB2							,543

Table 2: Factor Analysis Results  
Source: Authors' Calculations

After rotating the factors, we have 7 groups of factors:

- The *first* group of factors includes observed variables: DV1, DV3, DV5, DV2, and DV4. We named this group Support Services, denoted by DV.
- The *second* group of factors includes observed variables: PL4, PL3, PL2, PL1. We name the group as a legal institution, symbolized by PL.
- The *third* group of factors includes observed variables: LD3, LD2, LD1, LD4. We name the group Labor, symbol LD.
- The *fourth* group of factors includes observed variables: DD1, DD3, DD2. We name this group as land access, denoted by DD.
- The *fifth* group of factors includes observed variables: TM2, TM3, TM1, TM4. We name this group the Satisfaction of the enterprise, symbolized by TM.
- The *sixth* group of factors includes observed variables: HT1, HT4, HT3, HT2. We named this group Infrastructure, denoted by HT.
- The *seventh* group of factors includes observed variables: MB3, MB1, MB2. We name this group Transparency, denoted by MB

#### 4.3. Positive Factor Analysis Results (CFA)

The positive multiplication analysis (CFA) results shows that the standardized regression weights of all variables are greater than 0.5, proving that the model achieves convergent values, the criteria for evaluation. the model's

compatibility with indicators that are CMIN / DF, GFI, CFI, TLI and RMSEA to consider. The analytical results showed that CMIN / DF = 1,118 < 2. In addition, the indexes GFI = 0.921, CFI = 0.988, TLI = 0.986, these indexes are all greater than 0.9. RMSEA index = 0.019 < 0.08. As such, this shows that the appropriateness of the data is appropriate.

Factors	Synthetic Reliability ( $\rho_c$ )	Total Variance Extracted ( $\rho_{vc}$ )
Infrastructure	0,887	0,621
Supporting services	0,855	0,601
Access to land	0,811	0,582
Transparency	0,864	0,595
Legal institutions	0,810	0,580
Labours	0,783	0,509
To satisfy the enterprises	0,741	0,501

Table 3: The Synthetic Reliability and Total Variance Extracted  
Source: According to Authors' Calculations

According Table 3, the synthetic reliability and total variance extracted all are made the requirements that are greater than 0,5 (Jorekog,1971). Thus, the scale is fit.

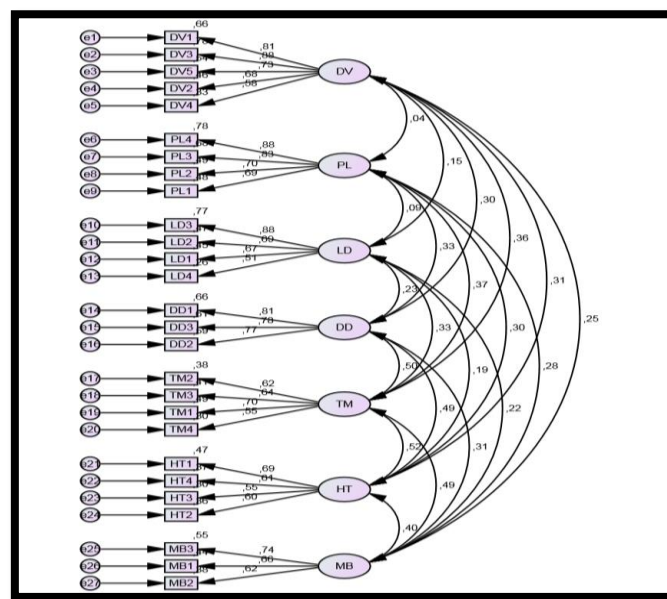


Figure 2: CFA Analysis Results  
Source: According to Authors' Calculations

#### 4.4. Linear Structure Model Results (SEM)

From the model results we have CMIN / DF = 1.118 < 2 and the indexes GFI = 0.921, CFI = 0.988, TLI = 0.986 are all greater than 0.9, RMSEA = 0.019 < 0.08. Thus, the data is consistent.

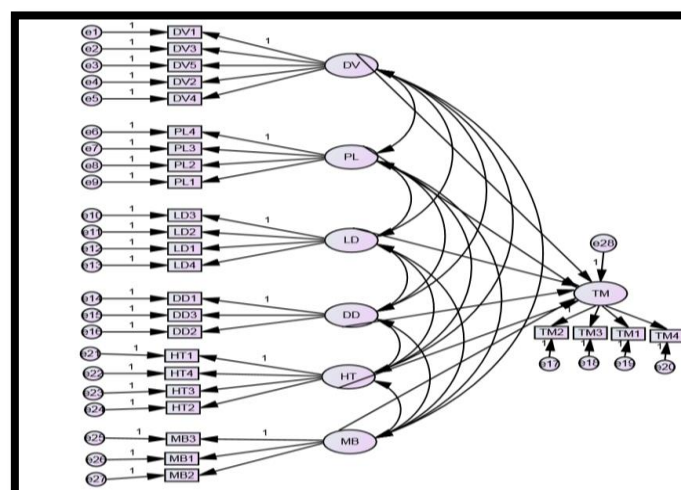


Figure 3: Linear Structure Analysis SEM

Next, start to consider the hypothesis of the research on the factors affecting the satisfactions of private enterprises

			Estimate	S.E.	C.R.	P
Satisfactory	<---	Service	,119	,060	1,974	,048
Satisfactory	<---	Legal institutions	,116	,053	2,198	,028
Satisfactory	<---	Labour	,125	,057	2,194	,028
Satisfactory	<---	Land	,153	,071	2,163	,031
Satisfactory	<---	Infrastructure	,200	,094	2,128	,033
Satisfactory	<---	Transparency	,209	,081	2,585	,010

Table 4: Test Results of Causality Relationship among the Definitions

Source: According to Authors' Calculations

Through the above results table, we have hypothesized relationships in the research model which are all proven by the SEM model test. Estimation results show that the weights are positive sign (+) and are statistically significant. This means that groups of factors have a positive impact on private firm satisfaction.

### 5. To Test the Reliability of Estimates Using Bootstrap Method

The Bootstrap method was used to test the model estimates in the final model with a repeat sample N = 500. Estimated results from 500 samples averaged with bias are presented below:

Parameter			SE	SE- SE	Mean	Bias	SE-Bias	CR
Satisfactory	<--	Service	0,061	0,002	0,13	0,003	0,003	1,00
Satisfactory	<--	Legal institutions	0,061	0,002	0,16	0,001	0,003	0,33
Satisfactory	<--	Labour	0,08	0,003	0,299	0,003	0,004	0,75
Satisfactory	<--	Land	0,07	0,002	0,144	-0,003	0,003	-1,00
Satisfactory	<--	Infrastructure	0,074	0,002	0,232	-0,006	0,003	-2,00
Satisfactory	<--	Transparency	0,069	0,002	0,139	-0,005	0,003	-1,66

Figure 5: Estimate Results with Bootstrap Method with N = 500

Source: According to Author' Calculations

In this study, the author performed Bootstrap by repeating samples with the size N = 500. Estimated results from 500 samples were averaged with the bias shown in the table above showing the bias (Bias) and the standard deviation of the deviation (SE-Bias) appears but not large. The value of CR <2 should be able to confirm a very small bias and not statistically significant at 95% confidence that the estimates in the model are reliable

### 6. Conclusion and Policy Implications

Through the above research results, it shows that *service variables, legal institutions, labor, access to land, infrastructure, and transparency* are statistically significant for enterprise satisfaction. private. Therefore, it is necessary to further enhance the role of the Government in creating an investment environment for private enterprises to continue to invest and expand production.

#### 6.1. For Infrastructure

Thai Nguyen province needs to allocate reasonable resources to build infrastructure, including technical and social infrastructure, to create conditions for private enterprises to push strong production and business activities. Regarding technical infrastructure, it is necessary to focus on building synchronous traffic infrastructure such as; Traffic works connected with highways, national highways, traffic works outside the fence of industrial zones and clusters.

#### 6.2. For Transparent Disclosure

Publicizing, posting and updating administrative procedures at the offices of state agencies in the most convenient place for private enterprises to easily search and review., monitor, update and promptly announce new administrative procedure dossiers when there is a decision to announce or change by a competent authority.

#### 6.3. Access to Land

Prepare and approve a 5-year land use plan, annual land use plan and make it widely available on the mass media, especially on websites (website). belongs to the State management agencies for investment of Thai Nguyen province to publicize to specific investors who are private enterprises. Implement well land use planning to create enough land for production and business.

#### 6.4. In Terms of Legal Institutions

Should establish a provincial public administrative service center with the main function and task as the focal point to receive and settle administrative procedures under the one-stop-shop mechanism under the jurisdiction of 9 agencies. Department of Planning and Investment, Department of Natural Resources and Environment, Department of

Construction, Department of Industry and Trade, Department of Justice, Department of Science and Technology, Department of Labor - Invalids and Social Affairs, Economic Zones Authority, Fire Police of Thai Nguyen province.

#### 6.5. *In Terms of Labor*

The People's Committee of Thai Nguyen province needs to develop a plan and implement the plan to develop the network of vocational training institutions to meet the requirements of businesses in general and private enterprises in particular to ensure compliance with regional and international standards.

#### 6.6. *Support Services*

It is necessary to implement solutions such as developing public administrative support service centers to shorten the time to implement administrative procedures in order to improve the operational efficiency of enterprises. Focusing on supporting private enterprises in business registration services; make investment registration documents; compile land assignment, land lease and land use right certificates; supporting enterprises to set up projects to borrow capital, choose an investment position in accordance with the current provincial planning.

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