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BUSINESS ENVIRONMENTAL FACTORS AFFECTING THE EFFICIENCY OF FOREIGN DIRECT INVESTMENT ENTERPRISES IN AGRICULTURE IN VIETNAM

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This study investigates potential impact of business environment factors toward investment efficiency of foreign direct investment (FDI) enterprises with the context of Vietnamese agriculture sector. The authors combined qualitative research methods (expert interviews) to develop research and quantitative models (EFA, CFA and SEM) to test research hypotheses. The findings revealed a direct influence of business environment among a sample of 68 enterprises, including: (1) Macro environment; (2) Intra-sectorial factors and (3) Inter-sectorial factors on business performance (profit, cost, export revenue, market share). In conclusion, some implications are proposed for more appropriate mechanisms and policies to improve the efficiency of business environment and at the same time increase the attraction of FDI for the Vietnamese agriculture.

Keywords: *FDI projects in agriculture; Efficiency of FDI enterprises; Vietnam's agricultural sector.*

JEL Classifications: *Q17, F21*

1. Introduction

In general, there are many factors determine the success of enterprises and many of which are internal-oriented. However, business activities are operated under the greater external environment. Meanwhile, these environmental-driven elements are uncontrollable and out of any individual enterprise's reach. However, business activities are always associated with an environmental system

consisting of a complex set of factors, conditions, forces and constraints, which are constantly changing and have an essential influence on the effectiveness of the business. These changes require businesses to function with a corresponding "dynamic" attitude to that of the environment. Failure to adapt to external factors such as laws, regulations and markets will ultimately inhibit any project's success (OECD, 2003). Agriculture is a risky business

investment field since all business activities tend to depend on natural resources, climate conditions and other inputs. Therefore, countries with a long-standing agricultural industry, rich natural resources, and many preferential policies find it challenging to attract investment capital in general and foreign direct investment in general. These challenges have limited the development of the agricultural sector and reduced its economic and social contribution to many countries worldwide and Vietnam. Viet Nam has a long history in agricultural production, has potential for development, and plays a vital role in Vietnam's growth and economic development after 35 years of "Đổi mới". However, the level and scale of FDI investment in agriculture are still minimal (accounting for only approximately 1%), which goes against the global investment trend of FDI in agriculture area (Department of Vietnam foreign investment, 2019). One of the main reasons is that the inner nature of the agricultural sector is potentially risky, while Vietnam's policy to attract FDI in this field is less attractive and what many investors are concerned about when investing in the agricultural sector. Investment in agriculture is the return will be meagre because the processing industry is not developed and the payback period is extended. This study focuses on reviewing and discussing the main factors affecting the efficiency of FDI projects in the Vietnamese agricultural sector for the past period. It identified the challenges to effectively attract FDI inflows into the Vietnamese agricultural sector in the future.

2. Literature review and hypothesis development

2.1. FDI in the agricultural sector

According to the International Monetary Fund (IMF, 1993), foreign direct investment is defined as "an investment made to establish long-term economic relationships with an enterprise operating in the territory of another country with the aim of the investor being to gain the actual management of the

enterprise". In other words, FDI is examined from the perspective of the foreign private owners of capital who invested in the local enterprise(s) to a sufficient extent and the fact that there is the direct management of the foreign owner for the production and business activities of the enterprise. The type of enterprise that meets the above requirements is called an FDI enterprise.

Foreign direct investment in agriculture is a form of international investment whereby the large capital/resources were pooled into establishment of enterprises specialized in agricultural field. As a result, they can form a co-operation to distribute both risks and profits with the host nation's enterprise partners (OECD, 1978). Forms of foreign direct investment in agriculture include:

(i) Enterprises with 100% foreign capital: enterprises wholly owned by foreign investors and are established in the country receiving investment. Foreign investors themselves invest, manage and take responsibility for their operations and business results.

(ii) Joint venture enterprise: a collaborated result of both foreign parties and the host country. The parties jointly contribute capital, jointly operate the business, and jointly share risks and profits in proportion to the contributed capital indicated by an authorized venture contract or agreement.

(iii) Business cooperation contract: a form of cooperation between two or more parties based on a business contract in which both parties are responsible and share the benefits without creating a new legal entity.

2.2. Efficiency of FDI enterprises in the agricultural sector

Efficiency is generally considered the rationality between the results obtained and the strategy, objectives and functions of the implementing unit (Bititci et al., 1997). From an investment perspective, project performance is understood as the extent to which

the objectives of FDI enterprises are achieved when doing business in the market (Cavusgil and Zou, 1994). Each FDI enterprise has a list of goals along the line of economic (increasing profits, revenue or reducing production costs) or strategic (expanding markets, responding to competition, exploiting competitiveness, strengthen the position of the enterprise in the market, improve the product brand value). Goals can be fully or partially achieved depending on the formulation and implementation of investment strategies. The level of achievement of strategic and economic goals of FDI enterprises is also a measure of performance. The efficiency of FDI enterprises can be assessed based on two methods, including the objective method (based on data on profits, sales levels...) (Lages, 2004) and the subjective method (based on assessments) (Zou et al, 1998). Objective indicators measure performance in a direct and predetermined manner, while subjective indicators require respondents to express their opinions using a multi-point reference scale. For FDI enterprises, only a small part of these indicators are used in multiple occasions, i.e. revenue, sales growth, profit, manager satisfaction (Katsikeas et al, 2000; Sousa, 2004).

2.3. Business environment factors affect the efficiency of FDI enterprises in agriculture

In order to attract FDI into an influential industry or business sector, creating an investment environment so that they can conduct profitable business and avoid unnecessary risks is the critical issue. OCECD (2003) considered some critical factors to be able to affect the efficiency of investment enterprises: (i) A regulatory environment; (ii) Stable macroeconomic environment; (iii) Availability of resources; (iv) Protect the transparency of the public sector; (v) Ensure that the rules are consistent with international law; (vi) International trade flourishes; (vii) Tariff system. From there, it is possible to summarize the business environment factors that affect

the efficiency of enterprises investing in agriculture, specifically as follows:

(i) Macro - environmental factors

Macro - environmental factors are general national characteristics that affect the business performance of enterprises in all different industries, including agribusiness. Macro - environmental factors include GDP growth, political stability, degree of market openness, growth of export trading activities, transaction costs and investment efficiency of FDI enterprises (FAO, 2012). On the other hand, a suitable and stable tax and interest rate policy is also an important lever to help FDI enterprises succeed in agriculture (Anyanwu, 2012; Hoang, 2012). These factors affect efficiency because they provide opportunities, resources and market access for FDI enterprises (Clegg et al., 2016). In addition, Demirbag et al. (2007) and Meyer and Nguyen (2005) also argued that the macro environmental status of host countries can drive the transaction costs of FDI enterprises, thereby affecting their performance. Besides, the degree of international economic integration is another important variable to have effect on the performance of FDI enterprises. This level not only helps attracting foreign investors but also creating favourable conditions for FDI enterprises' operation. From the above arguments and analysis, research hypothesis H1 was proposed:

H1: Macro-environmental factors have a positive influence on the efficiency of FDI enterprises in the agricultural sector.

(ii) Inter - sectorial factors

Cross-sector factors have a significant impact on investment costs and the potential benefits that foreign investors are likely to receive when investing in the industry. Enhancing investment environment factors, e.g. economic infrastructure, social culture, financial market or the legal system will create more opportunities for FDI enterprises to improve the efficiency of investment (Nascimento, 2011). On the

other hand, foreign investors are always aware of the advantages of infrastructure and services for business operations. Infrastructure and services are tools for production and business activities, so their level of development naturally affects the performance of FDI investors. These factors are information and communication infrastructure, traffic, financial services affecting operating, production and business costs (Nguyen Manh Toan, 2010). In addition, the socio-environmental factors are reflected in the level of education, attitudes and beliefs and moral values of society, religion, customs, language and communication; the number of employees, skill level of workers; discipline of employees (AW Don, 2007) also contributes to the creation of conditions. Foreign investors determine the convenience of this factor that will determine investment because it provides quality labour and creates a favourable for business. From the above arguments and analysis, research hypothesis H2 is proposed:

H2: Inter - sectorial factors have a positive influence on the efficiency of FDI enterprises in the agricultural sector

(iii) Intra - sectorial factors

Industry internal factors have a direct influence on all investment, production and business activities of FDI enterprises. Large agricultural product markets, high industrial productivity, accumulation of agricultural land and support policies are considered vital issues for determining the viability and development of FDI enterprises in the agricultural industry (FAO, 2012). The attractiveness of the industry is considered a factor promoting the activities of FDI enterprises. Market size, market growth, competition status, and availability of resources (Belderbos and Zou, 2007; Garg and Delios, 2007; Zeng et al., 2013) should actively promote the economic performance business of the company. In addition, the supportive policies, quick administrative procedures, and administrative procedures

reform enable efficiency in improvement of operation and significantly reduce unnecessary expenses, in addition to provide information and facilitate transactions (SAING Chan Hang et al., 2010). From the above arguments and analysis, research hypothesis H3 is proposed:

H3: Intra - sectorial factors have a positive influence on the efficiency of FDI enterprises in the agricultural sector

3. Research methodology

3.1. Developing research models and hypotheses

From the overview results of previous research, especially the model and research results of (Nascimento, 2011) combined with the results of expert interviews (who are managers of FDI enterprises in the agricultural sector). Industry and research experts in the field of foreign investment) have identified three groups of factors affecting the efficiency of FDI enterprises in the agricultural sector of Vietnam, including (1) Macro-environmental factors, (2) Interdisciplinary factors and (3) Industry-specific factors. Based on the review thus far, the authors developed and proposed the following research model.

3.2. Measures

In order to identify the items of the survey, the authors consulted findings from several studies. Since most of the observed variables are referenced from other foreign studies, two linguists were invited to translate the content into Vietnamese and cross-checked to ensure that there were no confusions for respondents when answering the surveys. In addition, to increase the relevance of the scale to the research context in Vietnam, the research team conducted in-depth interviews with two Associate Professors in Economics specialized in FDI research and three senior managers at FDI enterprises in the agricultural sector. After synthesizing the interview results, the research team evaluated and narrowed the original scale of 31 observed variables to 25 and

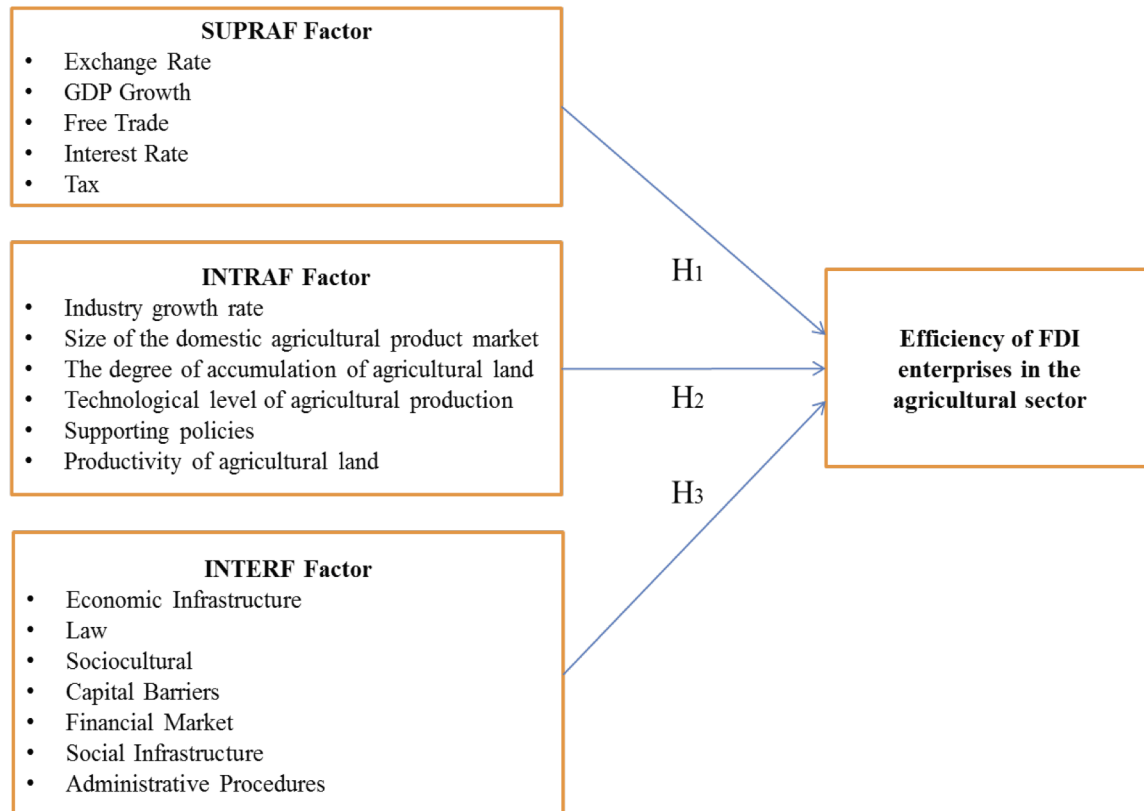


Figure 1: Research Model

classified them into four factors. Finally, to serve the multi-group differential test, three characteristics were specifically focused on in the study: Investment form (Ogasavera & Hoshino, 2007); FDI investment motives (Demirbag et al., 2007); FDI investment experience (Nguyen & Rugma, 2015). The details of the official research scale are described in Table 1.

3.3. Sample

The overall population set in this study is 492 FDI enterprises in Vietnam's agricultural sector (Foreign Investment Department, 2019). The study uses a convenient random sampling method to approach the targeted subjects in some provinces with many agricultural FDI projects in Vietnam, including Hanoi, Hai Duong, Bac Giang, Lam Dong, and Ha Noi. The number of FDI projects in

the domestic agricultural sector is relatively small, scattered in many provinces and cities throughout the country, so to ensure the selected research sample size, it is necessary to ensure reliability. Statistical techniques were used in this study consisted of factor analysis and structural equation modeling (SEM). The survey was conducted with a total of 68 FDI enterprises, and selected 1 to 5 managers within each of these enterprises to elaborate on the topic information. According to Hair et al. (2006), the minimum sample size is five times the observed variables. Therefore, the minimum study sample size is $25 \times 5 = 125$. Research data were collected from October 2019 to February 2020. The survey is designed with two parts: general information and inquiries concerning influence of factors on the investment efficiency of FDI enterprises. The

Table 1: *Items and Properties*

Factor	Items	Source
Macro - environmental factors		
SUPRAF1	Tax policy	Nascimento (2011)
SUPRAF2	GDP growth	Anyanwu (2012)
SUPRAF3	Exchange rate	FAO (2012)
SUPRAF4	Interest rate stability	
SUPRAF5	Free trade	
Inter - sectorial factors		
INTERF1	Bureaucratic procedures and legal requirements to open, operate, and even close firms and that take much time, efforts and other resources to comply with	Nguyen Mạnh Toan (2010)
INTERF2	The movement of capital into, out of, or within the country	Nascimento (2011)
INTERF3	The sophistication of financial and capital markets, availability of credit at competitive terms as well as other capital markets instruments	
INTERF4	Economic infrastructure services at competitive prices and quality such as those provided by roads, communications, energy, ports, railroads, airports	
INTERF5	Social infrastructure services at competitive prices and quality related to human development such as education; health; water, sewage and waste disposal	Zhang & Zuk (1998)
INTERF6	The level of general productivity and the availability of skilled workers at competitive prices	SAING Chan hang et al.(2010)
INTERF7	The existence of favourable legislation, enforcement, and legal services. Includes clear definition and protection of property legislation; respect to the letter of contracts, and timely justice at a reasonable cost	Lou & Wang (2012)
Intra - sectorial factors		
INTRAF1	Policies and measures taken by the public or private sectors that reduce costs or increase benefits for investors	SAING Chan hang et al.(2010)
INTRAF2	The land productivity of agriculture or forest based businesses. It is directly associated with the technologies used for production in the country	FAO (2012)
INTRAF3	Agricultural growth rate	
INTRAF4	Technology level in agriculture	SAING Chan hang et al.(2010)
INTRAF5	The size of lands in the country that are arable, or are forest vocation lands	Nascimento (2011)
INTRAF6	Labour cost	FAO (2012)
INTRAF7	The size of the domestic consumption of inputs and outputs of the agriculture and forest-based sector.	
Efficiency of FDI enterprises		
FO1	Profits of the business	Chan et al. (2010)
FO2	Business production costs	Katsikeas et al. (2000)
FO3	Export revenue	Desislava Dikova (2008)
FO4	Domestic market share	
FO5	International market share	

answers are designed on two 5-point scales: (1) 1 – Absolutely no influence to 5 - Very influential (for the group of questions to assess the influence of factors) and (2) 1 - Deeply reduced to 5 - Highly increased (for business performance evaluation questions). In order to ensure the reliability of data, the respondents were asked to confirm that they were not under any pressure during the interview process. Any queries arose when answering the questionnaires were answered by the researchers. Among the 320 questionnaires distributed, there were only 287 collected with 242 valid records included in the subsequent analysis.

descriptive statistical analysis (multivariable group, EFA and Cronbach Alpha analysis) were conducted via IBM SPSS 20. Meanwhile, confirmatory factor analysis (CFA), common method variance (CMV) and hypothesis testing using Structural Equation Modeling (SEM) were processed by IBM AMOS 23. The evaluation criteria were followed by the results of Hair et al. (2014), Nunnally (1978), Peterson (1994), William et al. (1989) and Malhotra et al. (2006). Specifically, the adopted indicators used to test the fit of the model were Chi-square/df (chi-square to the degree of freedom ratio), GFI (Goodness of Fit

Table 2: Demographic profile of the respondents

Category	Number of firms	Number of respondents	Percentage
Entry mode	68	242	100.00%
1. Wholly-owned subsidiary	27	72	29.75%
2. Joint venture firm	41	170	70.25%
Investment motivation	68	242	100.00%
1. Efficiency seeking	41	126	52.07%
2. Market seeking	0		0
3. Resource seeking	27	116	47.93%
4. Asset seeking	0		0
Host-country experience	68	242	100.00%
1. Under 3 years	48	147	60.74%
2. Over 3 years	20	95	39.26%

3.4. Data Analysis Method

In this study, to process primary data collected from 68 FDI enterprises, the authors use IBM SPSS 20 and IBM AMOS 23 software. The

Index), CFI (Comparative fit index), TLI (Tucker and Lewis index). and RMSEA (Root mean square error of approximation).

4. Research Results

4.1. Descriptive, Convergent Validity and Discriminant Validity

To test the reliability of the scale, the authors used the method of exploratory factor analysis (EFA), with extraction (Principal Component Analysis) and Varimax rotation, to perform exploratory factor analysis (EFA) to evaluate the convergence of the observed variables according to each component of the theoretical research model. As a result of the first EFA analysis, the variable INTRAF6 - labour costs in the agricultural sector with a loading factor of less than 0.5 was removed from the scale. After the second EFA analysis, the KMO value = 0.884 (> 0.5) with the significance level Sig = 0.000 (< 0.05) showed that the EFA analysis was appropriate. Eigenvalue values of factor groups > 1 . The results show that 23 observed variables are divided into four main components:

three independent variables and one dependent variable, with cumulative variance reaching 61.374% ($> 50\%$). The Cronbach Alpha coefficients of all variables were greater than 0.7, the Cronbach Alpha index when the variable type of each observed variable in the group is smaller than the value of the Cronbach Alpha coefficient of the variable overall. Therefore, according to the standards established in the studies of Hair et al. (2010), Nunnally (1978), Peterson (1994), the scale ensures reliability and is consistent with research data. The results of the scale test are shown in Table 3.

Through CFA analysis, the results show that the measurement model includes 220 degrees of freedom, Chi-square/df = 1.333 (less than 3). P-value = 0.001 (less than 0.05). GFI = 0.907; CFI = 0.971 > 0.95 ; TLI = 0.966 (greater than 0.9) and RMSEA = 0.037 < 0.08 . Thus, the data ensure a good fit with the research model (Hair et al., 2010).

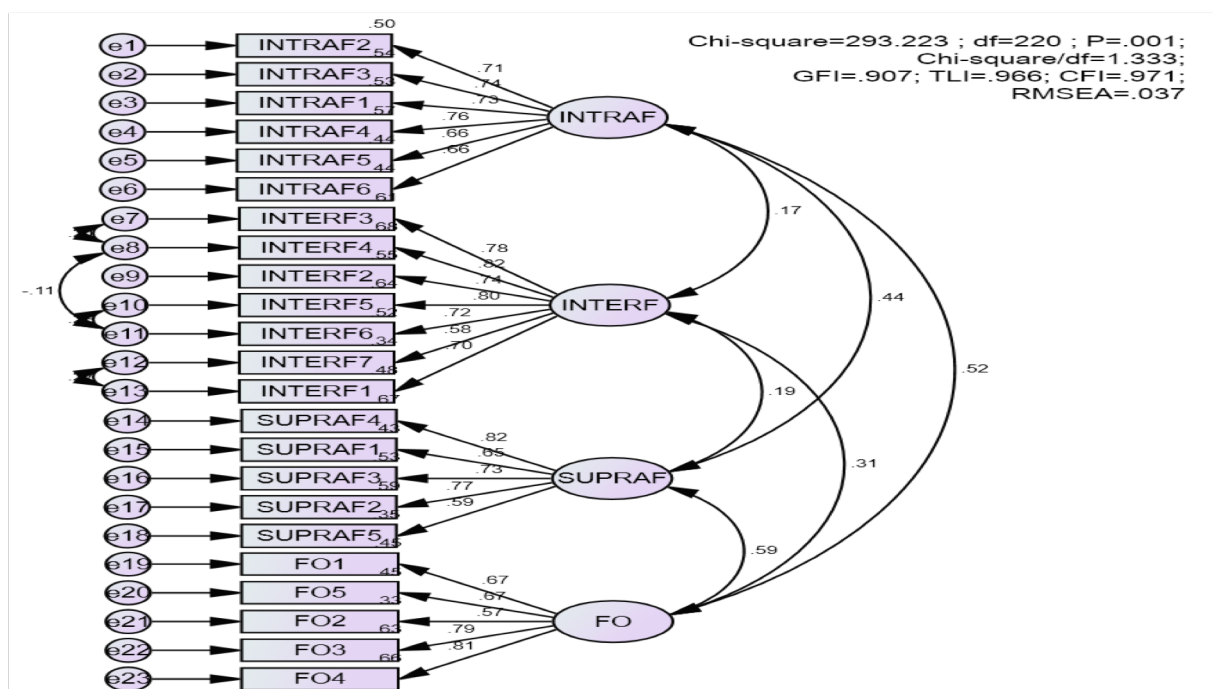


Figure 2: CFA Results

Table 3: Descriptive, Convergent Validity and Reliability

Items	Mean	SD	FLs	α	AVE	CR
Macro - environmental factors						
SUPRAF1	4.3099	0.72236	0.762	0.836	0.513	0.839
SUPRAF2	4.2893	0.69304	0.752			
SUPRAF3	4.2273	0.72450	0.828			
SUPRAF4	4.3802	0.64745	0.843			
SUPRAF5	4.2025	0.66031	0.838			
Inter - sectorial factors						
INTERF1	4.1860	0.77468	0.655	0.897	0.545	0.892
INTERF2	4.1074	0.88136	0.752			
INTERF3	4.0826	0.84566	0.828			
INTERF4	4.0992	0.86331	0.843			
INTERF5	4.0826	0.77392	0.838			
INTERF6	4.0000	0.72878	0.758			
INTERF7	4.1322	0.75608	0.655			
Intra - sectorial factors						
INTRAF1	4.0372	0.87535	0.734	0.858	0.504	0.859
INTRAF2	4.0041	0.83739	0.767			
INTRAF3	4.1570	0.93798	0.788			
INTRAF4	4.0785	0.91893	0.787			
INTRAF5	4.0372	0.82659	0.705			
INTRAF7	4.3099	0.79874	0.656			
Efficiency of FDI enterprises						
FO1	4.2314	0.86192	0.770	0.827	0.505	0.834
FO2	4.2438	0.91238	0.708			
FO3	4.1860	0.80102	0.736			
FO4	4.4669	0.63845	0.664			
FO5	4.2190	0.90959	0.720			
Note: SD - Standard Deviation; FLs - Factor loadings; α - Cronbach Alpha; AVE - Average Variance Extracted; CR - Composite Reliability.						

In order to evaluate the reliability, convergence value and discriminant value of the variables in the model, according to Hair et al. (2010), the composite reliability index (CR) must be greater than 0.7, Average variance extracted (AVE) must be greater than 0.5, $AVE > MSV$, the square root AVE (SQRAVE) of each variable should be greater than the correlation coefficient between that variable and other variables in the model. The results presented in Table 4 show that the variables of the research model all satisfied the above requirements, ensuring reliability, convergence value and discriminant value. Besides, the regression correlation index is less than 0.6. According to Grewal et al. (2004), multicollinearity does not occur in this study.

Table 4: Discriminant Validity and Correlation

	MSV	MaxR (H)	SUPRAF	INTRAF	INTERF	FO
SUPRAF	0.349	0.854	0.716			
INTRAF	0.269	0.861	0.441	0.710		
INTERF	0.094	0.902	0.194	0.170	0.738	
FO	0.349	0.852	0.591	0.519	0.307	0.710

4.2. Common Bias Method

The scale of the study is referenced based on the results of many studies. The diversity of the origin of the observed variables will lead to the risk of common method variance (CMV). The effects of CMV on the measurement efficiency of the research model was mentioned in study by Podsakoff et al. (2012). To limit the adverse effects on measurement performance from CMV, researchers have come up with many solutions in terms of the data collection process and quantitative analysis. Chang et al. (2010) believe that keeping private information confidential and changing the structure of the questionnaire to limit respondents' perception of research structure will help reduce the likelihood of CMV occurrence. Several studies have looked at quantita-

tive analyzes such as Harman's single factor test or common latent factor variance to test for the presence of CMV.

In this study, the authors applied the suggestions and recommendations of Podsakoff et al. (2012), including:

- (1) Keep the private information of the respondents providing the answers confidential.
- (2) Limiting respondents' ability to perceive the structure of the research model through shuffling the order of research questions.
- (3) Apply Harman's single factor test and common latent factor variance to test.

The test results show that the single factor in Harman's single test explains 29.132% (less than 50%) of the total variance, the common latent factor

reaches 11.25% (less than 25%) of the total variance. Therefore, CMV is unlikely to appear in this study (William et al., 1989, Malhotra et al., 2006).

4.3. Hypothesis Testing

The study uses the linear structural model SEM to assess the influence of the independent variables. The results in Figure 3 show the index of degrees of freedom $df = 220$ with $p = 0.000$, Chi-square/ $df = 1.333$ (less than 3); GFI = 0.907; CFI = 0.971; TLI = 0.966 (greater than 0.9) and RMSEA = 0.037 (less than 0.08), which represents a good fit between the model and the data sample (Hair et al., 2010).

With both p-values less than 5%, the research hypotheses are accepted. Results of the analysis (Table 5) also show the impact of the factor variables: (1) Macro factor (normalized load factor 0.423); (2) Sectoral factors (normalized load factor 0.303) and (3) Interdisciplinary factors (normalized load factor 0.173). Finally, three factors were selected to consider the impact on the efficiency of FDI

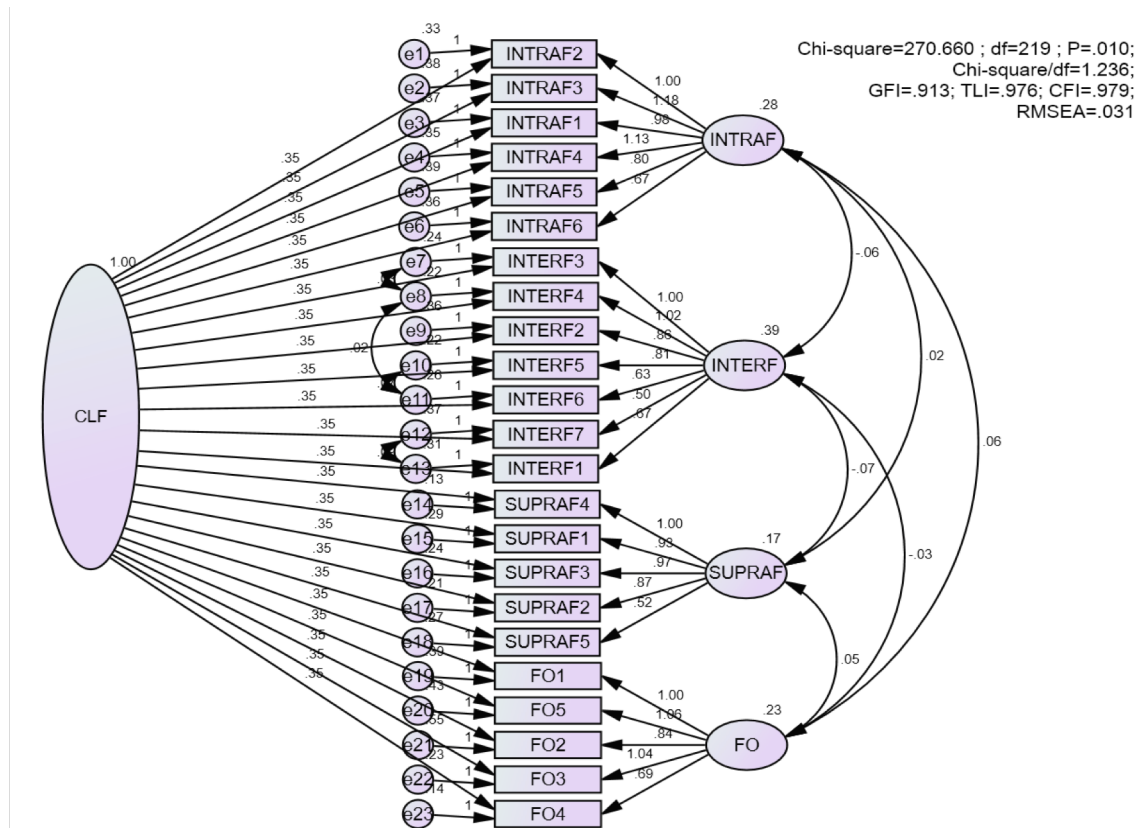


Figure 3: Common Latent Factor Analysis Result

enterprises to explain 46% of the variation of the dependent variable ($R^2=0.46$).

differences when pairing between samples in the following criteria: 100% FDI enterprises and joint

Table 5: Hypotheses Testing Results

Relationship	Regression Weight	S.E.	C.R.	P	Findings
FO ← INTRAF	0,303	0,074	3.989	***	Accepted
FO ← INTERF	0,173	0,056	2.734	0,006	Accepted
FO ← SUPRAF	0,423	0,087	5.312	***	Accepted

4.4. Multi-group test results

A multigroup test was conducted to evaluate the difference in the evaluation criteria of the sample group. The Independent Sample T-test method is applied in the study to determine whether there are

venture enterprises; FDI-motivated enterprises seek resources and enterprises seek markets; and enterprises with little FDI investment experience and enterprises with a lot of FDI investment experience. The analysis results show that the Sig coefficient of

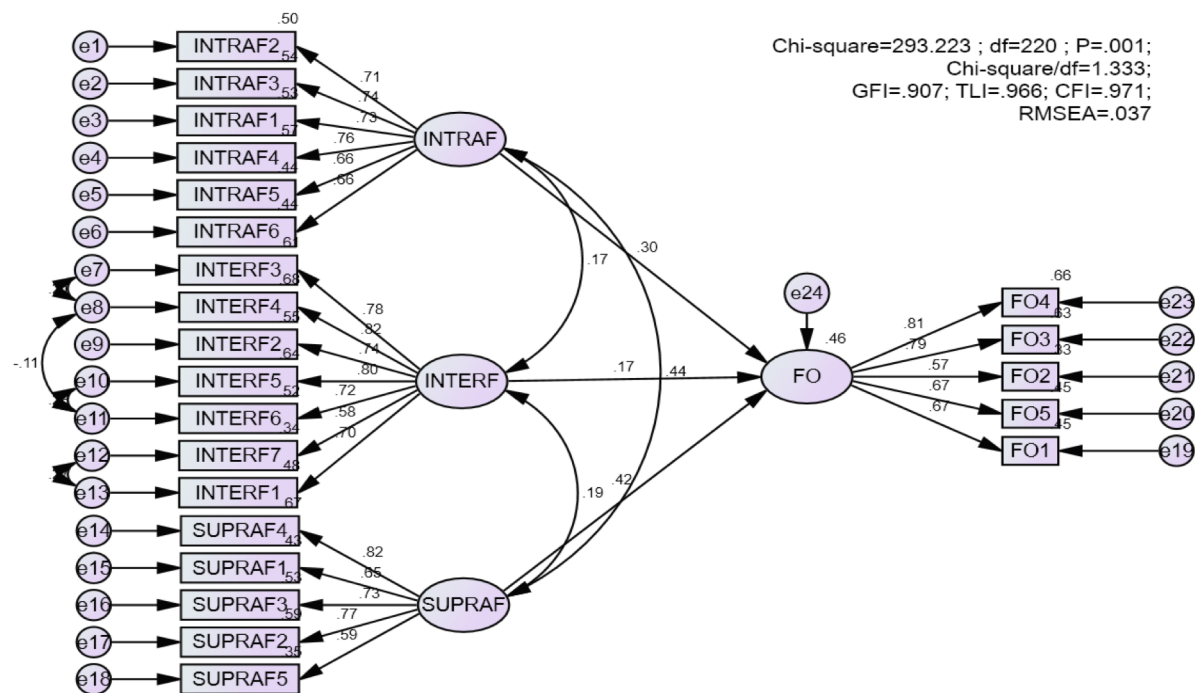


Figure 4: SEM Analysis Result

Levene's test of the entry mode of FDI investment is more significant than 0.05, so there is a difference in variance according to the mode of entry. However, the Sig T-test value of this factor is less than the significance level of 5%, so it can be concluded that there is a difference in the assessment level according to the two primary forms of investment in agriculture, including 100 % of FDI and joint ventures.

Similarly, when dividing by criteria of motivation for FDI in agriculture, the results show that investors in Vietnam's agriculture mainly look for resources and efficiency (while ignoring the motivations of asset and market searching). Levene's test results show the coefficient Sig < 0.05, indicating the difference variance between two groups of enterprise.

Table 6: Independent Sample T-test Result

		Mean	SD	Levene Test		Sig. (2-tailed)
				F	Sig.	
Entry mode						
FO	Joint venturer	4.5247	0.4850	0.009	0.924	0.000
	Wholly-owned subsidiary	3.6667	0.5475			0.000
Investment Motivation						
FO	Resource seeking	4.7586	0.3214	15.749	0.000	0.000
	Efficiency seeking	3.8190	0.5144			0.000
Host-country experience						
FO	Under 3 years	3.9197	0.5046	13.896	0.000	0.000
	Over 3 years	4.8105	0.4036			0.000

Under different conditions, the Sig T-test value of this factor is less than 0.05, showing a difference in the efficiency of FDI investment of agricultural enterprises according to the investment motivation of enterprises.

Based on investment experience (newly invested and have invested for a long time), the research sample is divided into two groups of enterprises: those with history of over five years and those who were under five years. The analysis results show that the Sig value of the Levene's test was 0.000 (< 0.05), revealing a difference in variance between the two groups of FDI enterprises. However, the Sig T-test value < 0.05 can conclude that FDI enterprises with different investment experience will bring different investment efficiency.

Research results have recorded all three factors included in the research model, including macro factors, interdisciplinary factors and intrinsic factors. This emphasizes, the success of FDI enterprises and the contribution of internal factors of investment enterprises such as scale, experience, resources, capacity, external environmental factors also play a critical role.

The results of hypothesis testing (Table 5) have shown the level of importance (or the level of impact) of macro-environmental factors on the efficiency of FDI enterprises in agriculture. The coefficient $\beta=0.42$ demonstrates the macro-environmental factors, including economic growth, exchange rate, taxes, interest rates and the degree of free trade to have the highest level of explanation for the dependent variable. In specific, the degree of importance is ranked in the following order exchange rate (0.82), interest rate (0.77) and economic growth (0.73).

The findings also showed a positive correlation between internal factors and the efficiency of FDI in agriculture in Vietnam ($\beta=0.30$). In details, factors that play an important role are the level of technology in the industry (0.76), the level of agricultural

land accumulation (0.74) and investment support policies in the industry (0.73). Over the years, the State policies concerning FDI enterprises has made progressive changes and become more comprehensive. These incentives have helped FDI enterprises in the agricultural sector to grow sustainably.

The group of interdisciplinary factors also influences the efficiency of FDI enterprises in Vietnam's agricultural industry (coefficient $\beta=0.17$). The most influential factors are economic infrastructure (0.82), social infrastructure (0.80) and administrative procedures (0.78). They are considered the most important due to being independent from the agriculture sector direct government, yet their quality helps businesses to reduce costs and increase profits.

5. Conclusion and Policy implication

5.1. Conclusion

This study builds and tests hypotheses about factors affecting the efficiency of FDI enterprises in the agricultural sector in Vietnam. Concepts have been developed and evaluated for validity and reliability. The findings showed that there is agreement between the theoretical model and experimental data. Metrics have provided vital information to assess how environmental factors affect operations and investment efficiency in the agricultural sector. It helps policymakers and researchers measure and evaluate the factors affecting the performance of investment enterprises.

5.2. Policy implications

The identification and analysis of the business environment factors on the efficiency of the agricultural sector FDI enterprise raised a few implications to improve the investment environment, the efficiency of investment enterprises and thus, attracting FDI in Vietnam's agricultural sector in the coming future.

Firstly, macro environment is a cluster of factors affecting all fields. Changing in any of these factors

often leads to adverse effects for each sector. Regarding exchange rate, the government has maintained a floating exchange rate regime with state control over the years. It affects the value of the local currency and stimulates the export of goods, increasing the investment efficiency of FDI enterprises in general and FDI. However, this control needs to be adjusted flexibly and based on the supply-demand relationship. The State also needs to settle the mechanism for controlling interest rates; effectively managing the exchange rate, foreign exchange market and gold market; ensuring the value of the Vietnamese dong; and balance of trade to improve the competitiveness of enterprises investing in the agricultural sector.

Secondly, internal factors directly influence the costs, benefits, and operational efficiency of FDI enterprises. Publicly and transparently implementing regulations on administrative procedures in terms of order and procedures, jurisdiction, prescribed time, and fee levels. It is preferable to continue with the implementation and improvement in the efficiency of the "one-stop shop" mechanism to simplify administrative procedures and create a clear and favourable legal corridor for foreign investors when investing in the agricultural sector. Fully implement Vietnam's commitments upon international economic integration. Towards land accumulation as well as private investment policies in technical infrastructure in agriculture, promulgates preferential policies, especially a support mechanism that is attractive enough for foreign investors such as tax exemption and reduction, land use fee exemption and reduction, land rent, support for investment in building large fields, concentrated raw material zones, hi-tech agricultural zones.

Thirdly, interdisciplinary factors include factors that are not in the agricultural sector but have significant influences on the profits of FDI enterprises. This is a group of factors that are not under the con-

trol of the agricultural sector, so the involvement of stakeholders is desirable to provide the best conditions for the operation of the agricultural value chain. Therefore, efforts should be made to invest in economic and social infrastructure development and minimize the completion of administrative procedures. Over the past years, Vietnam has made significant progress in infrastructure for economic development. Vietnam's global competitiveness index on infrastructure and society are ranked respectively at 77/141 and 101/141 (WEF, 2019). It requires intensification of the development of structures or work items such as transportation systems, power system, water supply, drainage and environmental sanitation systems, irrigation system while also taking into account the overall planning of regional social infrastructure, including the banking system, audit, coupling with the communication systems. Attempts at improving and developing the banking system, financial services, and audit are highly recommended to improve service quality that support agricultural enterprises in payment, money transfer, loan, inspection, and evaluation. The basis for this suggestions is due to their enabling favourable conditions for FDI enterprises to use financial services quickly, efficiently and safely in rural areas. Focus on developing human resources, gradually forming a team of skilled, disciplined and highly competitive workers to meet the needs of investors while at the same time, priority should be given to labour resources activities, human resources for industries with high technology content and high added-value in key sub-sectors.

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Summary

Nghiên cứu này tiếp cận vấn đề thu hút đầu tư trực tiếp nước ngoài (FDI) vào lĩnh vực nông nghiệp Việt Nam trên cơ sở nghiên cứu các yếu tố môi trường kinh doanh ảnh hưởng đến hiệu quả đầu tư của các doanh nghiệp đầu tư trong lĩnh vực này. Sử dụng phương pháp nghiên cứu kết hợp định tính (phỏng vấn chuyên gia) để phát triển mô hình nghiên cứu và định lượng (EFA, CFA và SEM) kiểm định các giả thuyết nghiên cứu. Kết quả phân tích dữ liệu của 68 doanh nghiệp cho thấy tồn tại sự ảnh hưởng trực tiếp của môi trường kinh doanh gồm: (1) môi trường vĩ mô; (2) yếu tố nội bộ ngành và (3) yếu tố liên ngành đến hiệu quả kinh doanh (lợi nhuận, chi phí, doanh thu xuất khẩu, thị phần) của doanh nghiệp FDI trong lĩnh vực nông nghiệp trong nước. Từ đó đề xuất một số hàm ý giải pháp nhằm hoàn thiện cơ chế chính sách phù hợp nhằm cải thiện môi trường kinh doanh, tạo điều kiện cho các doanh nghiệp hoạt động hiệu quả, đồng thời tăng cường sức hút đầu tư FDI vào ngành nông nghiệp Việt Nam trong thời gian tới.

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