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Factors Affecting FDI Intentions of Investors: Empirical Evidence from Provincial-Level Data in Vietnam

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Abstract

This study aimed to explore the factors affecting the foreign direct investment (FDI) intentions of investors into Quang Ninh province, located in the north-eastern of Viet Nam. Researchers used two main methods, namely, Exploratory Factors Analysis (EFA) and the Structural Equation Model (SEM) based on partial least squares structural equation modeling (PLS SEM) to explore and measure the impact of factors affecting the investors' FDI intentions into Quang Ninh province. The empirical analysis used data from the survey of 206 domestic and foreign investors into Quang Ninh province, including representatives of the Board of Directors, members, and management representatives at the department level, with reliable tools (SPSS 26 and SmartPLS 3.0 software). The research results identified the following factors affecting investment into Quang Ninh: FDI attraction policies have the strongest impact on the investors' FDI intentions; it is followed by infrastructure, public services and human capital with strong effects on intentions of investors' FDI; and finally the standards of living that affects the investors' FDI intentions. There is also a positive relationship between all the factors and the investors' FDI intentions. Several recommendations are further suggested to enhance attraction of foreign direct investment into Quang Ninh province.

Keywords: Investors, FDI Intentions, PLS SEM, Vietnam, Provincial Level

JEL Classification Code: B27, F13, F17

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1. Introduction

A considerable amount of literature has been published on foreign direct investment (FDI), which has attempted to explain why firms engage in FDI, why one country is preferable as a location for foreign investment, or why a firm chooses a specific mode of entry. With regard to the determinants of FDI, according to a review of FDI theories proposed by Faeth (2009), there have been numerous theoretical models and econometric studies, including early studies of determinants of FDI (Robinson, 1961; Wilkins, 1970); determinants of FDI according to the neoclassical trade theory (MacDougall, 1960; Kemp; 1964); ownership advantages as determinants of FDI (Vernon, 1966; Buckley & Casson, 1976); aggregate variables as determinants of FDI (Scaperlanda & Mauer, 1969); OLI paradigm (Dunning, 1979, 1980); theories of horizontal and vertical FDI (Markusen, 1984; Helpman, 1984); determinants of FDI according to the Horizontal FDI,

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Vertical FDI and Knowledge-Capital Model (Markusen, 1997; Markusen & Venables, 1998); determinants of FDI according to diversified FDI and risk diversification models (Rugman, 1975; Hanson et al., 2001) and policy variables as determinants of FDI (Bond & Samuelson, 1986; Black & Hoyt, 1989; Haufler & Wooton, 1999).

Among them, Dunning's OLI paradigm (1979, 1980) is one of the most preferred models that explain FDI and the location decision of multi-national enterprises (MNE) by combining ownership, location, and internalization advantages of the host country as determinants of FDI. Ownership advantages refer to the competitive advantages of the MNE engaging in FDI, which derive from the possession of proprietary technology or other unique intangible assets, making them more powerful than domestic firms. Location advantages refer to a certain location that can provide firms some specific advantages, such as the favorable tax treatments, lower production and transport costs, lower risk, and so on. Internalization advantages refer to the firm's ability to internalize its activities, and thus reducing its transaction costs. Corresponding to these three advantages, Dunning (1980, 1996) has also indicated four main types of FDI categorized by the motives behind the investment decision, which are resource-seeking FDI (seeking natural, physical or human resources), market-seeking FDI (seeking domestic, adjacent or regional markets), efficiency-seeking FDI (seeking the rationalization of production to exploit economies of specialization and scope across or along value chains), and strategic-asset-seeking FDI (to advance a company's regional or global strategy or link into foreign networks of created assets, such as technology, organizational capabilities and markets).

Since there are numerous theoretical models explaining FDI and no single theory can be applied solely, many researchers have also relied on empirical evidence to determine which factors influence FDI. Indeed, a number of empirical studies have found FDI to be determined by various factors, such as market size, factor costs, transport costs, political environment, exchange rate, trade openness, tax rates, infrastructure, property rights and others. Moreover, it is important to note that the determinants of FDI differ across world regions (Asiedu, 2002) and vary greatly between different countries (Wijeweera & Mounter, 2008), that is, while some determinants in some countries positively affect the FDI inflows, the linkages have been either negative or neutral in other countries. Therefore, it is of paramount importance for each host country to understand the factors that determine its FDI inflows, and thus taking appropriate measures to make it more attractive than other countries.

According to Ta et al. (2020), Vietnam has been successful in attracting FDI inflows since the inception of economic reform (known as "doi moi") in 1986. Since then, the country has attracted 8,000 foreign direct investment (FDI) projects with a total registered investment capital

estimated at over USD145 billion. Apart from foreign direct investment (FDI) projects, Vietnam also has 7,500 domestic investment projects, with a total registered capital estimated at nearly VND970 trillion (Do et al., 2020). The FDI sector proves to play a decisive role in Vietnamese economy, and Vietnam has become an attractive destination (Ta et al., 2020). Quang Ninh is located in the north-eastern of Vietnam with particular important and favorable geographical location for economic development. The current population is 1,185 million, of which the urban population accounts for 50.3%. The total area is 12,200 km2, of which inland area covers over 6.100 km2. Quang Ninh's sea and island zone is an unique terrain, comprising more than two thousand islands, accounting for more than two thirds of islands in the whole country, stretching along more than 250 km coastline. The socio-economic development of Quang Ninh province has made great progress in recent years thanks to mass contribution from FDI projects, especially large-scale projects. According to Quang Ninh province's Department of Planning and Investment, the province now has 124 FDI projects with a total investment over USD6.6 billion. In the first nine months of 2019, eight FDI projects were granted new investment registration certificates with a total registered capital of nearly USD16 million.

In an attempt to investigate factors that significantly affect the FDI inflows toward Vietnam at the provincial level, the theory of Dunning (1979, 1980), the OIL paradigm, is selected as the theoretical framework, however, it is adjusted to fit the scope of the study. The main purpose of this study is to identify the factors that determine the intention of FDI investors from the viewpoint of the host country. In greater details, this study investigates the determinants of intra-country FDI flows, that is, whether a province becomes more effective in attracting FDI than others by virtue of possessing certain advantages, such as natural resources, labor force, local authorities, and business environment. By using provincial-level data in Vietnam, we examine the impact of some FDI determinations that are proposed and supported in previous theoretical and empirical studies on the intention of FDI investors to choose a province as an investment destination. Quantitative research is used through the following stages: designing questionnaires and collect information from the survey questionnaire from managers of enterprises. The questionnaire was designed on a 5-point Likert scale with a variety of variables. After collecting questionnaires, the data will be encrypted, cleaned, and processed by using SPSS 26, SmartPLS 3.0 software.

2. Theoretical Framework and Hypothesis Development

The dependent variable in this study is investors' FDI intentions. According to Ajzen (1991), "intentions are assumed

to capture the motivational factors that influence a behavior" and "they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior". Moreover, in the Theory of Planned Behavior, Ajzen (1991) has also stated that "intentions to perform behaviors of different kinds can be predicted with high accuracy from attitudes toward the behavior, subjective norms, and perceived behavioral control". In the context of this study, investor's FDI intentions can be understood as an individual's motivation to exert effort to enact the investment behavior. Through the lens of the Theory of Planned Behavior (Ajzen, 1991), investors' FDI intentions can be determined by their attitude toward engaging in FDI (attitudes toward the behavior); their perception of what other people think about the investment behavior and their motivation to comply with these views (subjective norms); and their perception of the easiness of performing the investment behavior which is involved by both endogenous and exogenous factors. The independent variables in this study include infrastructure, locational advantages, human capital, FDI attraction policies, public services, and standards of living which are explained as follows.

2.1. Infrastructure

Infrastructure covers various dimensions ranging from roads, railways, ports, and telecommunication systems to the level of institutional development (Haile & Assefa, 2006). In the literature, there has been a general consensus that infrastructure quality is a crucial motivator for FDI inflows. It is stated that the provision of good quality and well-developed infrastructure in a host country enables foreign firms to minimize transportation and communication costs in their production activities, and thus increasing the productivity potential of investments in that country, and therefore stimulates FDI flows towards the country (Morriset, 2000; Jordaan, 2004). According to Krugman (1991), the transportation network is highlighted as a factor enabling firms operating in a manufacturing belt to gain wider access to input and product markets. As Dunning (1993) has put it, low costs of transport and communication are locational factors that can explain FDI in a host economy. In the same vein, other studies have also found that developed communication and transportation infrastructure has a positive influence on inward FDI flows (Loree & Guisinger, 1995; Addison & Heshmati, 2003). For developing countries, Wheeler and Mody (1992) concluded that infrastructure is one of the dominating determinants in attracting FDI. Several empirical studies have also demonstrated the significantly positive relationship between infrastructure and FDI inflows in developing countries, such as in Malaysia (Ahmed et al., 2015), Bulgaria (Sakali, 2013), Sri Lanka (Jayasekara, 2014), and Pakistan (Lodhi et al., 2013).

However, although most studies have found a significant positive impact of infrastructure on inward FDI, there still exists other studies that have shown different results. Vogiatzoglou (2007) found that infrastructure has no statistically significant effect on FDI inflows in South and East Asia while Mateev (2009) also stated that infrastructure do not seem to have a significant impact on FDI flows into the transition economies of Central and Southeastern Europe. From other perspectives, Yong and Tuck (2009) argued that infrastructure plays a crucial roles in FDI flows only in the short run after considering the event of China joining the WTO in 2001 and the inclusion of corruption variables.

2.2. Locational Advantages

According to the OIL model (Dunning, 1979, 1980), locational advantages are stated to be an important motivation for MNE to engage in FDI. Dunning (1980) has also identified four main types of FDI and one of them is resource-seeking, in which firms choose to invest in foreign markets in order to obtain superior or less costly access to the inputs of production, namely, land, labor, capital, and natural resources, than at home. Other aspects of locational advantages have also been investigated in other studies. Karluk (2000) has listed eight factors that affect the FDI into an economy and one of these factors is the strategic positioning of the country and its favorable geographic conditions. Campos and Kinoshita (2003) have divided the location determinants into three categories including (i) country-specific advantages such as low-cost labor, large domestic market, skilled labor force, adequate infrastructure; (ii) institutions, macroeconomic policy and other policies that facilitate business-operating conditions; and (iii) agglomeration economies, which arises when there are benefits from locating close to other foreign investors due to positive externalities, and have stated that the most important determinants of FDI location are institutions and agglomeration economies.

2.3. Human Capital

According to a definition provided by OECD (2001), human capital is "the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being". Other studies tends to use the term 'human capital' to refer to the quality of the labor force. In general, high-skilled labors, in comparison to low-skilled labors, handle machine and technologies more efficiently and adapt to new changes more easily, and thus having higher labor productivity, which is proved to have a positive impact on FDI inflows in some previous studies (Cushman, 1987; Woodward, 1992; Axarloglou, 2004). Numerous studies have also found a significantly positive

correlation between human capital and FDI inflows, and have acknowledged the crucial role of capital human in attracting FDI into the host country (Noorbakhsh et al., 2001; Axarloglou, 2004; Asiedu, 2006; Seetanah & Rojid, 2011; Iwai & Thompson, 2012). Moreover, in relation to the four types of FDI indicated by Dunning (1980), while market-seeking firms may not be concerned about the quality of the labor force, the efficiency seekers may find it a pivotal factor for the efficiency of their business systems, which, then, determines their investment decisions.

2.4. FDI Attraction Policies

Several studies have attempted to examine the impact of FDI policy on FDI flows. Brewer (1992) has identified various types of government policies that affect FDI, whether directly or indirectly, through their impacts on market imperfections. He has also argued that government policies can either reduce or create market imperfections and thus, while some policies can make FDI more attractive, others can make FDI less attractive (Brewer, 1992). According to Te Velde (2001a), government policies toward FDI can be classified in terms of purpose into three main categories, namely, (i) attract FDI, (ii) upgrade FDI, and (iii) enhance linkages and spillovers to domestic firms, and each category can be sub-divided into industrial policies, specifically relating to FDI, and more general macro-economic policies. In terms of FDI attraction policies, there are several policies recommended in previous studies, such as tax incentives, simplification of the tax and tariff system, fiscal incentives, efficient administrative procedures, FDI promotion and so on.

In the literature, there still exist some different findings about the impact of certain FDI attraction policies on FDI inflows. A number of studies found a positive effect of investment incentives imposed by the host governments on inward FDI flows (Loree & Guisinger, 1995; Taylor, 2000; Kumar, 2002), while other studies emphasized that fiscal incentives do affect location decisions but other incentives seem to play a secondary role (Devereux & Griffith 1998; Hines 1996). Moreover, several studies have mentioned the marginal impact of incentives. OECD (1983) stated that incentives are more likely to influence intra-regional location decisions and that overall volumes of investment are determined by the broader investment climate of the host country. Similarly, Hoekman and Saggi (2000) concluded that although incentives are useful for attracting certain types of FDI, they do not seem to work when applied at an economy wide level. Other studies suggested that incentives are generally ineffective once the role of fundamental determinants of FDI is taken into account (Caves, 1996), and that incentives are most effective for foot-loose, export-oriented investment, in countries or regions that are similar to neighboring countries or regions and in places where other aspects of the business climate are already favorable (Bergsman, 1999). The role of FDI promotion in attracting FDI inflows is also acknowledged in some studies. Wells and Wint (1990) showed that FDI promotion significantly positive relates to FDI inflows though less so in developing countries. Moran (1998) stated that FDI promotion helps address the market failure related to imperfect information both on the investors' and the host government's side. Despite different results, the general consensus among previous studies is that FDI policy do affect FDI flows and that which policies are more important in which countries depends on the specific country characteristics, the objective of the country and the entire FDI strategy.

2.5. Public Services

The term public services is generally understood to mean services which are provided by government to people living within its jurisdiction, either directly or by financing private provision of services. According to a definition provided by EU (2017), public services cover both the high visibility ones (health, education, police, welfare, etc.) and every instance in which citizens, businesses and others interact with the administration and some form of exchange of information or finance takes place (registering, licensing, applying, paying, borrowing, making an enquiry, and so on). In general, the quality of public services should always be improved to meet the demands of citizens and businesses for higher quality services, greater accessibility, and more cost- effective ways of working (EU, 2017). With regard to the relationship between public services and the efficiency in attracting FDI, recent studies have considered the quality of public services as a component of government effectiveness, and, then, have stated the significantly positive effect of it on FDI inflows (Kaufmann et al., 2004, Kurul & Yalta, 2017). Other studies have also stated that the poor quality of public services is one of the important factors that can hold back FDI (Dollar & Easterly, 1998; OECD, 2002). In addition, some studies have considered the level of bureaucratic inefficiency within the government is an aspects of non-transparency, which can impose additional costs on businesses and thus reducing a country's attractiveness to foreign investors (OECD, 1997b; Drabek & Payne, 2002).

2.6. Standards of Living

The term standards of living has come to be used to refer to the amount and quality of material goods and services available to a given population. In general, this concept includes income, gross domestic product, national economic growth, economic and political stability, political and religious freedom, environmental quality, climate, and safety.

In relation to the relationship between standards of living and FDI, a number of studies have revealed that living standards is one of the determinants of FDI. UNCTAD (1998), for example, has made an analysis in World Investment Report, in regards to the economical, political, and environmental factors affecting FDI, and has stated that life standards is one of the host country determinant. Similarly, Yasmin et al. (2003) have studied the volume and factors affecting FDI in developing countries with a sample of 15 developing countries, and, then, have shown that urbanization, GDP per capita, standard of living, inflation, current account and wages has significant impact on FDI. They have also stated that profit-seeking foreign investors appear to be attracted more towards countries with higher incomes leading to higher standard of living and greater demand for foreign goods (Yasmin et al., 2003). From different point of view, several studies have demonstrated the role of standard of living as an indicator of countries' competitiveness (IMD World Competitiveness Yearbook, 2000; Madzík, Piteková, and Daňková, 2015), which may imply its high level of productivity, thus offering greater returns on investment, which matters to foreign investors when choosing a country as an investment destination.

Based on the aforementioned discussion, this study will examine the linkage between these above factors and investors' FDI intentions in the context of a developing country, Vietnam. The theoretical framework is proposed in Figure 1 as below:

Considering the findings in previous studies, we expect significantly positive impacts of these factors on the intention of FDI investors to invest into a province as the following hypotheses:

H1: The infrastructure of a province will positively affect the intention of FDI investors to invest into a province.

H2: The locational advantages of a province will positively affect the intention of FDI investors to invest into a province.

H3: Human capital of a province will positively affect the intention of FDI investors to invest into a province.

H4: FDI attraction policies will positively affect the intention of FDI investors to invest into a province.

H5: The public services will positively affect the intention of FDI investors to invest into a province.

H6: The living standards will positively affect the intention of FDI investors to invest into a province.

3. Methodology

The technique for creation of attributes of this research is based on pilot sample, judgment and experts of the researchers according to the theoretical framework and hypotheses development above. The structured questionnaire is employed and the communication approaches selected are both "survey via personal interview" and "self- administered survey". The study has chosen the form of interview as a method to collect data. According to Hair et al. (2016), the minimum sample size should be 10 times the maximum number of arrowheads pointing at a latent variable
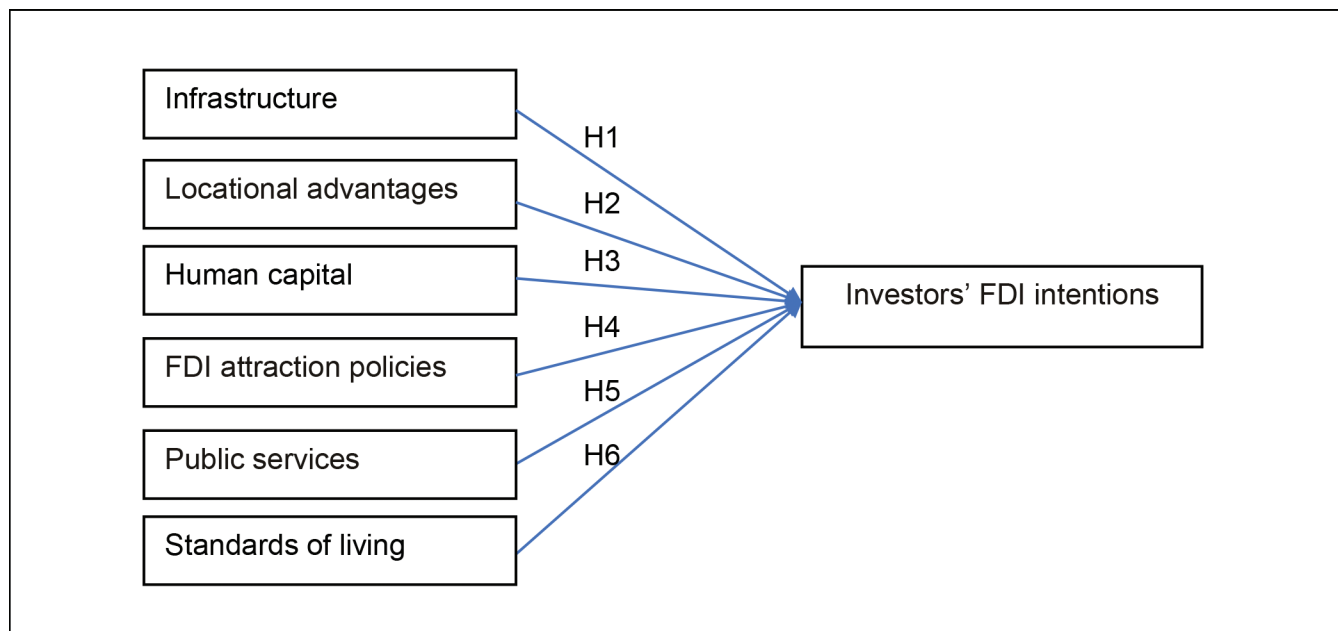

Figure 1: The Proposed Theoretical Framework

anywhere in the PLS path model. This study uses a survey questionnaire to elicit perceptions/opinions about intention of FDI investors. The questionnaire was distributed firstly to five experts at the Department of Planning and Investment of Quang Ninh Province who have a deep understanding of the situation of attracting foreign investment into Quang Ninh province and five senior lecturers in economics and business administration at Vietnam's top economic universities, with a deep understanding of the theory of attracting foreign investment. Afterward, the study has conducted a survey with a total of 95 FDI enterprises with questionnaires sent to domestic and foreign investors into Quang Ninh province including: representatives of the Board of Directors, members, and management representatives at the department level. Out of a total of 285 samples, the authors obtained 226 responses, of which 20 were not suitable (lack of information); finally, there were 206 valid samples, which were analyzed in the next steps.

4. Data Analysis

4.1. Testing the Reliability of the Scales

This study examines the impact of the six factors (scales) to the investors' FDI intentions (II), including: Infrastructure (I), Locational advantages (L), Human capital (H), FDI attraction policies (F), Public services (P), and Living standards (S). In particular, the factor I is measured by five observed variables (I1–I5), the factor L is measured by four observations (L1–L4), the factor H is measured by four observed variables (H1–H4), the factor F is measured by four observations (F1–F4), the factor P is measured by four observations (P1–P4), the factor S is measured by five observations (S1–S5), and the investors' FDI intentions is measured by four observed variables (II1-II4).

This study uses the Cronbach's Alpha (CA) analysis to determine the reliability of the valid variables for the scales (including infrastructure, locational advantages, human capital, FDI attraction policies, public services, and living standards) as well as the investors' FDI intentions. All coefficients of CA are higher than 0.7 and the values of Corrected Item-Total Correlation are higher than 0.4, the reliability test stand reached. The variables that are not suitable are excluded from the model including (L1-L4), H2, P4, and S1 (see Table 1).

4.2. Exploratory Factor Analysis

After analyzing Cronbach's Alpha, five factors (independent variables) with 17 observed variables were included for Exploratory factor analysis (EFA). From Table 2, KMO test coefficient calculated from the sample is 0.785 < 1.0. Thus, the sample size of the survey is eligible to conduct EFA. Bartlett's Test of Sphericity value is significant

Table 1: Survey Scale Items for the Constructs

Factor	Cronbach's alpha	Variables	Corrected Item-Total Correlation
Infrastructure (I)	0.819	I1	0.655
		I2	0.656
		I3	0.531
		I4	0.588
		I5	0.632
FDI attraction policies (F)	0.849	F1	0.701
		F2	0.720
		F3	0.663
		F4	0.688
Human capital (H)	0.794	H1	0.526
		H2	0.143
		H3	0.612
		H4	0.657
Locational advantages (L)	0.596	L1	0.370
		L2	0.214
		L3	0.603
		L4	0.356
Living standards (S)	0.872	S1	0.124
		S2	0.710
		S3	0.692
		S4	0.739
		S5	0.638
Public services (P)	0.770	P1	0.557
		P2	0.573
		P3	0.627
		P4	0.162
Investors' FDI Intentions (II)	0.865	II1	0.679
		II2	0.710
		II3	0.736
		II4	0.735

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.785
Bartlett's Test of Sphericity	Approx. Chi-Square	1809.742
	df	171
	Sig.	0.000

with *P*-value = 0,00. This value indicates that the observed variables are correlated with respect to the total number of observations.

4.3. PLS Structural Model Results

In the next step, the research will examine the overall explanatory power of the structural model, as well as the amount of variance explained by the independent variables. Then, we examined the magnitude and strength of its paths, where each of our hypotheses corresponds to a specific structural model path. According to Henseler et al., (2015), we conduct the test with sample size Bootstrapping

$N = 5000$ (Henseler et al., 2015). With *P*-value < 1%, 5%, and 10%, the proposed hypotheses are considered as statistically significant at the 99%, 95% and 90% reliability levels.

The results on Table 3 and Figure 2 show that the structural model provided adequate explanatory and the independent variables have significant impacts on the dependent variable. From the path analysis, the result indicates that FDI attraction policies have the strongest impact on investment intentions of FDI enterprises ($t = 0.398$, $p < 0.001$); Infrastructure, public services and human capital have the following strong effects on investment intentions of FDI enterprises, particularly for infrastructure with results ($t = 0.322$,

Table 3: Hypothesis Result

|	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	*T* Statistics (|O/STDEV|)	*P* Values	Conclusion
FDI Attraction Policies → Investers' FDI Intentions	0.398	0.397	0.023	17.191	0.000	Accepted
Human Capital → Investers' FDI Intentions	0.285	0.284	0.028	10.089	0.000	Accepted
Infrastructure → Investers' FDI Intentions	0.322	0.322	0.027	11.895	0.000	Accepted
Public Services → Investers' FDI Intentions	0.326	0.325	0.026	12.627	0.000	Accepted
Standards of Living → Investers' FDI Intentions	0.246	0.246	0.024	10.109	0.000	Accepted
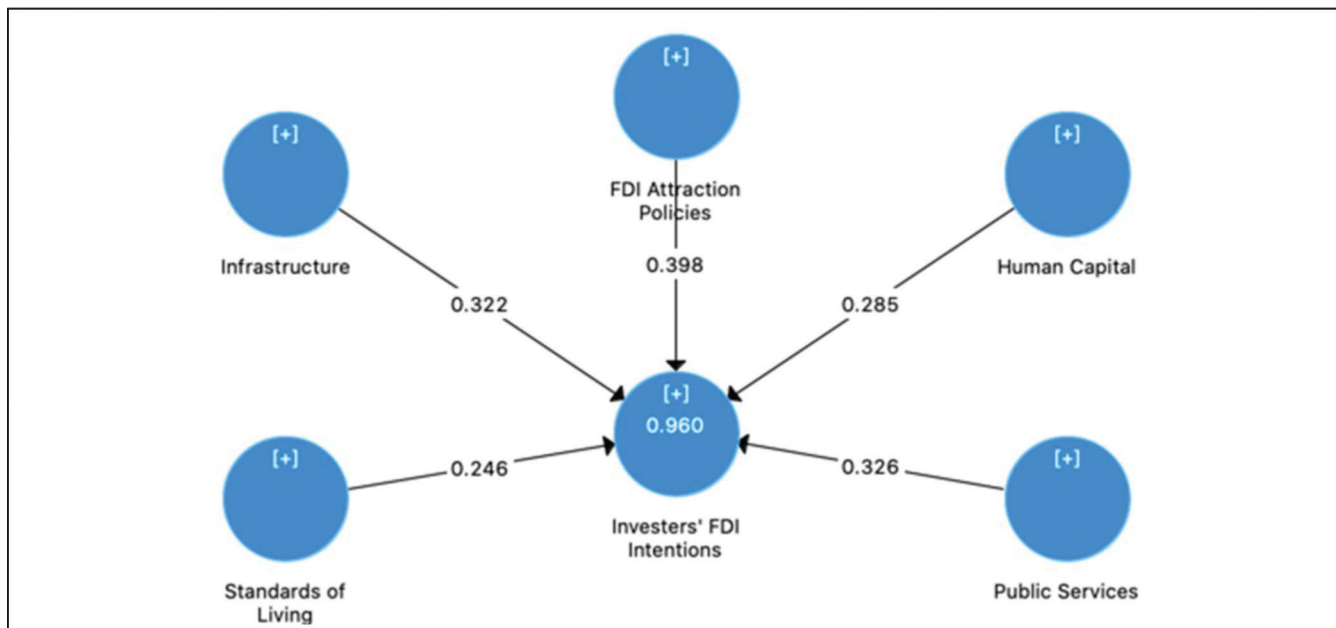
Figure 1: The Proposed Theoretical Framework

$p < 0.001$), public services with results ($t = 0.326$, $p < 0.001$), human capital have results ($t = 0.285$, $p < 0.001$); and finally the standards of living that affects investment intentions ($t = 0.246$, $p < 0.001$). All *P*-Values are equal to 0 ($p < 0.001$), proving that the results of testing the reliable hypotheses and all the hypotheses are accepted.

5. Conclusion and Policy Recommendations

FDI investment attraction and promotion activities would always be actively renewed toward real effectiveness based on two-dimensional viewpoint: Quang Ninh is willing to create the best conditions for investors who also have great contributions to Quang Ninh. Quang Ninh province has carried out various solutions to attract and support FDI projects, like issuing attractive policies and competitive investment incentives, arranging sufficient capital sources for improvement of socio-economic infrastructure, technical infrastructure at industrial and economic zones, enhancing investment promotion and attraction of FDI projects, especially large-scale projects and high technology application.

This study has developed many steps for testing the investors' FDI intentions at Quang Ninh. The research uses the exploratory factor analysis model EFA, the structural equation model based on partial least squares (PLS-SEM) to analyze the factors affecting the attraction of FDI in Quang Ninh province. The result shows that five hypothesizes are supported by the mode, and draw conclusions about the influence and influence level of the groups of factors as well as the influence of the observed variables. The research results identified the following factors affecting investment into Quang Ninh: FDI attraction policies have the strongest impact on the investors' FDI intentions; infrastructure, public services and human capital have the following strong effects on intentions of investors' FDI; and finally the standards of living that affects on the investors' FDI intentions. Group of solutions to enhance attraction of foreign direct investment into Quang Ninh province are: Promoting the policy of attracting investment into Quang Ninh province; Completing infrastructure system; Improving the quality of human resources; Improving the quality of public services; Completing socio-economic development planning; and Innovating, promoting and improving the effectiveness of investment promotion.

From the limitations of this paper, we suggest directions for future research. The sample used in this study was extracted from Quang Ninh Province, so it may not represent all FDI enterprises in Vietnam. In addition, the fact that each questionnaire was answered by only managers can be seen as the third limitation because a single respondent is likely to cause common method variance.

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