GMR
The Original

THE IMPACT OF FOREIGN DIRECT INVESTMENT AND GENETIC POPULATION AGING ON ECONOMIC GROWTH: AN EMPIRICAL STUDY IN VIETNAM

Mai Diem Lan Huong[1], Tran Huyen Trang[2], Tran Thi Thanh Xuan[3], Nguyen Mai Huong[4], Nguyen Manh Cuong[5]

[1,4]Southern Luzon State University of Philippines
[1]School of Economics and Business, Nha Trang University
[3]Faculty of Business Management, University of Transport Technology, Hanoi, Vietnam.
[2,4,5]International School of Thai Nguyen University, Vietnam
Email: [1]lmai@slsu.edu.ph, [1]huongmdl@ntu.edu.vn, [2]trangtranhuyen2208@gmail.com, [3]xuanttt@utt.edu.vn, [4]hmai@slsu.edu.ph, [4]maihuong1206@gmail.com, [5]cuongbiz@tnu.edu.vn
[3]Orcid: https://orcid.org/0000-0002-5716-0318, [4]Orcid: https://orcid.org/0009-0009-8972-7655

ABSTRACT
This study aims to assess the impact of foreign direct investment (FDI) and population aging on economic growth in Vietnam in the period 1996 – 2024 using the Vector Error Correction Model (VECM). The results of the study show that FDI and population aging represented by average life expectancy both have a negative impact on long-term economic growth. In the short term, FDI has a negative and statistically significant effect on economic growth, while the average life expectancy has not shown a significant impact. In addition, the results of the variance decay show that shocks from FDI have a great influence on long-term economic growth fluctuations. From there, the study suggests that Vietnam needs to improve the quality of FDI attraction, strengthen the link between the FDI sector and domestic enterprises, and proactively adapt to the aging population to promote economic growth in the coming time.

KEYWORDS: FDI, population aging, economic growth, Vietnam

1. INTRODUCTION

In the context of globalization and population restructuring, FDI and population aging are becoming two factors that have an important influence on the economic growth of many countries, especially developing economies such as Vietnam. Over the years, Vietnam has achieved a relatively high economic growth rate thanks to its deep international integration and strong attraction of FDI inflows. According to the OECD (2025), FDI has contributed to promoting exports, expanding production and supporting Vietnam's industrialization process. However, the spillover effect of technology and linkages between the FDI sector and domestic enterprises is still limited, making the substantive contribution of FDI to long-term growth disproportionate.

In addition, Vietnam is entering a period of population aging at an increasingly rapid rate. According to the World Bank (2024), the average life expectancy of Vietnamese people is continuously increasing, while the birth rate has tended to decline sharply in recent years. An ageing population can put pressure on the workforce, social security system, and economic productivity, which in turn affects economic growth in the long term. However, previous studies have not reached a consensus on the impact of FDI and population ageing on economic growth, especially in the case of Vietnam.

Stemming from that practice, this study was conducted to assess the impact of FDI and population aging on economic growth in Vietnam through the VECM. The results of the study are expected to provide more empirical evidence and policy implications to improve the quality of FDI attraction and effectively adapt to the aging population in the context of sustainable economic development.

2. LITERATURE REVIEW

2.1. Relationship between FDI and economic growth

According to OECD (1996), “FDI reflects the objective of obtaining a lasting interest by a resident entity in one economy (‘‘direct investor’’) in an entity resident in an economy other than that of the investor (‘‘direct investment enterprise’’)”. The recent economic growth theories have predicted that FDI and economic growth go together, which further creates the situation of a sustainable economy in those countries where foreign capital inflows (De Jager, 2004). The role of FDI should be considered in economic progress, production improvement, and employment creation. Higher FDI flows worldwide reflect a better economic climate, economic reforms, and investment-friendly policies. Many emerging economies have recognized FDI as their primary source of growth (Hoang et al.,2010).

Many projects affirm that FDI promotes economic growth through capital addition, technology transfer and productivity improvement. Fazaalloh (2024) research in Indonesia with data on 33 provinces in the period 2010–2019 shows that FDI has a positive impact on economic growth, especially in the processing and service sectors. Epor (2024) studies Brazil, Nigeria and Vietnam in the period 1990–2021 using the ARDL and FMOLS methods also concluded that FDI has a positive impact on long-term economic growth in these countries. In addition, Chornyi (2026) research in Poland, Ukraine and Vietnam in the period 2000–2023 shows that FDI contributes to promoting growth through expanding investment, improving production capacity, and improving technology transfer.

In addition to studies confirming the positive role of FDI, many recent studies show that FDI can create a negative impact or effectively degrade economic growth under certain conditions. Ang, J. B. (2009), using a Vector Error Correction Model (VECM), assessed the impact of FDI on Thailand's economy during 1970–2004 and found a negative effect of FDI on economic growth. Similarly, Bouchoucha, N. and Ali, W. (2019), investigating the conditional effect of FDI on economic growth in African countries between 1996 and 2016, emphasized that positive effects of FDI depend on the presence of strong institutional quality. Using the Pedroni panel cointegration test, they discovered a negative relationship between FDI and economic activity in these contexts. Khan et al. (2024) assessed the impact of FDI on Afghanistan's economic growth during the period 1990–2019 through the ARDL model. The results show that the F-bound cointegration test confirms the long-run relationship among the variables. The long-run and short-run results reveal that foreign direct investment has a significant negative impact on economic growth in the long run.

2.2. The relationship between population aging and economic growth

Recent studies show that population aging tends to negatively impact economic growth through a declining workforce, reduced savings, and increased fiscal pressures. In these studies, life expectancy is often used as a proxy for population ageing, as the increase in life expectancy reflects a trend toward a longer population and an increasing proportion of older people.

Kasnauskienė and Michnevič (2017) studied Central and Eastern European countries in the period 1996–2013 using a tabular data regression model, which uses the mean life expectancy variable to represent population ageing. The results showed that the increase in life expectancy had a negative impact on economic growth, while the working-age population drove growth. Huang, Lin et al. (2019) studied Taiwan in the period 1981–2017 using the ARDL model and cointegration testing. The results show that population aging has a negative effect on economic growth in the long term. The study found that increasing life expectancy increases the proportion of the dependent population, which in turn puts pressure on public spending and reduces growth efficiency. Yang, Zhang and Chen (2021) studied China in the period 1990–2019 using the Dynamic Panel Model and the GMM method. The results show that population aging reduces the size of the workforce, decreases the accumulation of human capital, and inhibits economic growth. The authors emphasize that the rate of increase in average life expectancy faster than the rate of improvement in labor productivity can create a "demographic burden" on the economy. Kotschy and Bloom (2023) studied OECD countries in the period 1980–2020 using econometric modeling, table data, and long-term growth analysis. The results show that population aging reduces the growth rate of per capita income due to a sharp decline in the proportion of the working-age population. However, the study also suggests that this negative impact can be mitigated if older people maintain their health and ability to work longer.

In summary, existing studies on the impact of FDI, population aging to Vietnam's economic growth show different conclusions about the impact of these factors on economic growth. Therefore, this issue needs to be studied, analyzed and evaluated cautiously.

3. METHODOLOGY

3.1. Research methodology

The study employs the Johansen cointegration analysis and the Vector Error Correction Model (VECM) estimation method to examine the short-run and long-run impacts of FDI, population aging to Vietnam's economic growth. The research is conducted through the following steps:

Step 1: Descriptive Statistics: Compute basic statistical indicators for each variable to understand distributional characteristics.

Step 2: Unit Root Testing: Apply the Augmented Dickey-Fuller test (ADF) to determine the order of integration for each time series.

Step 3: Cointegration Testing: Use the Johansen trace and maximum eigenvalue tests to verify the existence of long-run equilibrium relationships among variables.

Step 4: Lag Selection: Determine the optimal lag length for the VECM model using Akaike Information Criterion (AIC) and other selection metrics.

Step 5: Model Estimation: Estimate the VECM model to quantify both short-run dynamics and long-run relationships.

Step 6: Diagnostic Checking: Assess model robustness via residual autocorrelation tests, heteroskedasticity tests, and model stability analysis.

Step 7: Analysis Forecasting: Conduct impulse response functions and variance decomposition to evaluate the effect of variables over time.

3.2. Research model and data

The empirical model investigating the impacts of FDI, population aging to Vietnam's economic growth can be specified as follows:

$$LGDP_t = \alpha + \sum_{i=1}^{k} \beta LFDI_{t-i} + \sum_{i=1}^{k} \beta LSP_{t-i} + \varepsilon_t$$

In which: ε_t denotes the stochastic error term.

t represents the time variable in years, ranging from 1996 to 2024.

The variables in the model are collected from reputable sources, which are shown in Table 1 below:

Table 1. Research data

Variable Name	Description	Source
LGDP	Logarithm of GDP (current US$)	The World Bank Development Indicators Database
LFDI	Logarithm of Foreign direct investment, net inflows (BoP, current US$)	The World Bank Development Indicators Database
LSP	Logarithm of Population ages 65 and above (% of total population)	The World Bank Development Indicators Database

4. Data Analysis

4.1. Descriptive Statistics

Table 2. Descriptive statistics of the variables used

	LGDP	LFDI	LSP
Mean	10.82879	9.253088	1.859674
Median	10.76067	9.379306	1.864725
Maximum	11.67796	10.30471	1.877273
Minimum	9.798879	4.602060	1.829625
Std. Dev.	0.566406	1.187778	0.012851
Skewness	-0.069466	-2.136667	-0.942793
Kurtosis	1.774354	7.927619	2.619619
Jarque-Bera	2.472454	69.13208	6.012705
Probability	0.290478	0.000000	0.049472
Sum	422.3230	360.8704	72.52727
Sum Sq. Dev.	12.19098	53.61106	0.006275
Observations	39	39	39

Source: Results extracted from Eviews software

The descriptive statistical table shows that the study data consisted of 39 observations with three variables LGDP, LFDI, and LSP. In which, LGDP has an average value of 10.82879 and a standard deviation of 0.566406, reflecting relatively stable economic growth. The Jarque–Bera test for Prob = 0.290478 > 0.05, indicates that this variable follows the standard distribution.

The LFDI variable has an average value of 9.253088 and the highest standard deviation (1.187778), indicating that FDI inflows fluctuate sharply over the years. The large negative skewness coefficient (-2.136667) and high Kurtosis (7.927619) reflect the left-skewed and pointed distribution. The Jarque–Bera result with Prob = 0.000000 < 0.05 shows that this variable does not follow the standard distribution.

For the LSP variable, the mean value reached 1.859674 with a low standard deviation (0.012851), indicating a fairly stable change in mean lifespan. However, the Jarque–Bera test for Prob = 0.049472 < 0.05 so this variable also does not follow the standard distribution at the 5% significance level.

4.2. Unit Root Test of Data Series

Table 3: ADF inspection results

Lag length	Lag length 0		Lag length 1		Result
	t-statistics	p-value	t-statistics	p-value	
LGDP		0.9573			(I1)

	0.052678		-4.996718	0.0002	
LFDI	-3.200788	0.0279	-10.23737	0.0000	(I1)
LSP	-1.799938	0.6845	-7.373881	0.0000	(I1)

Source: Results extracted from Eviews software

The results of the ADF test showed that in the root chain, the LGDP and LSP variables had p-values greater than 0.05, so they did not stop, while the LFDI variable was statistically significant at 5%. However, after taking the wrong order of 1, all three variables had p-values less than 0.05, indicating that the strings all became stopped. Therefore, the LGDP, LFDI, and LSP variables are all identified as tier 1 integration, suitable for further co-linking testing and the VECM model.

4.3. Johansen Cointegration Test and Long-Run Relationship

Table 4. Results of Unrestricted Cointegration Rank Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.841752	85.17997	35.01090	0.0000
At most 1	0.226536	16.96708	18.39771	0.0784
At most 2 *	0.182654	7.462645	3.841466	0.0063
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.841752	68.21289	24.25202	0.0000
At most 1	0.226536	9.504433	17.14769	0.4445
At most 2 *	0.182654	7.462645	3.841466	0.0063
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Results extracted from Eviews software

The results of your Johansen cointegration test show that the model has a cointegrating equation at a significance level of 5%. This means that there exists a long-term equilibrium relationship between the variables, so you can continue to use the Vector Error Correction Model.

Table 5: Normalized cointegrating coefficients

LGDP	LFDI***	LSP***
1.000000	-0.608340	-18.34737
	(0.08648)	(6.55319)
	7.0085	2.7998

Notes: *** represents a 1% significance level, ** represents a 5% significance level, * represents a 10% significance level, and the standard error in ( ) & t-statistic in [ ].

Source: Results extracted from Eviews software

The results of the co-linked vector estimation show that in the long term, both FDI (LFDI) and population aging represented by average life expectancy (LSP) have an inverse impact on economic growth (LGDP). Specifically, when LFDI increases by 1%, LGDP decreases by about 0.608340%, while when LSP increases by 1%, LGDP decreases by about 18.34737%, keeping other factors unchanged. The variables are statistically significant at 1%, as shown by the t-statistic value being greater than the critical value. This results are consistent with the study by Bouchoucha, N. and Ali, W. (2019), Khan et al. (2024), Yang, Zhang and Chen (2021), Kotschy and Bloom (2023).

The long-term relationship between variables is described by the following equation:

LGDP = - 0.608340 * LFDI - 18.34737 * LSP + ε

With the adjustment coefficient of long-term equilibrium:

D(LGDP) = -0.317896

An ECM error adjustment factor of -0.317896 indicates that approximately 31.79% of the deviation from the long-term equilibrium will be adjusted in each period to bring the system back into equilibrium.

The results of the study show that, in the long term, FDI has a negative impact on Vietnam's economic growth. This result can be explained by the fact that the quality of FDI inflows in Vietnam is not really high and is still mainly focused on labor-intensive, processing and assembly industries with low added value. For many years, Vietnam has strongly attracted FDI into export activities that employ cheap labor and low-value-added final assembly. The report found that about 85% of jobs in Vietnam's export sector are direct manufacturing jobs and low-skilled labor, while nearly 85% of jobs in the manufacturing industry are low-skilled labor. This shows that FDI has not created a strong change in technology and labor productivity for the economy.

In addition, although FDI inflows into Vietnam are continuously increasing, the effect of technology spillover and linkage with domestic enterprises is still limited. The OECD (2025) believes that FDI has contributed to the expansion of Vietnam's trade and exports, with FDI inflows in the period 2015-2023 equivalent to about 4.8% of GDP, higher than many other ASEAN countries. However, the OECD also emphasized that FDI in Vietnam "has little success in developing linkages with the domestic economic sector". This implies that domestic enterprises have not made good use of the spillover effect from the FDI sector, thereby limiting the substantive contribution of FDI to long-term growth.

In addition, the heavy reliance on the FDI sector can also increase the vulnerability of the economy. According to Vietnam's Ministry of Planning and Investment, in 2024, the FDI sector will create a trade surplus of about 50.3 billion USD and continue to account for a large proportion of Vietnam's exports. However, the heavy reliance on foreign enterprises may cause the economy to face the risk of transferring profits abroad, transfer pricing and declining the development ability of domestic enterprises. This may be the reason why FDI has not yet created a clear positive impact on economic growth in the long term.

The results of the study also show that, in the long term, population aging, represented by the average life expectancy variable, has a negative impact on Vietnam's economic growth. This reflects the fact that the increase in life expectancy leads to an increasingly pronounced trend of population aging. According to the AMRO report (2024), the average life expectancy of Vietnamese people has increased from 69.2 years in 1990 to about 74.5 years in 2022, while the fertility rate has dropped sharply from 3.6 children/woman to 1.9 children/woman in the same period. This change shows that Vietnam is rapidly entering a period of population aging. Population aging causes a relative shrinking of the workforce of productive age, thereby negatively affecting economic growth. As the proportion of elderly people increases, the economy faces the risk of labor shortages, declining productivity and increasing population dependence. At the same time, an ageing population also increases pressure on social security, health insurance and pension systems. In the context that Vietnam is still a developing economy with limited labor productivity, the increase in life expectancy has not really translated into an economic advantage, but on the contrary, it can create a "demographic burden" on long-term growth. The OECD (2025) also warns that unfavorable demographic trends are becoming a major challenge to Vietnam's productivity growth and economic growth in the future.

4.4. Optimal Lag Selection

Table 6. VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	194.8522	NA	4.72e-09	-10.65846	-10.52650	-10.61240
1	226.9386	57.04240	1.31e-09	-11.94103	-11.41319	-11.75680
2	250.8945	38.59560*	5.79e-10*	-12.77192*	-11.84820*	-12.44951*

Source: Results extracted from Eviews software

The results of the latency selection according to the Akaike Information Criterion (AIC) criterion show that the smallest AIC value is -12.77192 at a latency of 2. According to the principle of the AIC criteria, the model with the smallest AIC value will be selected because it reflects the best balance between the suitability of the model and the number of estimation parameters. Therefore, the study selected the optimal latency of 2 for the VAR/VECM model. This selection of latency helps the model to fully reflect the dynamics of the study variables, while enhancing the reliability of co-linked tests, VECM estimation, and subsequent analyses such as impulse reaction functions and variance decay.

4.5. Estimation of the VECM Model

Table 7: Estimation results of the VECM model

D(LGDP(-1))	D(LFDI(-1))***	D(LSP(-1))	C
1,000000	-0.157602	8.346651	-0.028665
	(0.04769)	(6.07556)	
	[-3.30469]	[1.37381]	

Notes: *** represents a 1% significance level, * represents a 10% significance level, and Standard Error in ( ) & t-statistic in [ ].
Source: Results extracted from Eviews software

From the results of VECM estimation in Table 7, the existence of co-integration vector represents the short-run equilibrium relationship between the variables in the model and is described by the following equation:

LGDP = - 0.028665 - 0.157602* LFDI + 8.346651* LSP + ε

The VECM estimation results show that in the short term, the variable D(LFDI(-1)) has a negative impact on D(LGDP) with a coefficient of -0.157602 and is statistically significant at 1%. This implies that when FDI increased in the previous period, economic growth in the current period tends to decrease in the short term. This result is consistent with the study of Bouchoucha, N. and Ali, W. (2019), Khan et al. (2024). Meanwhile, variable D(LSP(-1)) has a positive coefficient of 8.346651 but is not statistically significant because the t-statistic value is only 1.37381. Therefore, the average life expectancy has not shown a clear impact on economic growth in the short term. Thus, in the short term, only FDI has a significant impact on economic growth, while population aging has not had a statistically significant impact.

4.6. Diagnostic Checking

(a) Stability Test of the Model

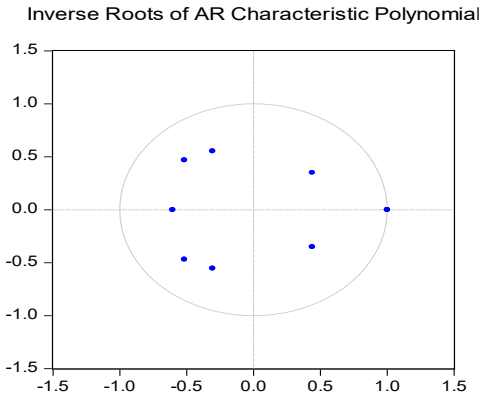

Figure 1. Inverse Roots of AR Characteristic Polynomial

Source: Results extracted from Eviews software

The inverse solution graph of the AR-specific polynomial shows that all solutions are inside the unit circle. This proves that the VECM model satisfies the stability condition and does not appear to be outside or on the unit circle. Therefore, the model is considered stable and suitable for analyzing short-term dynamics as well as long-term relationships between variables.

(b) Residual Portmanteau Tests for Autocorrelations

Table 8. Results of Residual Portmanteau Tests for Autocorrelations

Lags	Q-Stat	Prob.*	Adj Q-Stat	Prob.*	df
1	5.636963	---	5.802756	---	---
2	12.11068	---	12.66882	---	---
3	19.81742	0.1790	21.09807	0.1337	15
4	24.31301	0.4438	26.17373	0.3444	24
5	28.42331	0.6945	30.96909	0.5686	33

Source: Results extracted from Eviews software

The results of the Residual Portmanteau test show that the Prob. values at delays 3 to 5 are greater than 0.05. Specifically, the value of Prob. reached 0.1790; 0.4438 and 0.6945. This shows that there is no residual self-correlation in the VECM model at a significance level of 5%.

(c) Residual Heteroskedasticity Tests

Table 9. Results of Residual Heteroskedasticity Tests

Joint test:		
Chi-sq	df	Prob.
90.65053	84	0.2907

Source: Results extracted from Eviews software

The results of the Residual Heteroskedasticity Test showed that the Prob. value of the joint test was 0.2907, which was significantly greater than the 5% significance. This shows that the VECM model does not have heteroskedasticity.

(d) Shock Transmission Mechanism and Variance Decomposition

Table 10. Results of Shock Transmission Mechanism and Variance Decomposition

Variance Decomposition of D(LGDP):				
Period	S.E.	D(LGDP)	D(LFDI)	D(LSP)
1	0.026629	100.0000	0.000000	0.000000
2	0.032406	73.74978	21.14688	5.103340
3	0.032871	71.92930	21.30285	6.767849
4	0.037838	54.29875	34.96348	10.73777
5	0.040700	47.12629	40.02371	12.85000
6	0.043358	42.07256	43.93372	13.99372
7	0.045848	37.65065	46.96656	15.38279
8	0.048210	34.09803	49.80069	16.10128
9	0.050202	31.49634	51.65456	16.84911
10	0.052292	29.04789	53.43521	17.51690

Source: Results extracted from Eviews software

The results of variance decay for variable D(LGDP) show that in the early stages, fluctuations in economic growth are mainly explained by the shock of the variable itself. Specifically, in the first period, 100% of the fluctuations of D(LGDP) are explained by D(LGDP) itself, while variables D(LFDI) and D(LSP) have not contributed. However, over time, the impact of shocks from FDI and average life expectancy is increasing. By the 10th period, the volatility rate of D(LGDP) explained by itself decreased to about 29.05%, while the shock from D(LFDI) explained about 53.44% and D(LSP) explained about 17.52%. This result shows that FDI is the factor with the strongest impact on long-term economic growth fluctuations. At the same time, the aging of the population represented by the average life expectancy also has a certain effect on economic growth, albeit to a lesser extent than FDI. This implies that in the long term, Vietnam's economic growth is significantly impacted by external shocks related to foreign investment inflows and changes in population structure.

5. CONCLUSIONS

The results of the study show that FDI and population aging have a negative impact on Vietnam's economic growth in the long term. In the short term, FDI has a negative impact and the aging of the population is not statistically significant. Therefore, in order to improve the quality of growth and ensure sustainable development in the long term, Vietnam needs to synchronously implement many solutions to attract investment, develop human resources and adapt to the trend of population aging.

Firstly, transforming the strategy of attracting FDI from "quantity" to "quality"

Over the years, Vietnam has made many achievements in attracting FDI, but most of the capital flows are still focused on the outsourcing, assembly and low-cost labor industries. This makes the added value created in the country still low and the technology spillover effect is not high. Therefore, Vietnam needs to strongly shift to a selective FDI attraction strategy, prioritizing high-tech projects, clean technology, innovation, digital transformation, renewable energy and large value-added industries. In addition, it is necessary to develop a set of criteria for assessing the quality of FDI based on the level of technology transfer, localization rate, the ability to create links with domestic enterprises and contribute to sustainable development. FDI projects that use outdated technology, consume a lot of energy or pollute the environment need to be strictly controlled to avoid Vietnam becoming a recipient of low-value manufacturing industries and high environmental risks.

Secondly, promote linkages between FDI enterprises and domestic enterprises

One of the major limitations of the FDI sector in Vietnam is that the level of linkage with domestic enterprises is still weak, making the spillover effect of technology and productivity not as expected. Therefore, the State needs to promote the development of supporting industries, improve the production capacity of domestic enterprises to participate more deeply in the supply chains of multinational corporations. The Government needs to have programs to support domestic small and medium-sized enterprises in terms of capital, technology, quality standards and governance to improve their ability to connect with FDI enterprises. At the same time, it is necessary to encourage FDI corporations to carry out technology transfer, labor training and prioritize the use of domestic suppliers. The formation of industry clusters and innovation centers will also contribute to strengthening the cohesion between the FDI sector and the domestic economic sector.

Third, improve the quality of human resources and the capacity to absorb technology

The results of the study show that Vietnam has not effectively taken advantage of the benefits of FDI due to its limited capacity to absorb technology. Therefore, improving the quality of human resources is an urgent requirement to improve labor productivity and increase the ability to receive new technologies. The State needs to step up education reform and vocational training innovation in the direction of associating with the needs of the labor market and the Fourth Industrial Revolution. In particular, it is necessary to focus on training digital skills, technology skills,

automation, artificial intelligence and modern management. In addition, it is necessary to strengthen cooperation between universities, research institutes and businesses to promote applied research and innovation in the country.

Fourth, improve the mechanism for managing and supervising the activities of FDI enterprises

The fact that some FDI enterprises carry out transfer pricing, tax evasion and transfer profits abroad has effectively reduced the actual contribution of FDI to Vietnam's economic growth. Therefore, the management agency needs to improve the legal system on investment, taxation and competition to enhance transparency and control the operation of FDI enterprises. It is necessary to improve the capacity of inspection, examination and application of digital technology in tax administration to limit transfer pricing. At the same time, it is necessary to strengthen the requirements of social responsibility, environmental protection and efficient use of resources for FDI enterprises to ensure sustainable development goals.

Fifth, proactively adapt to the trend of population aging

Vietnam is rapidly entering a period of population aging at a high rate in Asia. This requires the State to soon develop a long-term adaptation strategy to limit the negative impact of population aging on economic growth. First of all, it is necessary to continue to adjust the retirement age according to the roadmap in accordance with the trend of increasing life expectancy and the labor market situation. Reasonable extension of working hours will help reduce the pressure of labor shortages and take advantage of the experience of an older workforce. At the same time, it is necessary to develop flexible employment models, part-time employment and reskilling for older workers to maintain their ability to participate in the labor market.

REFERENCES

1. Ang, J. B. (2009). Foreign direct investment and economic growth in Thailand. Applied Economics, 41(13), 1621–1632. https://doi.org/10.1080/00036840701367554
2. Asian Macroeconomic Research Office (AMRO). (2024). Vietnam annual consultation report 2024. AMRO.
3. Bloom, D. E., Canning, D., & Fink, G. (2010). Implications of population ageing for economic growth. Oxford Review of Economic Policy, 26(4), 583–612.
4. Bouchoucha, N. (2019). ARDL model analysis of FDI and economic growth in Tunisia. Journal of Economics and International Finance, 11(3), 24–32.
5. Chornyi, V. (2026). Foreign direct investment and economic growth in developing economies. Economic Analysis and Policy.
6. De Jager, P. (2004). Foreign direct investment and economic growth: A critique of the arguments for and against the multinational corporation. International Business & Economics Research Journal, 3(7), 1–7.
7. Epor, E. (2024). Foreign direct investment and economic growth nexus in emerging economies. Modern Finance Journal.
8. Fazaalloh, A. M. (2024). The impact of foreign direct investment on economic growth in Indonesia. Financial Innovation, 10(1), 1–24.
9. Hoang, T. T., Wiboonchutikula, P., & Tubtimtong, B. (2010). Does foreign direct investment promote economic growth in Vietnam? ASEAN Economic Bulletin, 27(3), 295–311.
10. Huang, W.-H., Lin, Y.-J., & Lee, H.-F. (2019). Impact of population and workforce aging on economic growth: Case study of Taiwan. Sustainability, 11(22), 6301.
11. Kasnauskienė, G., & Michnevič, K. (2017). Contribution of increased life expectancy to economic growth: Evidence from Central and Eastern European countries. International Journal of Economic Sciences, 6(2), 82–99.
12. Kotschy, R., & Bloom, D. E. (2023). Population aging and economic growth: From demographic dividend to demographic drag? (IZA Discussion Paper No. 16377). IZA Institute of Labor Economics.
13. Lee, H. H., & Shin, K. (2019). Nonlinear effects of population aging on economic growth. Japan and the World Economy, 51, 100963.
14. Ministry of Planning and Investment of Vietnam. (2025). FDI attraction situation in Vietnam and Vietnam's economic outlook. Ministry of Planning and Investment.
15. Mohd Thas Thaker, M. A., Baryal, B., & Taghizadeh-Hesary, F. (2025). The effect of foreign direct investment on economic growth in Afghanistan: An empirical insight. International Journal of Emerging Markets, 20(10), 4217–4234. https://doi.org/10.1108/IJOEM-04-2023-0666
16. Nagarajan, N. R., Teixeira, A. A. C., & Silva, S. T. (2016). The impact of an ageing population on economic growth: An exploratory review of the main mechanisms. Análise Social, 51(218), 4–35.
17. Organisation for Economic Co-operation and Development (OECD). (2025). OECD economic surveys: Viet Nam 2025. OECD Publishing.
18. General Statistics Office of Vietnam. (2024). Statistical yearbook of Vietnam 2024. Statistical Publishing House.
19. United Nations Conference on Trade and Development (UNCTAD). (2024). World investment report 2024: Investment facilitation and digital economy. United Nations.
20. World Bank. (2023). Vietnam country economic memorandum: Reforming institutions for effective implementation. World Bank.

21. World Bank. (2024). Vietnam 2045: Trading up in a changing world – Pathways to a high-income future. World Bank.
22. Yang, Y., Zhang, X., & Chen, W. (2021). Population aging, health investment and economic growth. Frontiers in Public Health, 9, 611864.