A comparative review of Vietnam's economic performance and policy between 1975 and 2024

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Introduction and notes on Vietnam's data

The study provides basically the outline of economic developement since 1975. It first outlines some fundamental findings regarding Vietnam's per capita income and economic development stage in comparison to other Southeast Asian nations, China, Japan, and Korea. From there, it examines Vietnam's reform since the 1990s, including its achievements and shortcomings, especially concerning the policies to lessen the role of state-owned corporations, and promote foreign direct investment but mainly for it to use cheap labor to process goods for exports particularly to the US and European markets, to the extent that the capital inflow through FDI is shown to be lower than the outflow of dividends paid to the owners of these FDI investment enterprises, because their rates of profits are double those of the state-owned and Vietnamese private owned enterprises. The paper also examines the shortcomings in the policies concerning R&D and tertiary education. The lack of focus on developing technical capability of the country with tertiary education particularly vocational schools and technical universities and R&D has already led the economy to a deceleration period since 2012 after only one decade of over 7% GDP growth rate, as compared to 4 decades of high growth in South Korea and China. The growth rate in labor productivity in manufacturing is surprisingly lower than that in agriculture during the 2010-2023 period (4.2% versus 7.8%). This happened when per capita income of Vietnam is still in the lower middle-income group of countries according to the World Bank, unlike 30-40 years of 7-9% rates of growth in South Korea and China. The rate of GDP growth in 2024 of 7.09% is on the bright side, but that rate may not continue in the future. Recent declaration of a big-bang economic plan to obtain 8% growth in GDP with an 18-20% increase in money supply for 2025 and a 10% annual increase in GDP for the following years seems dubious as it may threaten inflation. The focus on digital economy, even long-term may not generate that kind of growth when a well-known Nobel-winner economist from MIT, Daron Acemoglu, expected growth in total factor productivity (which is due to knowledge, not due to capital investment on labor) of not more than 0.71% in the next 10 years in the US.

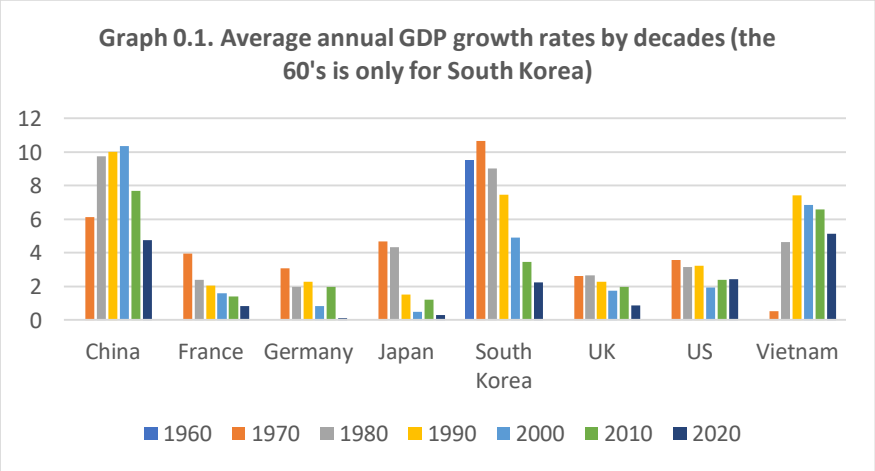
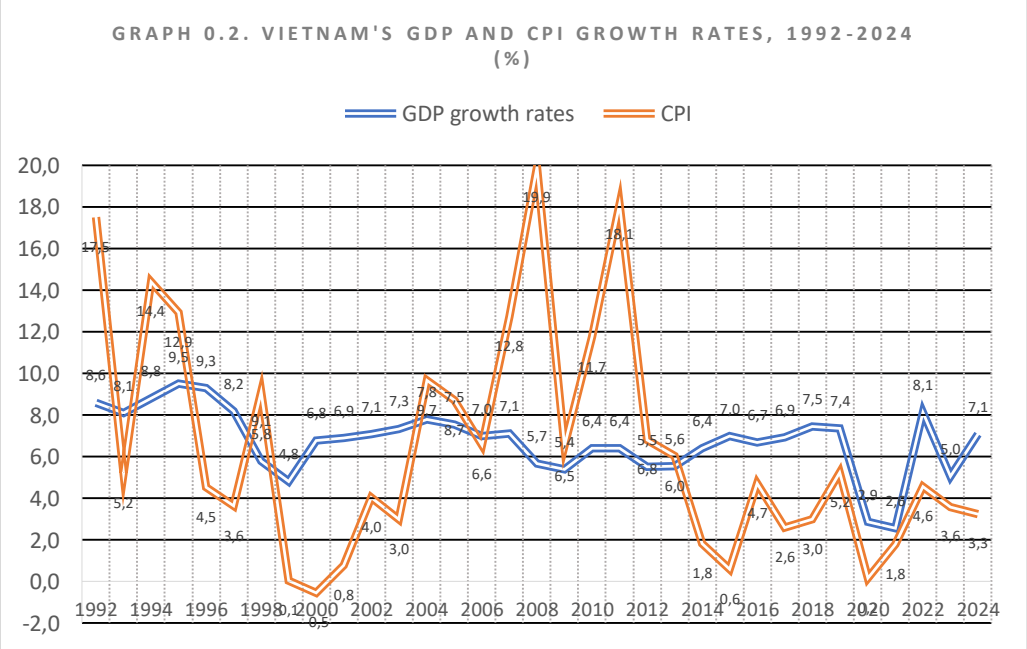


Table 0.1. Average annual GDP growth rates by decades (the 60's is only for South Korea)

	1960	1970	1980	1990	2000	2010	2020
China		6.1	9.7	10.0	10.3	7.7	4.8
France		4.0	2.4	2.1	1.6	1.4	0.8
Germany		3.1	2.0	2.3	0.8	2.0	0.1
Japan		4.7	4.3	1.5	0.5	1.2	0.3
South Korea	9.5	10.7	9.0	7.4	4.9	3.5	2.2
UK		2.6	2.7	2.3	1.7	2.0	0.9
US		3.6	3.1	3.2	1.9	2.4	2.4
Vietnam		0.5	4.6	7.4	6.9	6.6	5.1

A note on Vietnam economic data

1. GDP and per capita GDP will be used in this paper rather than GNI since GDP data is more easily accessible.
2. Data on GDP growth rates and CPI from 1992 to 2024 are shown below. The cut-off point was 1992 after the decision of the Political Bureau on 12 June 1988 to abolish mandated cooperatives to encourage private production that reduced extreme high inflation from 300-700% to 17.5% in 1992 as high inflation would render the graphic after 1989 unreadable at the bottom of the graphs.
3. Data on GDP of Vietnam after 2010 was revised by the General Statistics Office of Vietnam upward by almost 25-28% depending on the year. Data before 2010 has not been revised. For this paper, the same old rates of growth for the 1975-2009 were applied to derive GDP data measured in 2022 USD. This decision deviates from the UN Statistics Division Data as it assumed that the data for 2005 is corrent and then for the 2005-2010, rates of growth are revised upward (at annual rates of over 10%) to catch the higher value of GDP of 2010. These new growth rates are correct only if the old value of GDP of 2005 is the correct value. The data used for this paper is included in the Appendix.



Sources: CPI and GDP growth rates from 2010-2024 can be obtained from https://www.gso.gov.vn/ or https://unstats.un.org/UNSDWebsite/ or https://www.adb.org/publications/series/key-indicators-for-asia-and-the-pacific. Data on old GDP growth rates can only be obtained from adb.org for the key-indicators before 2010.

Part 1

Basic observations on the economy of Vietnam

Below are some of the basic observations on the economy of Vietnam as compared to neighboring and other related countries:

1. **Vietnam has made significant progress, 34 years after the reform started in 1988 but much less than China and South Korea before that**. Vietnam was united on 30 April 1975. At that time, its per capita GDP in 1975 was merely $US 527 (re-calculated in 2022 $USD)[1], or $1.4 a day, and less than half of Indonesia at $US 865, but was still higher than that of China at $340 (see Table 1.1). The extremely low per capita of China was due to Mao's Cultural Revolution. However, by 2022, Vietnam's per capita GDP in 2022 has surpassed the Philippines, and India, catching up with Indonesia, and reaching $US 4,164, at the level of low-middle-income countries as defined by the World Bank. The per capita GDP of Vietnam has increased 11.8 times during the 1975-2022 period, though much less than 34 times achieved by China, and thus China is reaching the high middle-income level and approaching the high-income level, around $US 14,000 (see Graph 1.3 and Table 1.1). The lesser achievement in Vietnam was due to the shorter period of high growth before deceleration as compared to South Korea and China. Vietnam achieved only one decade of average annual GDP growth rate of over 7% as compared to 4 decades of even higher growth rates in South Korea and China. It is necessary to find out all the reasons, though greater achievement was obtained by South Korea and later by China because both countries at the initiate stage of their economic development discouraged FDI while focusing on import substitution, export promotion and industrial policies in the form of heavy industries to develop their own technical base. China allows FDI, but given its huge market, has historically conditioned FDI on technology transfer to local partners and adaptation to local conditions.[2] Both countries also promote the development of high technology together with the promotion of research at both universities and research centers, instead of encouraging foreign direct investment to utilize cheap labor as in Vietnam. The achievement of Vietnam's industrialization lasted for 15 years (1990-2006) with an average annual rate of growth in GDP of 7.3% is laudable, but is comparatively short in comparison to that of South Korea for 40 years (1960-2000) at 8.1%, or China for 35 years (1978-2013) at 8.7%. Some Vietnamese analysts have written that Vietnam planned to be high-income (per capita GDP/income) of $14,000 and over by 2035.[3] They may be dreaming if that target is measured in constant $USD of 2022 with zero inflation, since to achieve that, Vietnam's GDP would need to grow at an average annual rate of growth in GDP of 10% given that the increase in population is approaching zero.

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[1] This is based on the effort to merge the statistics of South Vietnam and North Vietnam by the Statistical Office of Vietnam in **Kinh Tế Việt Nam 1955-2000, Tính Toán Mới, Phân Tích Mới**, Nhà Xuất bản Thống Kê, Hà Nội 12 -2000.

[2] https://www.minneapolisfed.org/article/2013/quid-pro-quo-technology-capital-transfers-for-market-access-in%20china#:~:text=In%20recent%20research%20published%20as,between%20advanced%20countries%20and%20China..

[3] "Phát triển kinh tế bền vững ở Việt Nam đến năm 2025 và tầm nhìn 2030", Phùng Thế Đông, **Tạp chí Tài Chính**, https://tapchitaichinh.vn/phat-trien-kinh-te-ben-vung-o-viet-nam-den-nam-2025-va-tam-nhin-2030.html

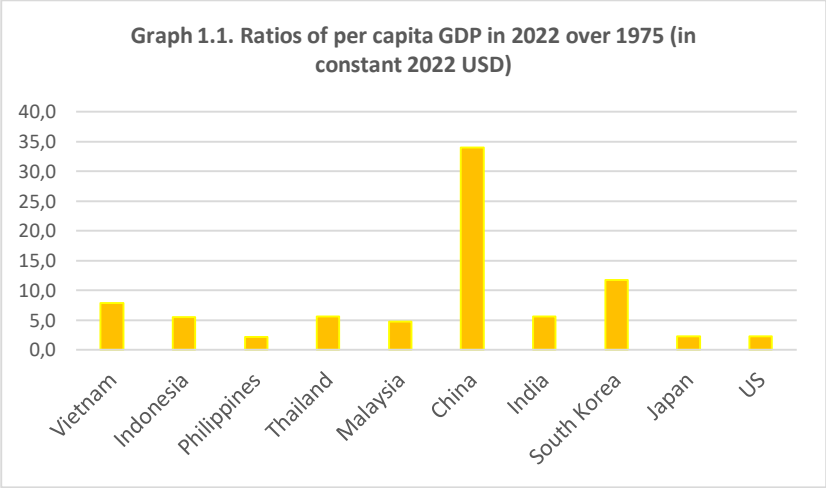
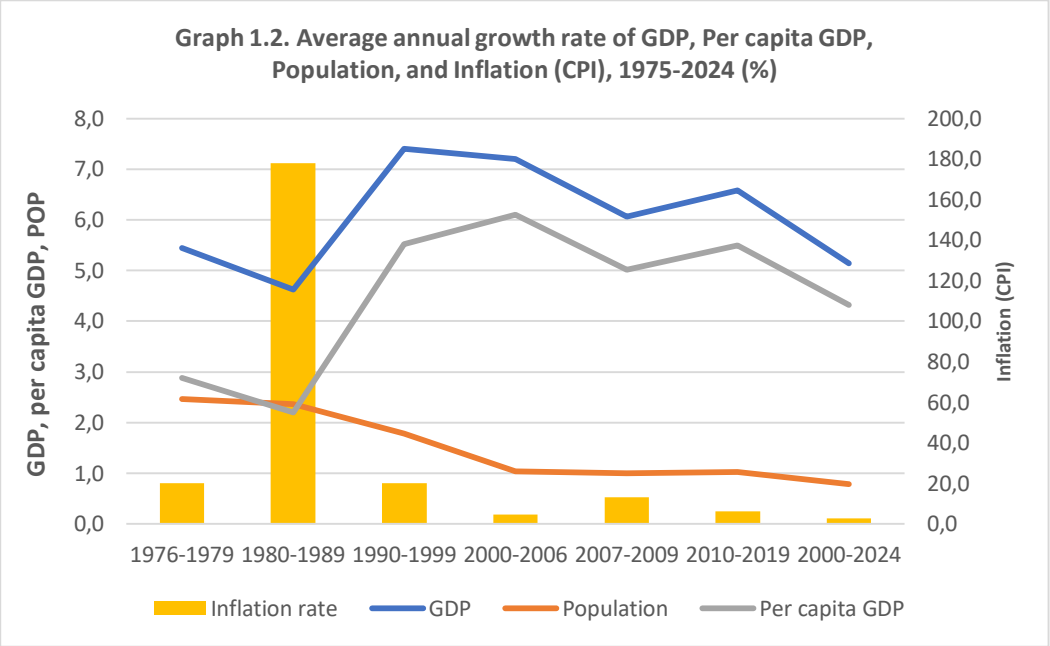


Table 1.1. Per capita GDP by a selected number of countries over time and average annual growth rates

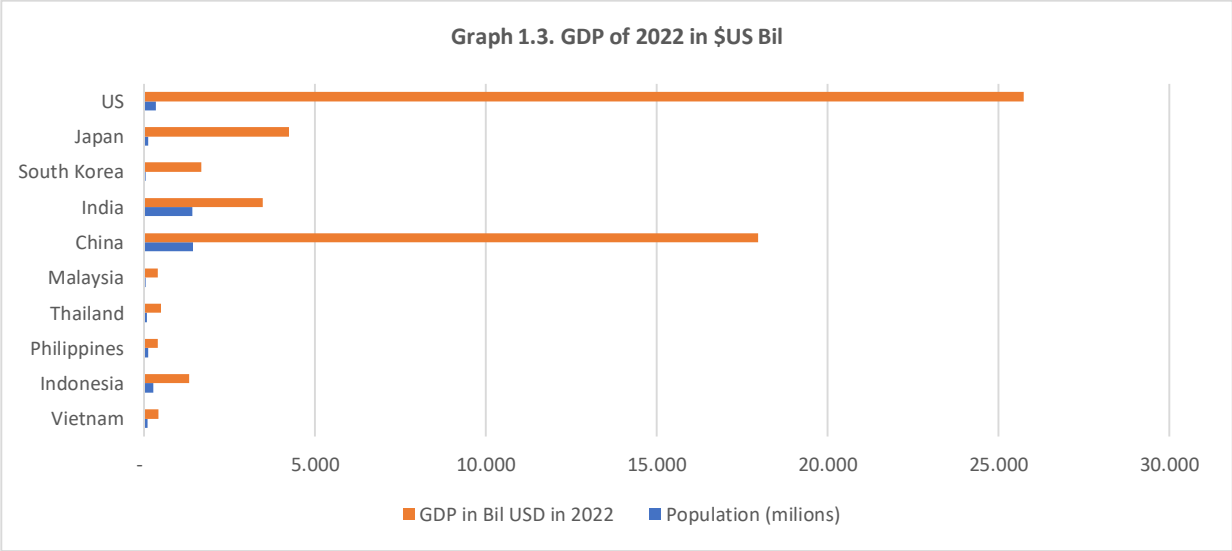
	Population (mil.)	Per capita GDP in 2022 USD			Ratios of per capita GDP over periods of time		Average annual growth rate of per capita GDP	
	2022	1975	2010	2022	2022/1975	2010-2022	2022/1975	2010-2022
Vietnam	98	527	2,288	4,164	7.9	1.8	4.3	5.0
Indonesia	124	865	3,166	4,784	5.5	1.5	3.8	3.5
Philippines	116	1,630	2,496	3,645	2.2	1.5	1.2	3.2
Thailand	72	1,255	5,725	7,072	5.6	1.2	4.4	1.8
Malaysia	34	2,640	8,881	12,466	4.7	1.4	3.5	2.9
China	1426	340	5,657	11,560	34.0	2.0	8.4	6.1
India	1417	422	1,402	2,366	5.6	1.7	3.5	4.5
South Korea	52	3,297	29,861	38,822	11.8	1.3	6.5	2.2
Japan	124	15,168	30,794	34,017	2.2	1.1	2.0	0.8
US	338	34,222	64,371	76,943	2.2	1.2	1.8	1.5

Sources: Data for Vietnam, Per capita GDP growth rates are derived from GSO's original GDP growth rates and population growth rates, the series of per capita GDP in 2022 $US was estimated backward from per capita GDP of 2022 using per capita growth rates.

2. **Economic growth has been decelerating since 2011**. Deceleration of growth rates is already happening in Vietnam (and Graph 1.2). This is normal as it happened to Korea and Japan, including China, after the full potentials of a given new economic policy (market economy and opening to the world market in the case of China and Vietnam) or given stage of technology development have been realized unless a new stage of technological progress that brings forth labor productivity appears (of course given supply of population and natural resources). The deceleration in Vietnam cannot be blamed on the Covid. It started in 2011. The COVID problem reduced the GDP growth rate to less than 3% between 2020-2021, and miraculously achieved 7.09% in 2024. However, the deceleration trend since 2011 may be reversed if the new economic policy is focused on high-skilled domestic production instead of relying on low-skilled labor supply to foreign direct investment for packaging.



3. **Vietnam with a reasonably large population with significant domestic market to be exploited**. With a population of almost 100 million, 1/3 of the US and 1/10 of India and China but in terms of GDP is very small compared to the US, China, and India. However, with 100 million people, more than Germany's 80 million, and almost double that of France and the United Kingdom, Vietnam's domestic demand and supply with the improvement of technical skill and labor productivity can and should be the focus of its economic strategy but it has failed to realize it, unlike that of Japan and Korea.



Source: The United Nation Statistics Division, National Accounts, https://unstats.un.org/unsd/snaama/Index. Values in 2022 USD are converted from 2015 by the author.

4. There has been some positive news recently; the economy has recovered well, and GDP increased by 7.09% in 2023. The overall 14.3% increase in exports to the world and the 9.1% increase to the US may be partially responsible for this. This could return to the typical prosperous years between 2011 and 2019, before COVID-19, when the average growth rate was 6.6%. However, too much focus on foreign trade particularly as a supplier of cheap and unskilled labor to foreign investors will not lead Vietnam out of the bottom of the basket. Clearly, Vietnam would need to take a new economic strategy that prioritizes enhancing technical capability to return to the high growth rate of 10% that existed between 2007 and 2011.

Part 2

Reform and economic policy in Vietnam since 1975

The reform started in 1986 in Vietnam, so-called Đổi Mới (renovation) but it was seen or ridiculed as the restoration of the market economy of the past, by dropping state price control, allowed private enterprises, all of which have since permitted the economy of Vietnam to function more effectively. As a result, the US dropped the trade embargo against Vietnam in 1994 and allowed Vietnam to join the World Trade Organization in 2007 to enjoy equal access to other member states' markets with lower tariffs; this was 6 years after China joined it in 2001.

The role of the state has, however, still been important, especially during the 2007-2011 period, with the effort to build up huge state enterprises in ship manufacturing and other projects such as mining bauxites for refining into aluminum generated high inflation, corruption, bankruptcy, and thus lowered economic growth. Since 2012, the economy has reverted to its normal self: a highly bureaucratic state aimed at attracting foreign direct investment with low wages.

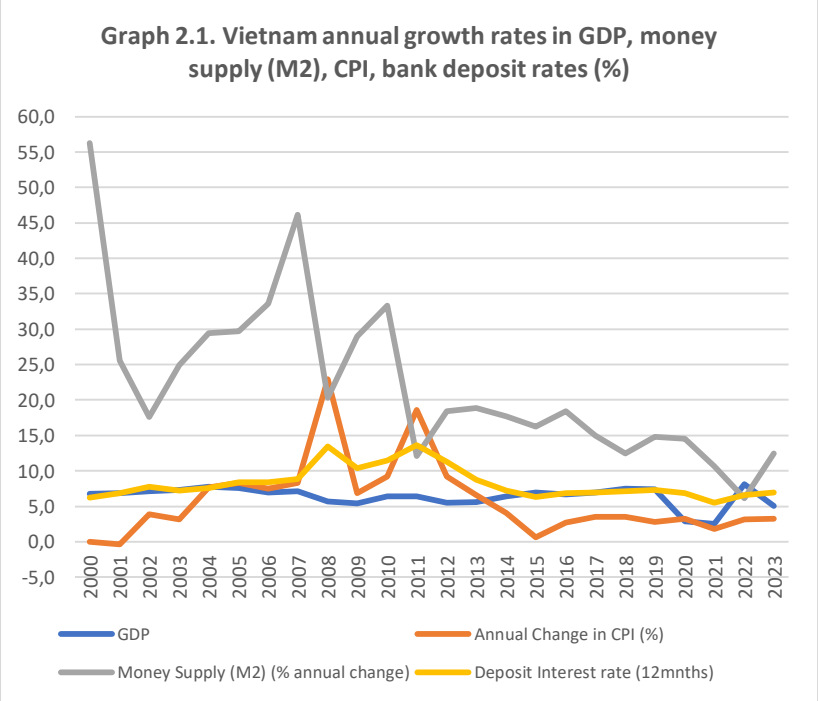
There were many phases of the economic reform in Vietnam:

1980-1989 central planning period: Economic decline after the war was a result of many factors: the most important ones were the banning of private businesses including household farming, and the imposing of central planning and price control. However, due to the need to purchase grains, the government had to allow price bidding for procurement after a given supplier contract was satisfied. But that action was uncontrollable, inflation soared to an annual rate of almost 100% in 1985. In the same year, the government decided to change the old money for the new fiat money with restriction on the exchangeable amount as a form of forced saving to restrict consumption, but the decision to print money for food procurement, without understanding that there is always a close economic relationship between prices and money supply, inflation soared to a new high to almost 800% in 1986, leading to a very high average inflation rate for the 1980's, at almost 180% and continued to the 1990's at over 20% (see Table 2.1 and Graph 2.1).

Table 2.1. Average annual growth rates of GDP, Population, per capita GDP, inflation in Vietnam by periods from 1975-2022 in Vietnam

	GDP	Population	Per capita GDP	Inflation rate (CPI)
1976-1979	3.8	2.5	2.9	20.2
1980-1989	4.7	2.4	2.2	177.9
1990-1999	7.4	1.8	5.5	20.2
2000-2006	7.2	1	6.1	4.6
2007-2011	6.2	1	5.1	13.8
2012-2019	6.6	1	5.5	3.9
2020-2024	5.1	0.8	4.3	2.7

Sources: Tổng cục Thống Kê (GSO), Kinh tế Việt Nam 1955-2000, ADB's Vietnam Key Indicators 2010 for 2000-2010, GSO current website -2010-2024.



Sources: Asian Development Bank, Vietnam Key Indicators 2024. Data from IMF and GSO differ from ADB for a particular year, however the trends are more or less the same. ADB data is used since it is a long series with data on deposit interest rates.

1990-1999 period: The reform started in 1986 started badly but allowed private enterprises and market prices set by supply and demand to function, which created conditions for the economy to grow annually at over 7%. However, after the transition, with the control of the money supply, the setting of interest rates higher than the inflation rate to attract money to the banks and especially stopping the stocking of goods and gold, the allowance of money remittances from Vietnamese overseas actually increased consumption and inflation decerelated. The imposition of tax on imports, , the economy was turned around: revenues collected by the government were up, households final consumption reduced from

97% of GDP at the begining of the period to 75% at the end of the period, gross capital formation was up from 14% to almost 30%, and of course GDP growth rates were higher, achieved an average annual rate of GDP growth of 7.4%, a per capita growth rate of 5.5% while inflation was down to 20%. It is also remarkable that inflation went down to only 0.1% in 1999, the last year of the period. This was the period of the Prime Minsters Đỗ Mười (1988-1991) and Võ Văn Kiệt (1991-1997).

2**000-2006 period**: The economy during the period of Phan Văn Khải (1997-2006) was stabilized with an average annual GDP growth rate of 7.2% and annual inflation of 4.6%.

2007-2011 period: The government of Nguyễn Tấn Dũng (2006-2016) even before 2016 attempted to build up super large state enterprises in shipbuilding, ocean transportation, and bauxite mining and aluminum production, but unlearned from the high inflation experience of 1986-1989, by pumping out bank credits which led to high inflation (at high average annual rates of 13.8% for 5 years) and slowed down GDP growth rate from the average of 6.1% in the previous period to 5.1%.

2012-2021 period: The economy during Nguyễn Xuân Phúc (2016-2021) peformed better with less grandiose plan than the previous period although the latter part of the period, 2019 -2022, the economy was negatively affected by the Covid 19 pandemic, but recovered in 2023-2024.

2021 onward period: The Prime Minster Phạm Minh Chính has submited to the National Assembly the planned target of 8% GDP growth in 2025 and his national bank expert estimated that 18-20% increase in money supply would be required.[4] As money supply in recent years has been below 15%, then with the 18-20% increase in M2, inflation would likely go up to 10% but there is no guarantee that production will increase to generate high GDP growth rate.

Part 3
Review of enterprises by types in Vietnam

It is necessary to review to actual policies carried out in Vietnam and their results to visualize what further actions need to be taken to stimulate further growth. The main focuses of the recent economic reform policy since the debacle in the 2011s are: the legal acceptance of private enterprises, the reduction by privatizing SOEs, the promotion of FDI firms, especially in production for exports. This part will focus on the results that are revealed by official statistics.

1. Overall roles of the state, domestic private and FDI sectors in terms of GDP

The General Statistical Office of Vietnam (GSO) divides the economy into 3 groups (or sectors) for which GDP or value added are calculated and provided, these are shown in Table 3.1:

- The state sector which includes both state-owned enterprises and government organs producing government services,

[4] https://baochinhphu.vn/muc-tieu-tang-truong-gdp-tan-dung-cac-dong-luc-va-de-vuot-thach-thuc-102250219191438253.htm.

- The private domestic sector which includes legally registered private enterprises and the informal production activities of households, and
- The FDI sector that include FDI-owned enterprises.

GSO's data do not separate the state sector into government public services and government production for sales, neither separate informal household activities from more formal activities of private enterprises, however, does show that the state sector in terms of GDP is declining probably from close to 40% to 22% GDP recently though still important in Vietnam. More significant is the role of the foreign direct investment enterprises. In 2022, it made up 22.4% of value added, which is the same as that of the state sector. Table 3.1 shows their shares in the two distinct periods 2005-2009 and 2010-2022. The data in Table 3.1 shows that the share of the state sector was much higher in the 2005-2009 period, even though statistically these data are not fully compatible with the data of the latter period which was revised and valued differently by the Statistical office of Vietnam.

Table 3.1. Shares of GDP (2005-2009) or shares of Value added (2010-2022) by institutional sectors (%)

		Shares of GDP		Shares of Value added	
		2005	2009	2010	2022
GDP	State sector	37.6	34.7	27.2	22.4
	FDI sector	15.2	17.3	17.0	22.4
	Domestic private sector	47.2	48.0	55.9	55.2

Note: The shares in 2005-2009 are not compatible to 2020-2022, as GDP after 2010 was revised and measured at factor costs while GDP between 2005-2009 were not revised and measured at produced prices.
Source: General Statistics Office of Vietnam

2. General characteristics of enterprises in Vietnam

It is however more interesting to analyze the characteristics of enterprises in Vietnam, as they reflect the more technologically advanced production activities in the economy. These data, presented in details in Tables 3.2 - 3.5, are recently made available by Vietnam's GSO.

Enterprises are defined by Vietnamese enterprise laws as legally registered and government-approved organizations for business purposes with distinct names, own assets, and stable business locations for transactions according to the National Law on Enterprises. The national law was first issued in 2005 and revised in 2020. Enterprises thus exclude informal activities that include all small family businesses that are legally allowed but the owners are personally responsible for the business's liabilities as there is no legal separation of personal owned assets and business assets. There are already several broad-based annual samplings of enterprises since 2005 carried out by the General Statistical Office of Vietnam and the analyses of the data are shown in tables 3.2-3.4.

Table 3.2 Quantity, assets, revenues, profits by types of ownership of national totals (in current billion VND) and number of employees (1000 persons)

	2010	2015	2016	2017	2018	2019	2020	2021	2022
1. STATE-OWNED ENTERPRISE									
Number of enterprises	3,281	2,835	2,662	2,486	2,260	2,109	1,963	1,906	1,861
Number of employees (1000 pers.)	1,603	1,372	1,286	1,201	1,127	1,108	1,005	978	1,006
Capital assets	3,702	6,945	7,609	9,087	9,466	9,358	10,284	10,625	11,467
Revenues (Bil VND)	2,034	2,722	2,866	3,125	3,414	3,582	3,438	3,379	4,310
Profit before taxes	115	157	197	201	190	206	195	260	348
2. DOMESTIC PRIVATELY-OWNED ENTERPRISES									
Number of enterprises	268,831	427,710	488,395	541,749	591,499	647,632	660,055	694,181	710,664
Number of employees (1000 pers.)	5,983	7,713	8,572	8,807	8,977	9,075	8,607	8,604	9,082
Capital assets (Bil VND)	5,452	11,021	13,713	16,095	20,670	24,205	27,096	30,193	33,325
Revenues (Bil VND)	4,068	8,075	9,762	11,734	13,411	15,128	15,782	17,578	20,677
Profit before taxes	116	151	188	291	324	278	296	492	555
3. FDI-OWNED ENTERPRISES									
Number of enterprises	7,248	11,940	14,002	16,178	16,878	18,762	22,242	22,610	22,930
Number of employees (1000 pers.)	2,156	3,773	4,154	4,510	4,714	4,969	5,090	5,217	5,254
Capital assets (Bil VND)	1,688	4,178	4,728	5,500	6,679	7,512	8,873	10,086	11,330
Revenues (Bil VND)	1,386	4,152	4,809	5,801	6,813	7,617	8,154	9,450	10,975
Profit before taxes (Bil VND)	125	245	327	385	382	406	463	524	556

Table 3.3. Shares of national totals in number of enterprises, assets, revenues, profits by types of ownership (%)

	2010	2015	2016	2017	2018	2019	2020	2021	2022
1. STATE-OWNED ENTERPRISE									
Number of enterprises	1.2	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3
Number of employees	16.5	10.7	9.2	8.3	7.6	7.3	6.8	6.6	6.6
Capital assets	34.1	31.4	29.2	29.6	25.7	22.8	22.2	20.9	20.4
Revenues	27.2	18.2	16.4	15.1	14.4	13.6	12.6	11.1	12.0
Profit before taxes	32.3	28.4	27.7	22.9	21.3	23.2	20.4	20.4	23.9
2. DOMESTIC PRIVATELY-OWNED ENTERPRISES									
Number of enterprises	96.2	96.7	96.7	96.7	96.9	96.9	96.5	96.6	96.6
Number of employees	61.4	60.0	61.2	60.7	60.6	59.9	58.5	58.1	59.2
Capital assets	50.3	49.8	52.6	52.5	56.1	58.9	58.6	59.3	59.4
Revenues	54.3	54.0	56.0	56.8	56.7	57.5	57.7	57.8	57.5
Profit before taxes	32.5	27.2	26.4	33.2	36.1	31.2	31.0	38.6	38.0
3. FDI-OWNED ENTERPRISES									
Number of enterprises	2.6	2.7	2.8	2.9	2.8	2.8	3.3	3.1	3.1
Number of employees	22.1	29.3	29.6	31.1	31.8	32.8	34.6	35.3	34.2
Capital assets	15.6	18.9	18.1	17.9	18.1	18.3	19.2	19.8	20.2
Revenues	18.5	27.8	27.6	28.1	28.8	28.9	29.8	31.1	30.5
Profit before taxes	35.2	44.4	45.9	43.9	42.6	45.6	48.5	41.1	38.1

Table 3.4. Capital assets and revenues per employees (Mil VND in current prices) and profit rates (%)

	2010	2015	2016	2017	2018	2019	2020	2021	2022
1. State-owned enterprises-owned									
Revenues per employee	1.3	2.0	2.2	2.6	3.0	3.2	3.4	3.5	4.3
Assets per employee	2.3	5.1	5.9	7.6	8.4	8.4	10.2	10.9	11.4
Net profit over assets (%)	3.1	2.3	2.6	2.2	2.0	2.2	1.9	2.4	3.0
2. Domestic privately-owned enterprises									
Revenues per employees	0.7	1.0	1.1	1.3	1.5	1.7	1.8	2.0	2.3
Assets per employees	0.9	1.4	1.6	1.8	2.3	2.7	3.1	3.5	3.7
Net profit over assets (%)	2.1	1.4	1.4	1.8	1.6	1.1	1.1	1.6	1.7
3. FDI-owned enterprises									
Revenues per employees	0.6	1.1	1.2	1.3	1.4	1.5	1.6	1.8	2.1
Assets per employees	0.8	1.1	1.1	1.2	1.4	1.5	1.7	1.9	2.2
Net profit over assets	7.4	5.9	6.9	7.0	5.7	5.4	5.2	5.2	4.9

Sources: Statistical Office of Vietnam: Sách Trắng Doanh nghiệp 2022 (White Book on Enterprises: https://www.gso.gov.vn/wp-content/uploads/2022/11/Sach-trang-DN-2022.pdf. Some information can also be obtained in https://www.gso.gov.vn/doanh-nghiep/.

Table 3.5. Average fixed assets per employee by economic activity of enterprises

	2022
Overall	477
Agriculture, forestry, and fishery	798
Mineral extraction	951
Manufacturing	417
Electricity, gas, and hot water	8,494
Water supply and waste disposal	857
Construction	196
Wholesale, retail, and repairs	218
Transport and warehousing	778
Hotels, restaurants	871
Information and communication	293
Finance, banking and insurance	284
Real estate services	1,304
Scientific and professional activities	119
Business supporting services	99
Education and training	257
Hospital, health and social services	416
Entertainment	1,207

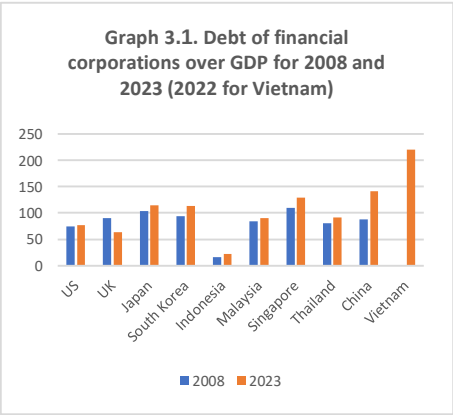
Source: General Statistics of Vietnam, https://www.gso.gov.vn/px-web-2/?pxid=V0543&theme=Doanh%20nghi%E1%BB%87p

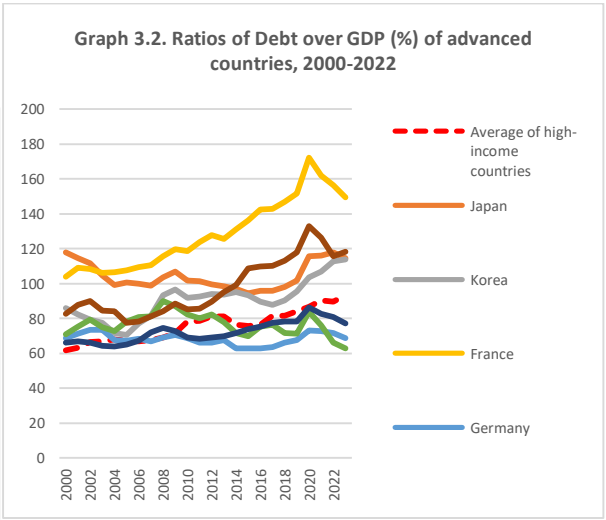
From these data, the following observations on enterprises in Vietnam can be made:

a) The state-owned enterprises are no longer dominating in the economy. Its number was reduced from 3,281 in 2010 to 1,861 in 2022 (from 1.2% down to 0.3% of the national total of enterprises), their share of employment over all enterprise down from 16.5% down to 6.6%, but their share of national assets down from 34% to 22% although is still significant (Table 3.3.3).
b) By economic activity, from the point of view of industrialization, it is surprising to see that manufacturing firms in Vietnam are equipped with the lowest capital investment per employee among almost all good-producing activities including agriculture and even real estate services (Table 3.5). The most capital-intensive firms are unavoidably in production of electricity, gas, mineral extraction.

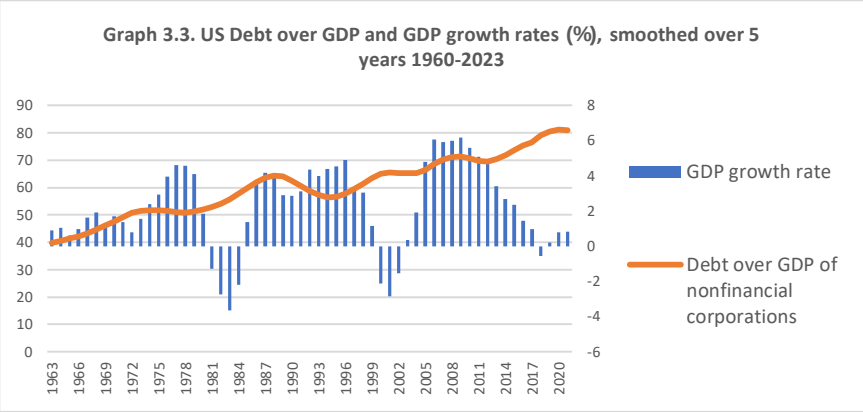
3. Debt problem of nonfinancial enterprises: a threat to Vietnam's future growth

Although national debt (of both government and private enterprises to foreign countries of Vietnam is relatively low, at $US 146 billion in 2022, around 36% of GDP, debt of nonfinancial enterprises as reported in the GSO's Sách Trắng Doanh Nghiệp (White Book on Corporations), was exceedingly high compared to other countries, at 220% of GDP in 2022, surpassing almost every country in the world. This may lead to more stringent restraints on investment from both the nonfinancial corporations and the government to ensure financial stability, thus affecting future economic growth. Based on the data published by the IMF,[5] For most developing countries, the ratios of debt over GDP since 2000 were below 50%, except for the fast-growing countries like Malaysia and Thailand (with 80-90% ratios in recent years). The developed countries and the countries in fast-growing countries in Asia tend to have higher ratios as they rely on debt for development, however, it seems that in recent times most countries got stuck in low growth rates and high debt. Most developed countries during the 2000-2010 period had a higher ratio, around 60-70%, but increased substantially to over 100% in the case of Japan and France, which hindered their economic growth.





[5] Global Debt Database - Nonfinancial corporate debt, loans and debt securities (imf.org). For the time series on debt in countries that are available, the Excel file has to be downloaded. The IMF has yet to incorporate data on Vietnam.



Sources: For data on Vietnam, see the footnote to Table 9. Data for other countries are from the IMF.[6]

Another way of looking at debt is the value of debt over equity (D/E) of nonfinancial corporations. The average ratio in Vietnam was very high, at 1.64 in 2017, though, smaller at 1.4 in 2022 (Item 5, Table 3.6). The ratios in Vietnam have not reached the critical ratio of 2 (200%), at which, banks in most countries would be extremely reluctant to lend to any enterprise with ratios at or over that critical ratio. However, the ratios may vary depending on whether the values of D and E or book value have been adjusted for market values. Data in the US, either adjusted or not adjusted, from the research group at NYU showed that the D/E ratios in the US in 2024 are on average at 0.46 (46%) and certainly vary from industry to industry, the high ratios over 1.0 are in a very few activities like air transport, broadcasting, green energy generation, chemicals, and real estate, and close to 3 only for banking, financial services (the sector that borrows to lend retailing.[7] Unfortunately, both data from GSO and White Book for state-owned enterprises (SOEs), FDI, and large corporations (lines 7,8,9) include both financial enterprises (borrowing for lending entities that always have high D/E ratios) and non-financial enterprises, their D/E ratios are thus distortedly high (Item 7-8 versus item 6 in Table 3.6). Assuming that FDI investment is mainly on nonfinancial activities, FDI tends to borrow more than domestic firms which makes it easy for them to transfer profits abroad in the name of paying debt.

Table 3.6. Debts of nonfinancial corporations 2017-2022

	2017	2020	2021	2022
1. Liabilities/Debt				
Total (Mil Bil VND)	12.9	19.08	21.56	23.03
Financial share	41%	42%	42%	43%
Nonfinancial share	59%	58%	58%	57%
(FDI) (Mil Bil VND)	3.4	5.5	6.5	7.1
2. Owners' equity				
Total (Mil Bil VND)	8.7	16.0	17.4	18.7
Financial	0.8	1.6	2.0	2.3
Nonfinancial	7.9	14.4	15.5	16.5
(FDI) (Mil Bil VND)	2.1	3.8	4.2	4.6
3. Total liabilities and owners' equity (Mil Bil VND)	30.7	48.7	54.5	59.1
4. GDP (Mil Bil VND)	6.29	8.04	8.49	10.32

[6] Global Debt Database - Nonfinancial corporate debt, loans and debt securities (imf.org). For the time series on debt in countries that are available, the Excel file must be downloaded. The IMF has yet to incorporate data on Vietnam.

[7] Debt Fundamentals by Sector (US), NYU, https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/dbtfund.html

	2017	2020	2021	2022
5. Ratio of liabilities (Debt)/GDP (%)	**205%**	**237%**	**254%**	**223%**
6. Debt over equity (D/E) ratio of nonfinancial corporations	**1.64**	**1.33**	**1.39**	**1.40**
7. Debt over equity (D/E) ratio of SOEs			**3.69**	**3.83**
8. Debt over equity (D/E) ratio of large enterprises			**2.80**	**2.73**
9. Debt over equity (D/E) ratio of FDI		**1.44**	**1.55**	**1.53**

Sources: Sách Trắng Doanh Nghiệp (White Book on Corporation) 2019 and 2024, though the 2017 data was replaced by the revised data on General Statistics of Vietnam.[8] The debt of nonfinancial corporations was calculated by deducting the debt of financial corporations from the total debt of corporations. Their equity was calculated the same way. However, it is not possible to calculate separately for different institutional sectors, like FDI or State enterprises, because GSO and White Book did not publish data on financial enterprises by institutions.

The financial data shows that Vietnam's economy is in a precarious situation, even though no financial crisis has happened, probably because the government might have special treatment for SOEs not to impose restrictive measures, but allow them to continue operation with tax holidays and government subsidies. Corporations in Vietnam are not forced to close even if the law requires that[9] and a creditor may have to wait even if it wins the case in court as complained by an investor magazine from Thailand.[10]

The high debt problem is probably known to officials when the State Bank of Vietnam[11] reported that the bad debt ratio, i.e. unpaid debt over accounts receivable (including bad debt on the balance sheet, bad debt sold to VAMC that has not been processed, and restructured debt that has the potential to become bad debt) of financial institutions in Vietnam in 2023 was 5% (2.9% in the year plus 2.1% already sold to the VAMC but not yet settled and potential bad debt). This 5% bad debt ratio is much higher than the ideal 1%.

About special measures taken by the State Bank of Vietnam (SBV), the IMF in a special study showed that the policy rates employed by SBV for influencing financial variables (like lending/deposit rates or the amount of credit in the economy), have weak effects on inflation or industrial production, generating a statistically insignificant effect.[12]

Whether the problem of debt has a significant effect on the current slowing down of the economy also needs to be explored as the debt ratio has been high at least since 1917.

It is necessary to keep in mind that for countries that do not have a developed financial center where funds for development and growth can be easily in the form of equity raised in the stock market, they have to rely mainly on domestic credit (mainly bank loans) underlined by the country's money supply

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[8] https://www.gso.gov.vn/wp-content/uploads/2024/10/Sach-trang-doanh-nghiep-Viet-Nam-2024.pdf. Revised data of 2017 from: https://www.gso.gov.vn/doanh-nghiep/.

[9] https://theinvestor.vn/vietnam-listed-banks-bad-debt-up-23-billion-in-9-months-d13214.html#:~:text=The%20bad%20debt%20of%20listed,from%20the%20end%20of%202023.

[10] https://theinvestor.vn/key-issues-for-debt-restructuring-in-vietnam-d11793.html

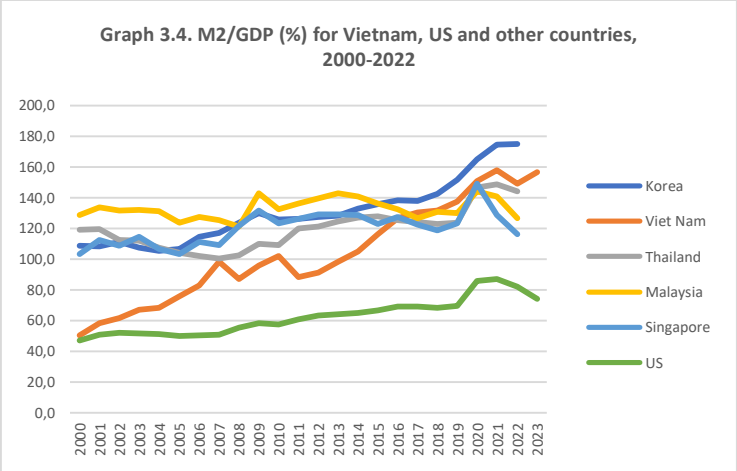
[11] Ngân hàng ngày càng khó xử lý nợ, July 11, 2023. https://www.sbv.gov.vn/webcenter/portal/vi/menu/rm/apph/tbnh/tbnh_chitiet?leftWidth=20%25&showFooter=false&showHeader=false&dDocName=SBV570631&rightWidth=0%25&centerWidth=80%25&_afrLoop=11205835288235774#%40%3F_afrLoop%3D11205835288235774%26centerWidth%3D80%2525%26dDocName%3DSBV570631%26leftWidth%3D20%2525%26rightWidth%3D0%2525%26showFooter%3Dfalse%26showHeader%3Dfalse%26_adf.ctrl-state%3Dpz8nt2zu_9.

[12] IMF, Rethinking Transmission of Monetary Policy in Vietnam, https://www.elibrary.imf.org/view/journals/002/2024/307/article-A001-en.xml.

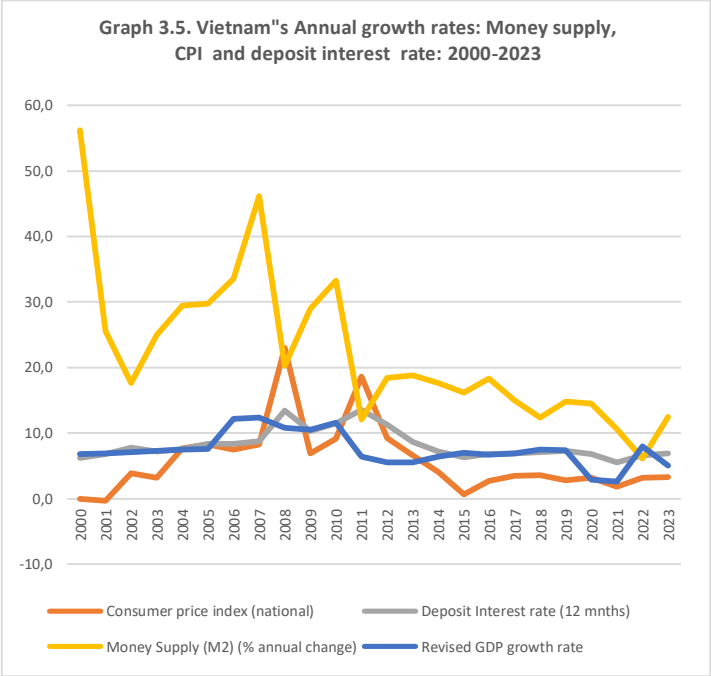
(M2 that includes cash, demand deposits, savings, money market funds) that are managed by the central bank. In this respect, ratios M2 over GDP are quite high in high-growth Asian countries.

M2/GDP ratios in the US are typically low, below 60% but increased substantially after the financial crisis in 2007-2008 and recently reached almost 90% during the Covid period. M2/GDP ratios of other countries have been over 100% since 2000 and overpassed 140% in recent times (see Graph 3.4).

Similarly, Vietnam's M2/GDP behaved the same way and increased drastically since 2000. Vietnam relies on loans as the main source of funds for investment. The main question is whether the increase in money supply as a ratio to GDP aims at encouraging production or saving inefficient SOEs. The increase in M2 in Vietnam during 2007-2011, brought high inflation, high deposit rates to fight inflation, and the slowing down of the economy. The Vietnamese economic growth rate stabilized at 6% until 2019, a lower rate than the rate achieved before COVID-19. Whether it can recover to the average of 6% is an issue to ponder, though clearly, the debt burden would hinder high growth possibility.



Sources: US Federal Reserve Bank and Asian Development Bank.



Sources: Vie-key-indicators 2024, Asian Development Bank, Revised GDP growth rates from United Nations Statistics Division.

4. The domination of FDI enterprises in the economy and its dominant role in the export and import of Vietnam

1. General observations

Table 3.7 summarizing Table 3.2 shows the shares of FDI enterprises in all enterprises in Vietnam in terms of number of enterprises, number of employees, values of assets, and profit that have been increasing over the years, surpassing state-owned enterprises and are still increasing.

Table 3.7. Shares of FDI enterprises in all enterprises in Vietnam (%)

	2010	2015	2016	2017	2018	2019	2020	2021	2022
Share of the number of enterprises	2.6	2.7	2.8	2.9	2.8	2.8	3.3	3.1	3.1
Share of labor	22.1	29.3	29.6	31.1	31.8	32.8	34.6	35.3	34.2
Share of assets	15.6	18.9	18.1	17.9	18.1	18.3	19.2	19.8	20.2
Share of revenues	18.5	27.8	27.6	28.1	28.8	28.9	29.8	31.1	30.5
Share of profit before taxes	35.2	44.4	45.9	43.9	42.6	45.6	48.5	41.1	38.1

Source: General Statistics Office of Vietnam: https://www.gso.gov.vn/doanh-nghiep/.

The following observations can be made of FDI enterprises in Vietnam:

c) The role of the FDI enterprises is highly significant in the Vietnamese economy in terms of quantity of enterprises, value of assets, employment and foreign trade and of course overall impact in terms of GDP.
d) FDI enterprises which make up the FDI sector as reproted by Vietnam's GSO generated 22.4% of gross value added (GVA) in 2022 (Table 3.1), the same percentage share generated by the State sector (which includes not only state-owned enterprises but also government services). Thus,

FDI enterprises contribute more to GDP than SOE's. Its contribution is also not much less than the share of 28% GVA contributed by domestic private enterprises; this share is based on an estimate by the author.[13]

e) FDI enterprises become more and more significant over time. In 2022, its number of enterprises increased from 7,248 to 22,930, making up only 3.1% of all enterprises (Table 3.7). Still, these FDI owned 20.2% of the value of national assets, and employed 5 million employees, a 34.2% share of all enterprises' employees, and generated 38.1% of total national profits before taxes, even higher than the share of all domestic privately-owned enterprises.

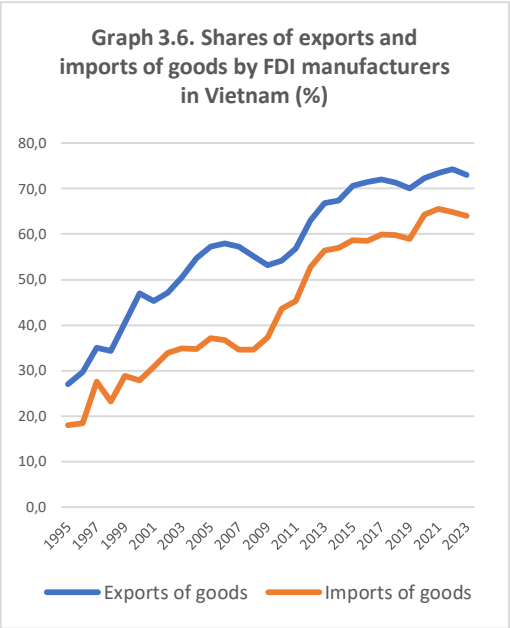
f) FDI enterprises are less capital intensive than native firms as shown in Table 3.4 (average capital asset per employee of FDI is 2.2 Mil VND versus 3.7 Mil of domestic privately-owned enterprises). Revenues per employees from FDI firms are also the lowest. Thus, clearly the purpose of attracting of FDI by Vietnam is not for the purpose of transfer of technology from foreign high-tech firms.

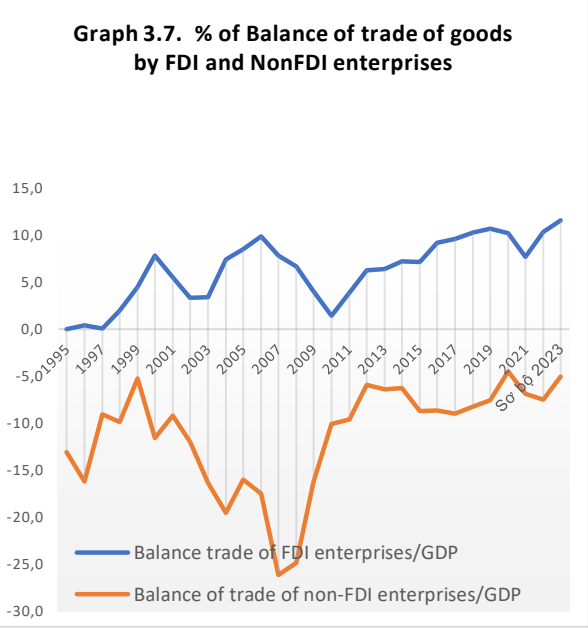
g) FDI enterprises dominate the exports and imports of the Vietnamese economy. In 2023, FDI enterprises made up 73% of exports and 64% of imports of Vietnam (see graphs 3.6 and 3.7). They also consistently, since 1995, generate an increasing positive net balance of trade while domestic enterprises generate a negative balance of trade.

h) FDI enterprises generated high rates of profit over assets as compared to domestic privately owned enterprises (see Graph 3.8).

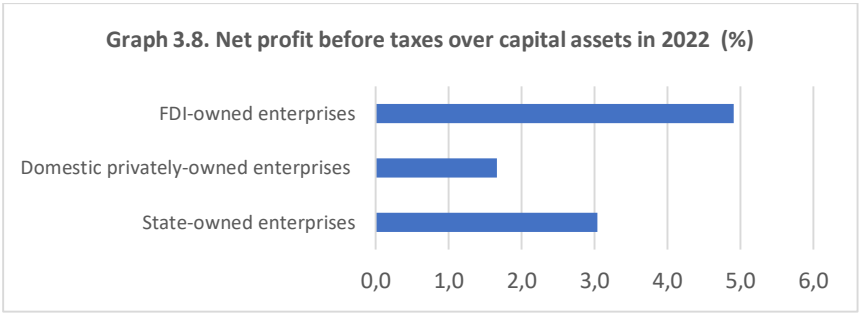
i) Not only that over the years since 2014, but dividends also paid out to FDI equity owners were very close or even higher than the values of FDI inflows to Vietnam, particularly since 2020 (See Table 3.8). It is worth to point out that the data are derived by the author from different sources of official statistics. As it is well known conceptually that that primary income paid to abroad in the balance of payments includes mainly interest and dividend payments and some insignificant payment of compensation of employees to abroad. Thus, dividends paid can be derived by deducting interest payment from primary income payment.

[13] The ggross value added (GVA) generated by domestic private enterprises is derived deducting deducted from GVA of the private sector the sum of GVA of activities in agriculture, retail sales, restaurants which are assumed to be produced from households.





Source: General Statistics Office of Vietnam.



Source: General Statistics Office of Vietnam: https://www.gso.gov.vn/doanh-nghiep/.

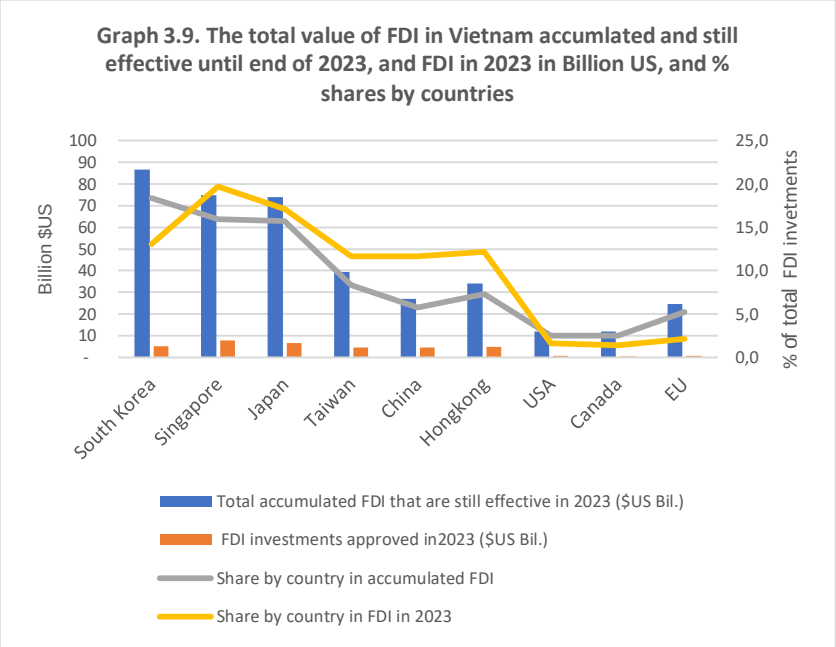
Table 3.8. Flow of FDI into Vietnam and Dividends paid out to FDI owners, 2014-2023 (in US Billions)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1. Foreign direct investment (from ADB data)	8.1	10.7	11.6	13.6	14.9	15.7	15.4	15.3	15.2	20.1
2. Primary income paid (from ADB data)	9.2	12.6	14.8	17.7	17.4	19.0	16.2	19.7	22.0	27.0
3. Interest payments (from Nợ công of Vietnam)	1.2	2.1	1.6	2.4	3.4	3.5	2.8	2.0	2.9	2.2
4. Dividends paid (estimated by (2)-(3)	7.9	10.5	13.2	15.4	14.1	15.5	13.5	17.8	19.2	24.8

Sources: 1. ADB: VIE-Key Indicators, https://www.adb.org/publications/key-indicators-asia-and-pacific-2024. Vietnam Ministry of Finance: Bản tin nợ công số 10, 17 (Public Debts Information Number 10, 17, that include both public and private debt payment including interest payments). No 10: https://mof.gov.vn/webcenter/portal/ttpltc/pages_r/l/chi-tiet-tin-ttpltc?dDocName=MOFUCM185309; No 17: https://finance.vietstock.vn/bao-cao-phan-tich/14237/ban-tin-no-cong-so-17.htm.

2. Major FDI investors

The value of FDI projects in Vietnam that are still operating up to the end of 2023 reached $US 470 billion (as compared to GDP of $430 Bil of the same year). The top countries that have most FDI in Vietnam are South Korea, Singapore, Japan, China (if Hongkong are added with China) and Taiwan (see Graph 3.9).



Source: General Statistical Office of Vietnam: https://www.gso.gov.vn/px-web-2/?pxid=V0413&theme=%C4%90%E1%BA%A7u%20t%C6%B0

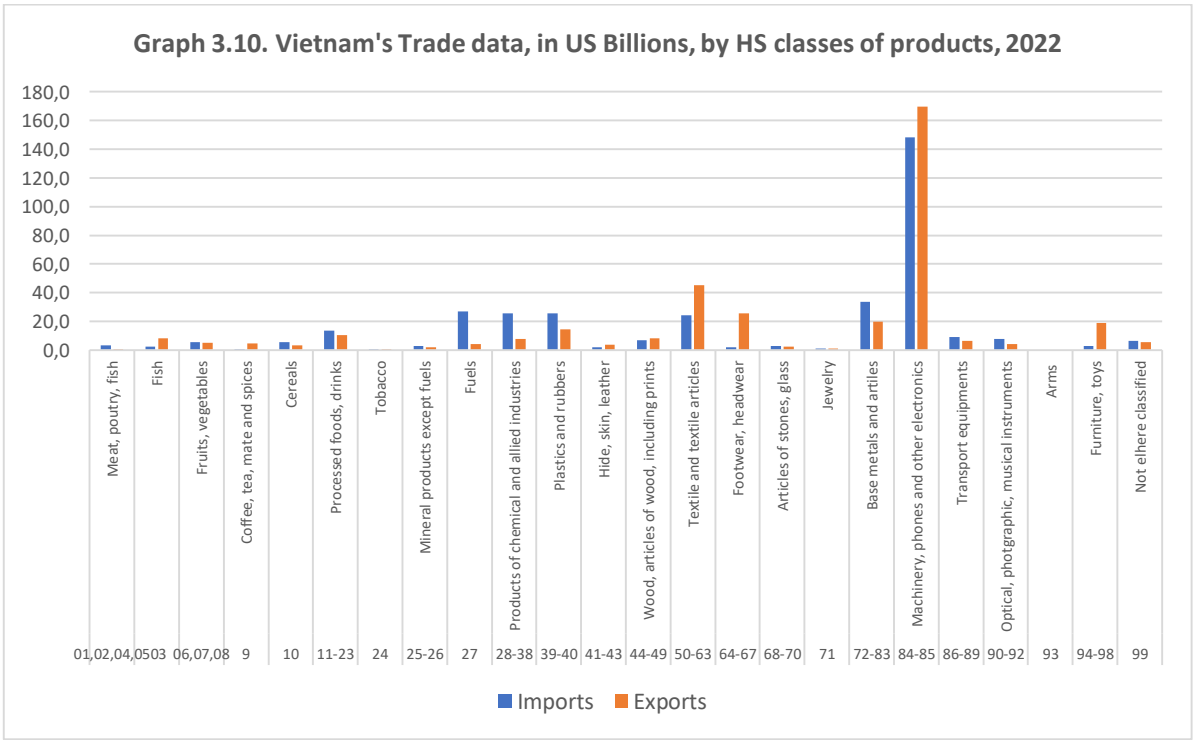
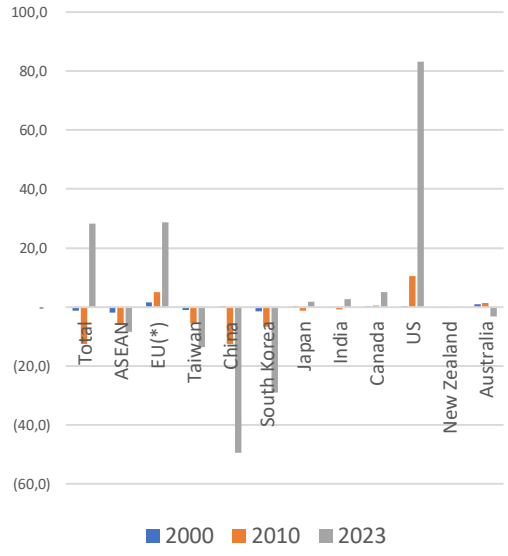


Table 3.9. Exports and imports of Vietnam in 2022, US Billions

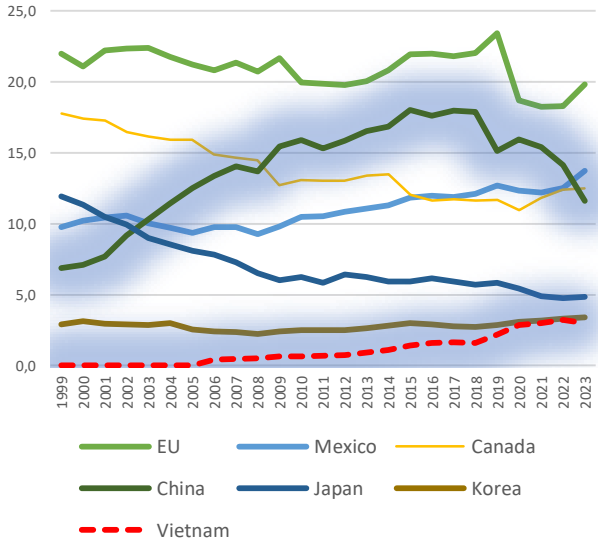
HS classes	Classification	Imports	Exports	Trade balance
01,02,04,05	Meat except fish	3.2	0.4	-2.8
03	Fish	2.4	8.0	5.6
06,07,08	Fruits, vegetables	5.5	5.2	-0.3
9	Coffee, tea, mate and spices	0.4	4.5	4.1
10	Cereals	5.7	3.3	-2.4
11-23	Processed foods, drinks	13.8	10.3	-3.4
24	Tobacco	0.3	0.2	-0.1
25-26	Mineral products except fuels	2.7	1.8	-0.9
27	Fuels	26.9	4.3	-22.6
28-38	Products of chemical and allied industries	25.6	7.6	-18.0
39-40	Plastics and rubbers	25.6	14.5	-11.1
41-43	Hide, skin, leather	2.1	3.9	1.8
44-49	Wood, articles of wood, including prints	6.8	8.3	1.5
50-63	Textile and textile articles	24.1	45.4	21.3
64-67	Footwear, headwear	1.8	25.4	23.7
68-70	Articles of stones, glass	3.0	2.4	-0.6
71	Jewelry	1.1	1.2	0.1
72-83	Base metals and articles	33.5	19.6	-13.9
84-85	Machinery, phones and other electronics	148.4	169.8	21.5
86-89	Transport equipment	9.3	6.3	-3.0
90-92	Optical, photographic, musical instruments	7.7	4.2	-3.6
93	Arms	NA	NA	NA
94-98	Furniture, toys	2.7	18.8	16.1
99	Not elsewhere classified	6.4	5.7	-0.7
Total		**358.8**	**370.9**	**12.1**

Source: UNCOMTRADE, UNSD, https://comtradeplus.un.org/.

Graph 3.11. Vietnam Trade balance of goods with selected countries (in $US Bil)



Graph 3.12. Share of US imports by selected countries and groups (%)



Source: US Bureau of Census: https://www.census.gov/foreign-trade/balance/

3. Purposes of FDI investors

There are two main purposes of FDI by foreign owners in Vietnam that can be identified:

a) FDI aims at using cheap Vietnamese labor for processing goods to be exported, particularly to the US and European markets. Table 3.10 and Graph 3.10 show the two most significant groups of exported products in terms of values:
    i. Electronics, phones, and components grouping with $US 169.8 billion of exports require $US 148.4 billion of imports with similar product classification (HS 84-85), or more than 87% of exported values to serve as inputs. Thus, 13%, the value added, mainly poorly paid low-skilled labor, to the domestic economy is negligible. Moreover, out of $148 billion of imports of machinery, computers, electronics, and phones, $100 billion or 67% are imported from Korea and China.
    ii. Similarly for garments, shoes, and accessories, around 50% of contents are imported.

b) For the reason given in a), FDI producers dominated both Vietnam's export and import markets. In 2023, 70% of total exports of Vietnam were by FDI firms while their imports comprised 64% of Vietnam's total import and the FDI enterprises have a positive trade balance, while non-FDI, i.e., local enterprises have a negative trade balance. (See again Graph 3.6 and Graph 3.7).

j) As shown in Graph 3.11, the intention of FDI producers from Taiwan, South Korea, Japan, and later China is quite clear: they aim to exploit the cheap labor market in Vietnam to export to the US and EU market. This is reflected in the fact that Vietnam has a large trade deficit with these countries and a huge trade surplus with the US and the EU, thus creating a very intense political conflict with the United States, even though the US imported $US 118.9 billion of goods and services from Vietnam, that made up only 3% of its imports in 2023 (Graph 3.12). This observation should be read as the lack of Vietnam's appropriate industrial policies and not as anti-foreign. Not only that Vietnam can be become a target country for countries with serious negative balance of trade with Vietnam, especially relating to the question if the product is a domestic product or a product of another country where Vietnam is serving purely as a processing center to avoid high tariff rates of countries at destination. Due to this phenomenon, it is also suspected that Vietnam becomes and exit gate for other countries to avoid payment high tariffs to the US and Europe. Vietnam has become since 2020 the third largest countries with which the US has trade defitcit after China and Mexico (see table 3.10), which might become a contentious issue in the US-Vietnam relation. In 2024, net exports from Vietnam to the US amounted to $US 123.5 billion, or 29% of GDP of Vietnam.

c) The proper identification of traded goods was recognized by economists especially when goods were produced by one country and then sent to another country for repacking or minor modification to be re-exported to other countries, for many reasons, either avoiding tariffs or embargos. However, until now, there is no international agreement on specific rules to determine the country of origin of the good. In 1981, the GATT Secretariat prepared a note on rules of origin, and in November 1982, Ministers agreed to study the rules of origin used by GATT Contracting Parties. Not much more work was done on rules of origin until well into the Uruguay Round negotiations. The WTO on its website wrote that: "Each contracting party was free to determine its own origin rules, and could even maintain several different rules of origin depending on the purpose of the particular regulation." Free Trade Agreement (FTA) between the US with about 20 members including Singapore, Korea made its own rule, deciding that the

"own goods" of a country must have a substantial transformation in that country. The rule of the US is that to be "own goods" of a certain country the value of transformation in that country must not be less than 35 percent of the appraised value of the good at the time the good is entered into the territory of the United States. For Singapore, an FTA member, it is a 25% rule. The UK requires 50% of domestic transformation to claim origin. It is also interesting to observe that the Free Trade Agreement between Vietnam and the EU (EVFTA) also set local content of not more than 10-30% in value or weight for many agriculture and textile products, and 50% for many manufacturing products.

Table 3.10. Balance of trade between the US and other countries ($US Billions)

	Canada	Mexico	China	Vietnam	Japan	Korea	EU	World
2010	-2.8	-61.2	-264.0	-10.6	-43.0	-2.6	-46.9	-503.1
2011	-7.8	-59.8	-282.6	-12.5	-44.9	-4.3	-60.1	-554.5
2012	-2.1	-57.2	-298.6	-14.7	-58.5	-5.6	-74.8	-525.9
2013	-0.3	-50.3	-298.1	-18.7	-59.4	-7.2	-78.2	-446.9
2014	-8.1	-53.8	-318.2	-23.9	-56.0	-12.7	-91.7	-484.0
2015	7.1	-60.0	-336.4	-29.9	-58.1	-16.3	-98.8	-490.8
2016	10.8	-64.2	-310.3	-30.9	-59.3	-14.2	-81.9	-479.5
2017	7.3	-70.6	-336.3	-37.2	-58.8	-6.6	-89.3	-516.9
2018	6.1	-79.1	-377.7	-38.1	-56.1	-4.5	-97.7	-578.6
2019	-1.1	-104.0	-302.0	-54.2	-56.4	-8.2	-103.7	-559.4
2020	0.6	-110.6	-282.3	-67.7	-50.5	-17.4	-110.3	-653.7
2021	-36.2	-108.8	-334.2	-89.5	-55.5	-23.1	-146.4	-848.1
2022	-57.6	-136.1	-366.2	-114.6	-68.9	-35.7	-129.0	-944.8
2023	-40.6	-162.1	-252.1	-102.9	-66.2	-40.8	-125.1	-784.9
2024	-63.3	-171.8	-295.4	-123.5	-68.5	-66.0	-235.6	-1202.2

Source: US Beaureau of Economic Analysis. Table 1: trad-geo-time-series-0724.xlsx

4. Evaluation of FDI investment as a tool for importing advanced technology

Proper identification of the domestic content of a good locally produced is important not only to satisfy the requirement of a given trade agreement but also to obtain an accurate assessment of the technical production capability of the country in each industry, which is helpful to policy makers to evaluate their economic policy. In addition, concerning the same type of assessment, the identification of the stage of production of a given industry: high-tech, medium, or low-tech is also important. The General Statistical Office of Vietnam can collect the data in the regular census and annual surveys of corporations.

Currently, factories and their major products, such as micro-computers, cell phones, machinery, and appliances, which make up about 35% of Vietnam's total exports and produced by the FDI firms, might be mistakenly classified into the high-tech category, simply because of their names by the General Statistics Office (GSO) of Vietnam. GSO stated that about 12% of firms with 32% of asset values can be

classified as high-tech, but it is a very doubtful assessment, [14] however, one may get a different understanding given a deeper look into the data on enterprises.

Samsung can serve as an example. The exported value of Samsung Vietnam reported by its chairman in 2023 was 55.7 Bil $SUS,[15] a bit higher than the total value of cell phones 52.4 Bil $SUS exported from Vietnam reported by Vietnam's Customs, thus only 11% of its content was locally produced. Even Mr. Tô Lâm, the Secretary of the Communist Party of Vietnam recognized this fact on his speech on high tech said of Samsung: *"I would like to add here: the electronics industry, phone and component manufacturing, the FDI sector exports 100% of the value of phones and components but imports up to 89% of the value of these components... Domestic enterprises mainly provide security services, industrial catering, waste treatment, etc."*[16]

Again, proper classification of an enterprise as high-tech would require a closer examination of the content of scientific research and technological development and the high technology added value at a given enterprise. Samsung paid software engineers from workers $US 3,800-13,200 a year (95-331 Mil. VND).[17] Obviously, with this payment, it would not be able to attract back any Vietnamese engineers with training abroad or even high-quality engineers with R&D capability at home.

In the case of Samsung goods exported from Vietnam, the whole value of cell phones is currently and conventionally classified as Vietnamese products, not the small value added to them in Vietnam, unlike the value added at the free-trade zone or export processing zones. More properly, the export value of cell phones from Vietnam may be divided into 2 parts, the value corresponding to the value imported from Korea is Korean goods transit in Vietnam, and the value added in Vietnam is Vietnam's exports. This can be implemented only if there exists an internationally recognized trade agreement, or among involved three-parties.

PART 4

A need for a new approach to economic development

This part of the paper will explore the relationships between the level of economic development and international trade and FDI, using statistics on international trade of many countries collected by international organisations. Similarly, it explores the link between R&D, tertiary education and economic developent. As can be seen from table 4.1 and graph 4.1 the record of average annual GDP growth rates of various countries in Asia and the world, the general trend is for economic growth to decelerate over

[14] See classification of enterprises in terms of high tech, middle and low tech here: https://www.gso.gov.vn/px-web-2/?pxid=V0545&theme=Doanh%20nghi%E1%BB%87p. GSOVN did not specify how it classifed an enterprise as high tech, however, the item 1, article 3 of the Law of High Tech of 2008- Luật Công Nghệ Cao (Luật công nghệ cao 2008 số 21/2008/QH12 áp dụng 2024 mới nhất (thuvienphapluat.vn) defines the "High technology is the technology with high content of scientific research and technological development; integrated from modern scientific and technological achievements; creating products with superior quality, features, high added value, environmentally friendly; playing an important role in forming new manufacturing and service industries or modernizing existing manufacturing and service industries." It is unclear how GSO applied this law in its survey on enterprises as the law requires that the high-tech enterprises should have high content of R&D and the product produced is high tech. These requirements should disqualify factories that processing goods for foreign owners for exports.

[15] https://nhadautu.vn/ty-trong-cua-samsung-trong-kim-ngach-xuat-khau-cua-viet-nam-giam-d91826.html.

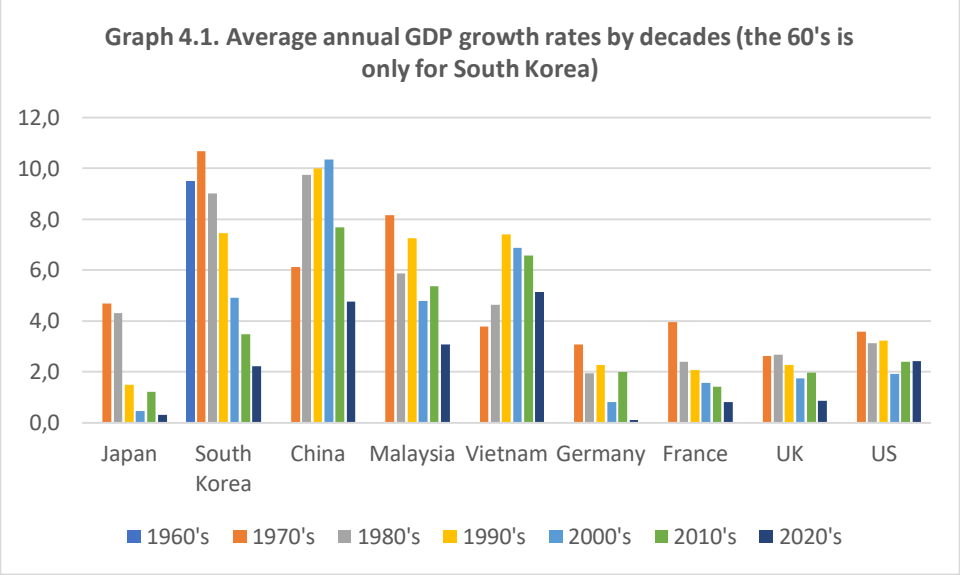
[16] https://special.nhandan.vn/tong_bi_thu_To_Lam_Dien_dan_quoc_gia_phat_trien_doanh_nghiep_cong_nghe_so_Viet_Nam/index.html.

[17] https://www.glassdoor.sg/Salary/Samsung-Electronics-Vietnam-Salaries-EI_IE3363.0,19_IL.20,27_IN251.htm.

time when the plateau of the third industrial revolution with mass-based production based on electriticy and computer-assisted automation is reached. This has happened in highly developed countries like US, Germany, UK, France, Japan and then South Korea. In Asia, probably China after having achieved 4 decades of growth at 7-10% a year, and classified into the higher middle income group of countries, still needs to catch up, seems to enter into the decelerating stage, but still high enough (at around 5%) to catch up with high income countries. Vietnam achieved only two decades of almost 7% growth a year, and still at the very low end of developing it is already decelerating. The questions should be raised is why? Another difficult-to-answer question that concerns Vietnam's ambitious plan to exit the group of lower middle income countries with a focus on AI digitalization technology is whether this plan is appropriate when this technology will replaces even skilled workers with AI-driven machines while enriching only a few equity owners?

Table 4.1. Average annual GDP growth rates by decades (the 60's is only for South Korea

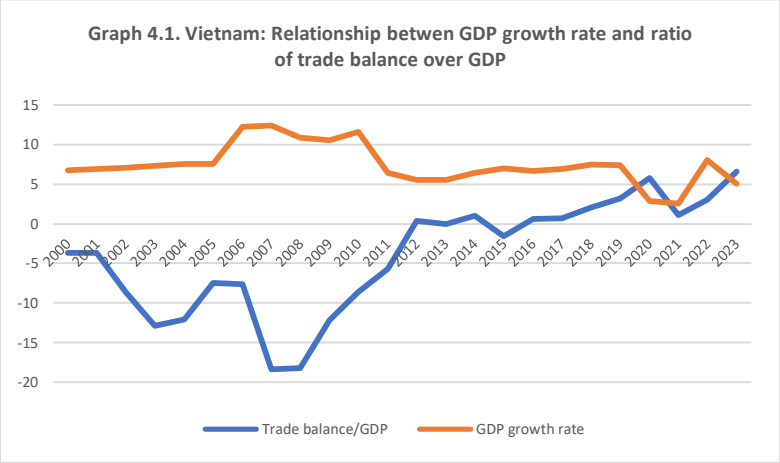
	1960's	1970's	1980's	1990's	2000's	2010's	2020's
Japan		4.7	4.3	1.5	0.5	1.2	0.3
South Korea	9.5	10.7	9.0	7.4	4.9	3.5	2.2
China		6.1	9.7	10.0	10.3	7.7	4.8
Malaysia		8.2	5.9	7.2	4.8	5.4	3.1
Vietnam		3.8	4.6	7.4	6.9	6.6	5.1
Germany		3.1	2.0	2.3	0.8	2.0	0.1
France		4.0	2.4	2.1	1.6	1.4	0.8
UK		2.6	2.7	2.3	1.7	2.0	0.9
US		3.6	3.1	3.2	1.9	2.4	2.4



Sources: United Statistics Division, except for Vietnam, the data of which is discussed at the start of this paper. Data for South Korea was estimated from https://kellogg.nd.edu/sites/default/files/old_files/documents/166_0.pdf.

1. Industrialization and international trade: export of own-produced goods or good processing services

In the case of Vietnam, it is worth posing the question of whether international trade has been the main driving factor in its economic growth or something else, as it is interesting to see that growth rates decelerated since 2012 when Vietnam's balance of payment get positive and the ratio of trade over GDP is approaching 200%, which is in 2020 surpased only by Hong Kong and Singapore (see Graph 4.1)?



Source: General Statistical Office of Vietnam.

Table 4.1. International trade of goods and services over GDP (%)					
	1990	2000	2015	2022	2022 Per capita GDP (in 2022 USD)
Cambodia	-	112	128	123	1,787
China	24	39	39	38	12,720
India	16	27	42	50	2,389
Indonesia	53	71	42	45	4,788
Japan	19	20	35	47	33,815
Korea, Rep.	51	66	79	97	32,255
Lao PDR	36	69	86	..	2,088
Malaysia	147	220	131	147	11,972
Philippines	43	85	59	72	3,499
Thailand	76	121	125	133	6,909
Viet Nam	81	111	145	184	4,164
US	20	25	28	27	76,399
Hong Kong	226	248	389	385	48,984
Singapore	344	364	329	333	82,808
European Union	53	72	88	106	
North America	22	30	31	31	
High income	41	52	61	67	
Middle income	32	47	47	53	
Low income	..	41	46	53	

Source: calculated from data in Basic Data Selection - amaWebClient (un.org)

It is well known that economic theory asserts that both trading countries will benefit when countries import products that are produced more efficiently and cheaply abroad, the question is not easy to answer in practice, because trade may bring richness to a few but create unemployment to a large segment of a society especially when people cannot freely move from one country to another. Currently, international trade has become a hotspot for international political alignment and of course military threat.

Statistically, data on many countries show that high-income countries like the US, Japan, South Korea, and even the UK are not as heavily dependent on trade (see Table 4.1 and Graph 4.2). Very high-income countries have relatively low ratios of foreign trade over GDP: In 2022, the US has a trade ratio of only 27%, China 38%, Japan 47%; Korea at 97% is high only recently not in the 1990 and 200 decades when it still in the process of industrialization aiming to achieve high economic rates of growth. In contrast, many low and middle-income countries in Asia have very high ratios of foreign trade over GDP.

Hong Kong and Singapore are exceptions as they are small territories that logistically and politically lend themselves to serve as transshipment centers and therefore their ratios of trade over GDP are as high as 300-400%.

Data on Vietnam shows that the growing positive trade balance and the ratio of trade over GDP reaching almost 200% do not seem to improve the economic growth rate. Vietnam's GDP growth rate seems decelerating since 2012 when its trade balance turned positive. Of course, before that, the negative balance of trade stimulated an extraordinary increase in GDP, that negative balance of course cannot be sustained for long due to the inability to pay international debts.

Though there is a connection between international integration through trade and high development reflected in high per capita income, but that requires the updating of technology, which is imported and internal development through education system and research and development. These cases may wait

to be expected in Vietnam, Cambodia, and Thailand and even Malaysia, which have high foreign trade-to-GDP ratio of over 100%.

2. Industrialization: policy on R&D and tertiary education in Vietnam

Another question to be posed here is: what is the long-term strategic economic policy that Vietnam pursues? Should it focus on the development of its own technical capability and the increase in the demand of its own population of 100 million, not a small number as compared to 50 million of France's population?

It is quite clear that the development of Japan, South Korea and later China was achieved through the improvement of their educational system, particularly relating to college and other tertiary education, and from their focus on research and development (R&D) that allowed them to develop its technical capability or adapt foreign technology for own uses.

Research and Development (R&D)

The ratio of South Korea's R&D is currently 4.9% of GDP, the highest in the world and its ratio of college and tertiary enrollment over eligible children at 103% is also the highest.[18] Remarkably, China started after 1975 at a point almost as low as Vietnam, it has learned quickly from other more advanced countries first with imports and then with a clearly stated intention to develop technology on its own, even written in contracts with foreign partners as in the case of building its high-speed railway system. The data in the graph shows that China has spent 2.43% of GDP on R&D and 99% of eligible children are attending colleges and tertiary schools.

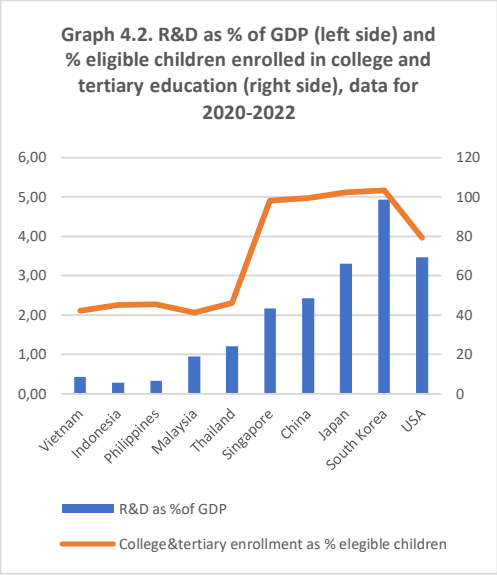
Vietnam's performance on both accounts is not better than that of most Southeast Asian countries at the bottom. The ratio of R&D to Vietnam's GDP was only 0.43%, a bit higher than Indonesia and the Philippines, though much lower than Malaysia's 0.95% (see Graph 20).[19]

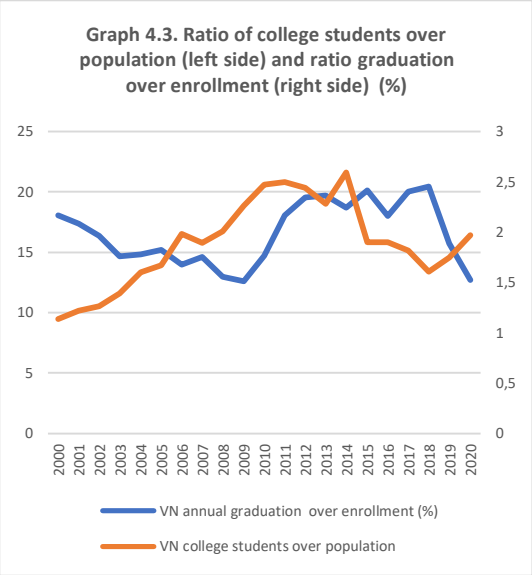
The data published by Vietnam's General Statistics Office also showed the recent decline in the ratio of college students to population since 2014-15 (2.5% in 2014 down to 1.9% in 2020) as well as the decline in graduation (20% in 2015 down to 12.7% in 2020). Vietnam might be a hub for goods processing for a while, but this role could have a limited lifespan as it will be replaced by other centers that offer lower labor costs.[20]

[18] The rate of over 100% is due to the number of college students from adult population.

[19] https://www.theglobaleconomy.com/Vietnam/. Data on R&D and education as part of 500 indicators for over 200 countries in the world for researchers including sources and methods are assembled here.

[20] https://www.wsj.com/economy/trade/trump-tariff-rates-china-world-trade-charts-3d6aee09?mod=djem10point.





Source: Important data from various international organizations are assembled here: https://www.theglobaleconomy.com/economies/ or Science & Engineering Indicators, US National Science Foundation: https://ncses.nsf.gov/pubs/nsb20246/figure/RD-10 and https://genderdata.worldbank.org/en/indicator/se-cuat-zs?education=At+least+completed+post-secondary&gender=total#data-table-section.

Looking at overall expenditure on education, Vietnam spends about 4.7% of GDP on education in 2023.[21] A major part of it, or 3.5% of GDP, was paid for by the government expenditure on education. Thus, it is paying 74% of the total education cost. In comparison, government expenditure on education was much lower than in other countries as a percent of GDP. Government expenditure for higher education was very low, only 0.33% of GDP compared to 0.64% in Thailand and 1.13% in Malaysia.[22]

Table 4.2. Expenditure on education as a % of GDP in some countries, and % paid by government budget, from OECD (2019), Vietnam, China, and Korea (estimated)

	OECD average	Norway	Australia	Israel	US	Korea	China	VN
All institutions	4.9	6.6	6.1	7.3	6.0	7.6	7.1	4.7
Elementary and secondary	3.4	4.6		4.8	3.5	4.1		
Postsecondary	1.5	1.9		2.5	2.5	2.6		
Government expenditure on education		4.9	5.2	6.5	5.4	4.0	4.0	3.5
Percent paid by the government		74%	85%	89%	90%	53%	56%	74%

Sources: https://nces.ed.gov/programs/coe/indicator/cmd/education-expenditures-by-country. China's figure is estimated by adding 7.9% of household final consumption (or 3.1% of GDP) and 4% of GDP spent by the government.

[21] This is (estimated by adding the value-added of education (3.9% of GDP) and intermediate cost of education (17% of the total output) based on the supply and use table of 2017. Government expenditure was 356,397 in 2023 (estimated from 380,561 VN BD in 2024, which is 3% of GDP. https://baodautu.vn/ngan-sach-nha-nuoc-chi-306128-ty-dong-cho-giao-duc-dao-tao-d227333.html

[22] https://daibieunhandan.vn/ngan-sach-nha-nuoc-chi-cho-giao-duc-dai-hoc-moi-nam-dat-0-18-gdp-khong-co-da-cho-khoa-hoc-but-pha-post352342.html.

In the same speech given on January 15 2025 by Mr. Tô Lâm, the new Secretary General as mentioned earlier he emphasized that "*In the coming years, we must attract FDI more selectively. Do not let Vietnam become an "assembly-processing" base, a technological dumping ground for the world, while domestic enterprises cannot learn anything*." [23]

The main issue for the future of Vietnam is what type of concrete policy and measures the government needs to implement to bring the economy of Vietnam to a higher stage. Higher education and R&D must be the focus.

23 https://special.nhandan.vn/tong_bi_thu_To_Lam_Dien_dan_quoc_gia_phat_trien_doanh_nghiep_cong_nghe_so_Viet_Nam/index.html.

APPENDIX

Revision of data since 2010

Vietnam has carried out economic census every 5 years. The recent ones were 2007, 2012, 2017, 2021. Data for the last one in 2021 has not been fully released.

On the basis the 2017 Economic Census, the GSO has released new data for the 2010-2016 and continued annual data after that based on limited surveys, a normal procedure carried out by the statistical community in the world.

According to the detailed data communicated to the author by the General Statistical Office of Vietnam, some of which are shown below, it is interesting to observe that it is the state-owned corporations (SOEs) and the FDI corporations that were underestimated, and the GDP originating from these two institutional sectors are adjusted upward, but the household sector (that includes the so-called unorganized activities and the collector sector) was overestimated and need to be adjusted downward. This means that during the 2010's Vietnamese government had problem to track the activities of SOEs and FDI. Overall, the revision of data did change the values of GDP significantly, but not GDP growth rates. This simply means that the annual data were projected from the same annual trends obtained by annual and or quarterly surveys.

A1. Initial but incomplete adjusted data for 2016 before and after the 2017 Census

	2017 Census	Before 2017 Census	Difference (%)
State-owned corporations sector			
Number of units	2,698	2,835	-5%
Employment	1,286,288	1,371,669	-6%
Revenues	2,865,500	2,722,246	5%
Sector GDP	751,480	1,171,875	-36%
Domestic private corporations sector			
Number of units	500,654	427,710	17%
Employment	8,627,766	7,712,499	12%
Revenues	9,762,148	8,075,154	21%
Sector GDP	1,496,153	369,434	305%
FDI corporations sector			
Number of units	14,572	11,940	22%
Employment	4,167,273	3,772,688	10%
Revenues	4,808,782	4,151,782	16%
Sector GDP	1,065,506	837,093	27%
Household activities sector			
Number of units	5,142,878	4,837,066	6%
Employment	8,701,319	7,780,524	12%
Revenues	2,524,270	2,551,539	-1%
Sector GDP	1,306,400	1,370,319	-5%
Collective sector			
Number of units	13,556	12,865	5%
Employment	205,081	212,938	-4%
Revenues	63,797	74,979	-15%
Sector GDP	21,647	176,510	-88%
State service institutions sector			
Number of units	143,723		
Employment	3,789,442		
Revenues	944,778		
Sector GDP	321,891		

Source: Data provided by the General Statistical Office of Vietnam.

A2. GDP of Vietnam adjusted after the 2017 Economic Census

In Billions VND in 2010 prices	2010	2011	2012	2013	2014	2015	2016
GDP before 2017 census	2,158	2,292	2,413	2,544	2,696	2,876	3,054
GDP after 2017 census	2,740	2,916	3,076	3,247	3,455	3,697	3,944
% Difference	27%	27%	27%	28%	28%	29%	29%
Growth rate before 2017 census		6.2	5.3	5.4	6.0	6.7	6.2
Growth rate after 2017 census		6.4	5.5	5.6	6.4	7.0	6.7

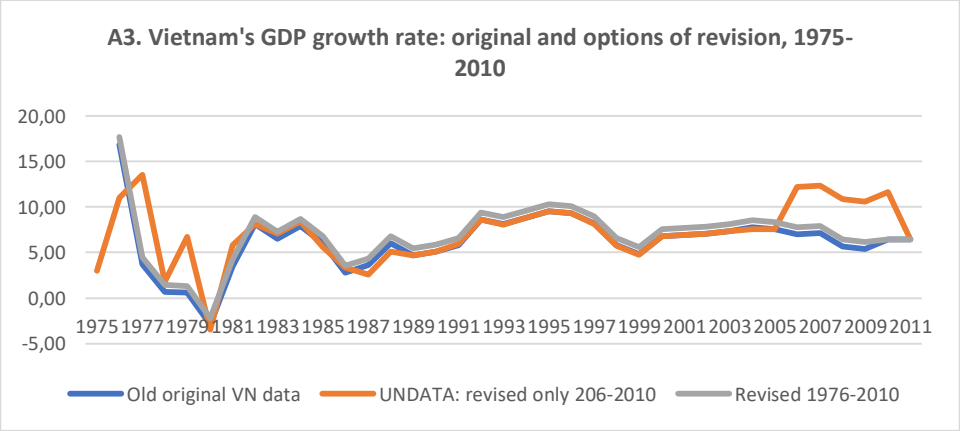
Vietnam's GDP data for the 2010-2016 period published by the General Statistical Office of Vietnam (GSO) based on the 2017 Census, with GDP data for 2016, higher than the previously published by 29.0%. The old and the revised data are shown in Table A2. Until now, the data before 2010 has not been officially revised.

The United Nations Statistics Division, however, decided to revise the data of growth rates within the 2006-2010 data such that GDP of 2005 will have to grow at higher rates to arrive at the new GDP that is 27% higher. The revised growth rates during the 2006-2010 were around almost 12%. The method is simple. Let assume that GDP at constant prices in t is X0 and GDP at constant prices in t+n is XN. Let also assume that new XNN is the new GDP based on the new census and XNN/XN = (1+r), then the new growth rate $g_N = g(1+r)^{(1/n)}$.

There is a drawback with this approach, because it is accurate only if the value of 2005 GDP is accurate.

The author tried another option by revising growth rates from 1976 assuming GDP of 1976 is reliable, which is a dubious assumption. The resulting incremental change in growth rates is 0.7% (see Graph A3).

For this paper, unless more accurate past GDP data for the census years before 2006 was obtained after reviewing the census data from the past, the original set of GDP growth rates may be the best alternative as they reflect the trend that were based annual surveys



Below is the historical set of GDP rates of growth of Vietnam, CPI and implicit GDP deflator. From these rates, constant GDP in VND or USD can be derived and from them, GDP in current prices can also be derived using the historical GDP implicit price deflators. However, per capita GDP as indicator of personal expenditure, CPI may be used instead.

Historical series of GDP growth rates, CPI and implicit price deflators

	GDP growth rates	CPI	Implicit GDP deflator
1976	16.8	21.9	5.0
1977	3.7	18.6	5.0
1978	0.7	20.9	18.6
1979	0.6	19.4	2.4
1980	-2.9	25.2	14.6
1981	3.5	69.6	32.7
1982	8.1	95.4	100.0
1983	6.5	49.5	49.5
1984	7.9	64.9	64.9
1985	6.0	91.6	91.6
1986	2.8	774.7	487.2
1987	3.6	223.1	316.7
1988	6.0	349.4	307.3
1989	4.7	36.0	74.0
1990	5.1	67.1	42.1
1991	5.8	67.5	72.5
1992	8.6	17.5	32.6
1993	8.1	5.2	17.4
1994	8.8	14.4	17.0
1995	9.5	12.9	17.0
1996	9.3	4.5	8.7
1997	8.2	3.6	6.6
1998	5.8	9.1	8.8
1999	4.8	0.1	5.7
2000	6.8	-0.5	3.4
2001	6.9	0.8	1.9
2002	7.1	4.0	4.0
2003	7.3	3.0	6.7
2004	7.8	9.7	18.1
2005	7.5	8.7	9.0
2006	7.0	6.6	8.6
2007	7.1	12.8	9.6
2008	5.7	19.9	22.7
2009	5.4	6.5	6.2
2010	6.4	11.7	12.1
2011	6.4	18.1	21.4

2012	5.5	6.8	9.1
2013	5.6	6.0	4.0
2014	6.4	1.8	3.7
2015	7.0	0.6	-1.7
2016	6.7	4.7	1.8
2017	6.9	2.6	4.4
2018	7.5	3.0	3.6
2019	7.4	5.2	2.4
2020	2.9	0.2	1.5
2021	2.6	1.8	2.9
2022	8.1	4.6	4.1
2023	5.0	3.6	1.9
2024	7.1	3.3	

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