

Economic Reform and Performance: A Comparative Study of China and Vietnam

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Since the launch of economic reforms in China in 1978 and Vietnam in 1986, both countries have made impressive achievements. However, the two countries have experienced a notable divergence in growth, even though the context and characteristics of their reforms were broadly similar. This paper documents three principal findings: (1) China and Vietnam were similar in their initial conditions and approaches to reform and economic management; (2) the growth divergence between the two countries is substantial not only quantitatively but also qualitatively, and the growth gap widened during good times, when both the countries enjoyed accelerated growth; and (3) the growth divergence between China and Vietnam can be explained mainly by considerable disparity in government effectiveness rather than by a significant gap in the quality of institutions or human capital.

Introduction

Over the past five decades, East Asia has emerged as a region with several spectacular stories of catch-up development. The World Bank identified the eight highest-performing Asian economies (HPAEs) as Japan, the “Four Asian Tigers” (Hong Kong, Singapore, South Korea and Taiwan) and the three newly industrialised economies (NIEs) — Indonesia,

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Malaysia and Thailand.¹ While the “Four Asian Tigers” and the NIEs have made impressive achievements in economic growth and development, gaps in the pace and efficiency of their growth have been substantial.² Furthermore, the slower recovery from the 1997 Asian financial crisis of the NIEs relative to that of the “Four Asian Tigers” suggests that these two groups have some significant disparities in the fundamental factors underlying their economic performance.³

China and Vietnam have achieved remarkable economic growth since the launch of their economic reforms (China in 1978 and Vietnam in 1986). However, the two countries have also experienced a divergence that resembles that of the Four Tigers versus the NIEs. Figure 1, which plots the relationship between per capita GDP and GDP growth rate, shows that China and Vietnam have followed very similar growth patterns, but Vietnam’s growth has been below China’s by a notable margin.⁴

Furthermore, Vietnam’s per capita GDP growth path appears to follow Indonesia’s (from the \$200 level) and Thailand’s (from the \$400 level), while China’s shows a decisive deviation from these patterns (Figures 2A and 2B).

Apart from China, it is important to note that India, which has achieved accelerated economic growth since its launch of reforms in 1991, has outperformed Vietnam since 2004, and both India and China are expected to be notably more resilient than Vietnam in this current global economic crisis (Figure 3).

These observations suggest that the gap in economic performance between China and Vietnam is something more serious than a simple quantitative difference in economic growth over a given period.⁵ This paper aims to gain insights into the gap in economic performance and the main factors behind it.

¹ World Bank, “The East Asian Miracle: Economic Growth and Public Policy”, A Policy Research Report (New York: Oxford University Press, Washington, DC, 1993).

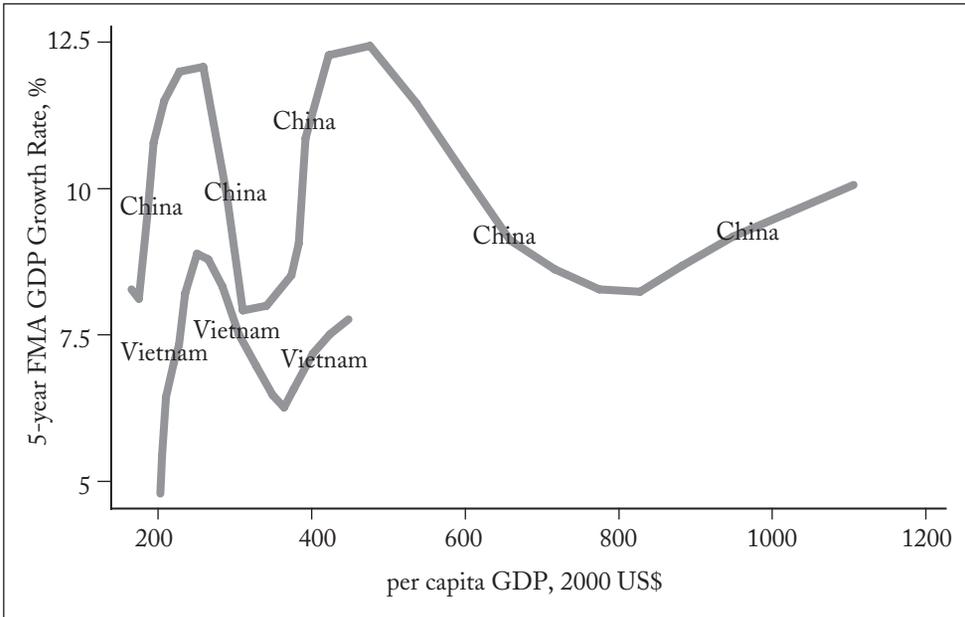
² According to World Bank over the period 1960–1985, the Four Asian Tigers significantly outperformed the NIEs’ average GDP and TFP growth. See World Bank, “The East Asian Miracle: Economic Growth and Public Policy”, pp. 29, 61.

³ GDP in 2000 relative to 1996 was 125 per cent for Taiwan and 116 per cent for Korea, but only 97 per cent for Thailand and 96 per cent for Indonesia. See Asian Development Bank, “Key Indicators 2001”, (ADB, 2001).

⁴ The 5-year forward moving average (FMA) growth rate is used to smooth out short-term fluctuations and capture the growth trend.

⁵ Regarding Vietnam’s rapid economic growth, see Van Arcadias, Brian and Raymond Mallon, *Vietnam: A Transition Tiger?* (Canberra: Asia Pacific Press, 2003), p. 8. They

Figure 1. Pattern of Economic Growth during Reform Period: China vs. Vietnam



Note: FMA is Forward Moving Average.
Source: WDI.

Figure 2A. Per Capita GDP Growth Paths: Vietnam vs. China

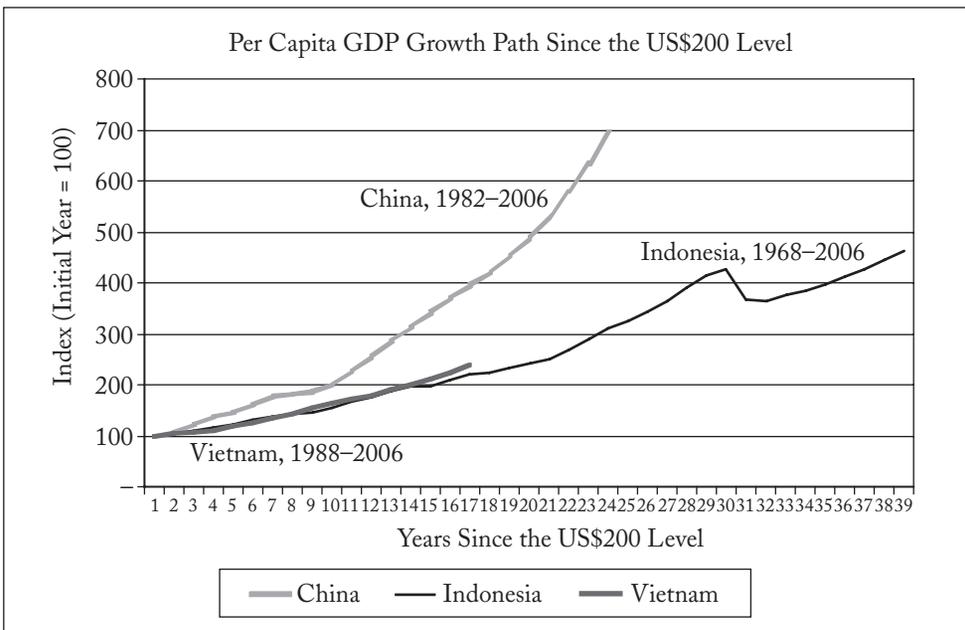
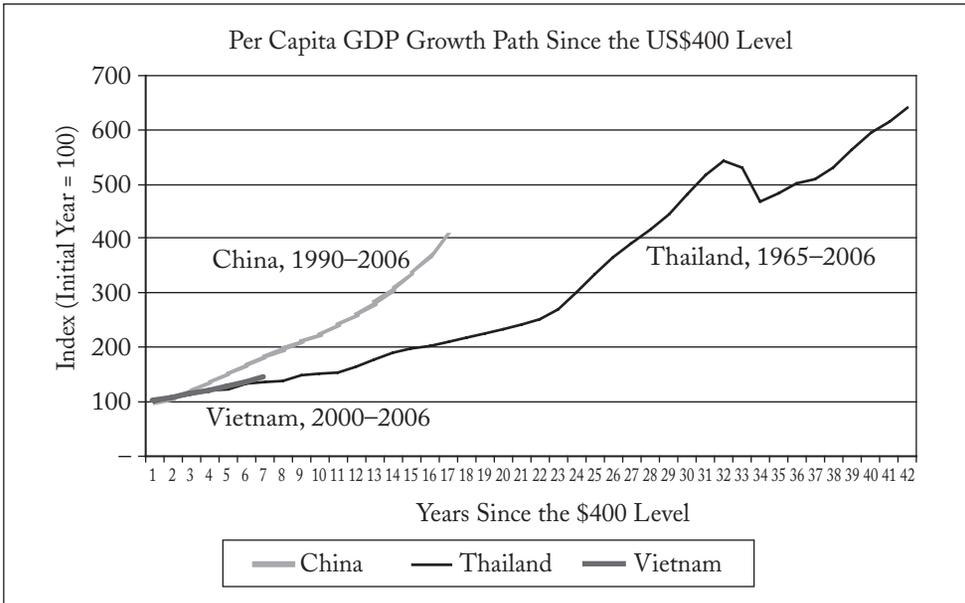
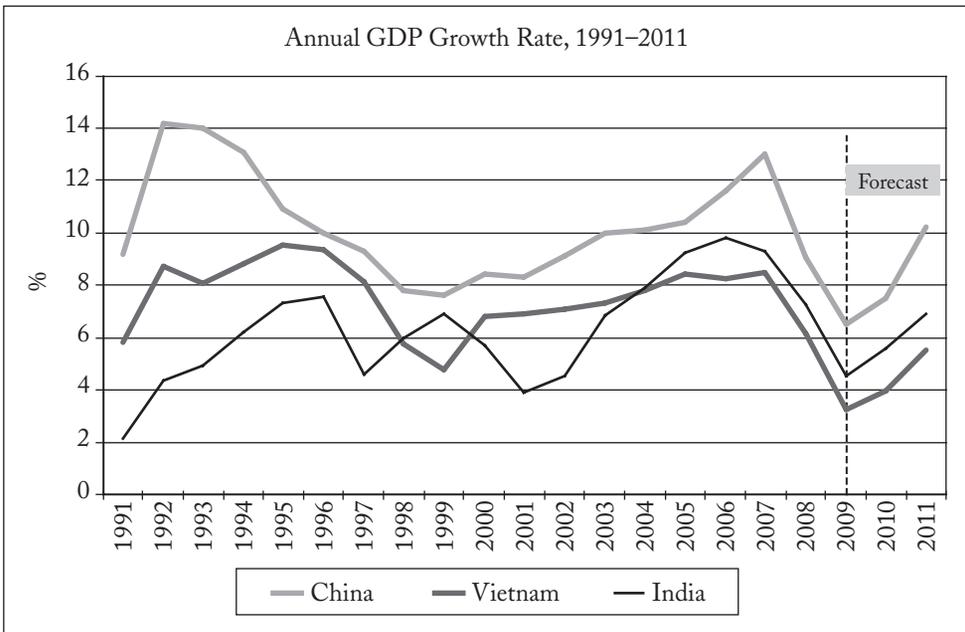


Figure 2B.



Source: WDI.

Figure 3. Economic Growth since 1990: China, Vietnam and India in Comparison



Source: IMF.

Economic Reform in Vietnam and China: Similarities and Dissimilarities

China started building its socialist economy in 1949, while the construction of the socialist economy in Vietnam began in 1954 for North Vietnam and in 1975 for the unified country. Both China and Vietnam began their economic development from economies dominated by agriculture, and in both cases, their attempts to build a Soviet-style economy failed during their pre-reform periods.

In December 1978, the Third Plenary Session of the 11th Central Committee, in which Deng Xiaoping became the “core” of the Communist Party of China’s leadership, initiated China’s economic reform. Eight years later, in December 1986, the Sixth Congress of the Communist Party of Vietnam (CPV) launched Vietnam’s economic reform, known as “*Doi Moi*” (Renovation).

Although economic reforms in the two countries were launched nearly a decade apart, they have strikingly similar features. These similarities lay in the circumstances leading to reform, the initial socio-economic development conditions and the approaches to reform and economic management.

Similarities in the Factors Leading to Economic Reform

The economic reforms in both China and Vietnam were initiated under circumstances that provided three critical factors for change: receptivity, crisis and opportunity.

Receptivity: During their pre-reform periods (China: 1949–1978; Vietnam: 1954–1986), the two countries made extraordinary efforts to build their socialist economies, but they experienced failure rather than success. China was

point out the potential impact of “powerful exogenous factors” such as “Vietnam’s regional location and the trajectory of the regional economy, the timing of natural resource (oil) exploitation, the entrepreneurial vitality of the Vietnamese, access to a sizeable and dynamic emigrant community, and the onset of peace.” On the other hand Dollars observed, “Vietnam is one of the fastest growing economies in the world in the 1990s, yet by many conventional measures, it has poor economic policies”. See David Dollar, “Reform, Growth, and Poverty in Vietnam”, *World Bank Policy Research Working Paper No. 2837* (2002), p. 1. These observations suggest that comparing Vietnam’s economic growth to that of China can shed valuable insights into the factors underlying the economic performance of the two countries.

impoverished by the catastrophic Great Leap Forward and Cultural Revolution, while the Vietnamese economy was ruined by the collectivisation of land, nationalisation of privately-owned industrial and trading establishments and socialist ideology-driven initiatives.

After nearly 30 years of economic development with an annual growth rate of 2.7 per cent, China's per capita GDP in 1978 was only US\$164 (Table 1).⁶ Nathan describes the beginning of China's reform as a time when "agriculture was stagnant, industrial production was low, and the people's living standards had not increased in twenty years".⁷ In 1986, Vietnam was listed among the poorest countries in the world, with per capita GDP at \$203. The per capita GDP growth rate was only 1.4 per cent over the 10 years following the country's official reunification in 1976 and the country was heavily reliant on the Soviet Union for economic aid.⁸

These frustrating economic development patterns caused the Chinese and Vietnamese people to long desperately for the government to change the way it managed the economy. For Vietnam in 1986, the receptivity to change was even greater due to the initial success of the economic reforms in China.

Crisis: The two countries faced critical difficulties that made their reforms even more urgent. China's agricultural sector shrank by 1.8 per cent in 1976 and 2.2 per cent in 1977.⁹ Vietnam suffered severe food shortages, hyperinflation and aid reduction. The annual per capita food output fell from 304 kilograms (of paddy rice equivalent) in 1985 to 301 kg in 1986 and to 281 kg in 1987.¹⁰ The inflation rate was extremely high: 90 per cent in 1985, 455 per cent in 1986, 361 per cent in 1987 and 374 per cent in 1988.¹¹ The annual aid per capita received by Vietnam dropped by more than 50 per cent, from \$6 during 1978–1982 to \$2.6 during 1983–1987.

⁶ Computed from the Penn World Table (PWT) dataset for the period 1952–1978.

⁷ Andrew J. Nathan, *China's Crisis* (New York: Columbia University Press, 1990), p. 200.

⁸ General Statistics Office, *Statistical Yearbook 1996* (Hanoi: Statistical Publishing House, 1997).

⁹ All the data used in this paper, unless otherwise specified, are from the *World Bank Development Indicators* (WDI) online dataset.

¹⁰ General Statistics Office, *Statistical Yearbook 1996*.

¹¹ See *IMF World Economic Outlook Database* [15 Oct. 2008].

Opportunity: Reforms in the two countries became possible thanks to internal and external factors. For China, the death of Chairman Mao Zedong in 1976 paved the way for Deng Xiaoping to rise to the core of the party's leadership. For Vietnam, the radical reform programmes launched by Mikhail Gorbachev in 1985 in the Soviet Union — which was then Vietnam's model for economic development as well as its main provider of aid — to some extent were an inspiration for the Vietnamese leadership. Furthermore, the death of Party General Secretary Le Duan in 1986, who had dominated the political system for decades, facilitated the transition of Vietnam into its reform stage marked by the Sixth Party Congress in December 1986.

The similar circumstances leading to reforms in China and Vietnam, as presented above, are behind the fact that the reforms in both countries were “more economic than political” as observed by Fforde and Vylder.¹²

Similarities in the Development Conditions at the Launch of Reforms

At the launch of their economic reforms, China and Vietnam were at similar developmental positions in many areas, including basic human capital, economy and infrastructure, as depicted in Table 1.

With regard to human capital, the two countries had comparable levels of literacy and nutrition. While life expectancy was somewhat higher in China, Vietnam had a slight edge in terms of adult literacy rate and the average age of the population. The Chinese and Vietnamese economies at the launch of reform were underdeveloped, with per capita GDP at \$165 for China and \$203 for Vietnam.¹³ Pertaining to the GDP structure, the industrial sector was dominant for China (48.2 per cent), while for Vietnam, agriculture was the largest sector (38.1 per cent). This difference between the two countries posed both advantages and disadvantages for each in its early stages of economic reform. For China, the large industrial sector, which was mainly state-owned, provided a stronger base for industrialisation, but its serious inefficiency, overstaffing and lack of market orientation would require costly efforts and strong political will to

¹² Adam Fforde and Stefan De Vylder, *From Plan to Market: The Economic Transition in Vietnam* (Boulder: Westview Press, 1996), p. 304.

¹³ Measured in constant 2000 US\$.

Table 1. *Developmental Conditions in China and Vietnam at the Launch of Their Reforms*

Indicator	China (1978)	Vietnam (1986)
<i>Human capital*</i>		
Adult literacy (% of total)	67.1	89.2
Young adult literacy (% of total)	91.3	93.6
Calorie supply (kcal/day)	2,328	2,300
Median age	22.1	19.5
Life expectancy at birth, years	67	63
<i>GDP per capita</i>		
In 2000 US\$	165	203
In 2000 PPP\$	685	1,031
<i>GDP structure, %</i>		
Agriculture	28.1	38.1
Industry	48.2	28.9
Services	23.7	33.1
<i>Rural economy</i>		
Share of rural population (%)	81.3	80.3
Cereal yield (kg per hectare)	2,802	2,715
<i>Openness</i>		
Exports of goods and services (% of GDP)	6.6	6.6
Imports of goods and services (% of GDP)	7.1	16.6
<i>Infrastructure</i>		
Main line telephones per 1,000 people	2.0	1.3

Note: * For human capital, the data is from 1980 for China and 1985 for Vietnam.

Sources: WDI; Data on human capital except for life expectancy is from the UN (2006).

reform.¹⁴ For Vietnam, the larger agricultural sector could allow it to “leap frog” with new industrial development projects. However, its smaller industrial sector also meant that the country would have difficulty in acquiring skilled labour and building a network of supporting industries at the beginning of its industrialisation.

With respect to the rural economy, 80 per cent of the population in both countries lived in rural areas, and the two countries had a similar level of cereal yield per hectare (2,802 kg for China and 2,715 kg for Vietnam). Both China and Vietnam had a very low level of openness as well as severely

¹⁴ Export-oriented, labour-intensive manufacturing in China developed largely independently of the industrial base laid down in the earlier period. This implies that the initial industrial base is not a precondition for successful export-oriented industrialisation. See J. Riedel, “Vietnam: On the Trail of the Tigers”, *World Economy* 16, no. 4 (1993): 401–22.

inadequate infrastructure. The export share of GDP was 6.6 per cent for both countries. Telephone penetration (per 1,000 inhabitants) was 1.3 for Vietnam and 2.0 for China.¹⁵

Similarities in Reform Approach and Implementation

While the reforms in China and Vietnam were initiated under the pressure of economic despair and the critical need to find a new way to build the economy, the paramount concern of the leadership in both countries was to maintain political stability and the absolute power of the Communist Party. As a result, to justify the legitimacy of the political system, both countries chose a “gradualist” approach to reform with a special focus on economic growth.

Table 2, which lists the reform milestones and major initiatives undertaken by China and Vietnam over their reform periods, shows some striking similarities:

- The launch of reforms was a landmark decision of the Communist Party led by a new leadership team.
- Unshackling the agricultural sector (which accounted for over 80 per cent of the labour force in each country): both countries introduced the “household contract responsibility system”. This step turned households into production units, giving farmers the incentive to maximise their efforts. This officially took place in China in 1980 and in Vietnam in 1988, that is, about two years after the launch of the reforms in each country.

Table 2. *Reform Milestones: Comparison of Vietnam and China*

Reform Initiatives	Major Events, Policy Documents and Timeframe		Time Lag VN-CN
	China (CN)	Vietnam (VN)	
Reform Launching	The Third Plenary Session of the 11th Central Committee of the CPC, in which Deng Xiaoping became the core of the party leadership and announced the official launch of the Four Modernisations, the drivers of China’s reform, Dec. 1978.	The Sixth Congress of the CPV elected a new leadership with a liberal reputation and launched Vietnam’s economic reform, dubbed as “Renewal”, Dec. 1986.	8 years

¹⁵ For comparison, the figure was 8.2 for the Philippines in 1978.

Table 2. (Cont'd)

Reform Initiatives	Major Events, Policy Documents and Timeframe		Time Lag VN-CN
	China (CN)	Vietnam (VN)	
I. Fundamental Changes			
Nation-wide introduction of the “household contract responsibility system”	Circular on further strengthening and improving the rural responding system, 1980	Resolution 10-NQ/TW of the CPV Politburo on agricultural sector management reform, 1988	8 years
Legalising the development of the private sector	Constitutional amendments making the private economy a “supplement to the socialist economy”, 1982.	“The law on private enterprises”, 1990.	8 years
II. State-owned Enterprise (SOE) and “Level Playing Field” Reforms			
<i>Phase 1:</i> Giving SOEs increasing autonomy through eradication of the command economic system; implementing experimental privatisation	1979–1984	1987–1993	8 years
<i>Phase 2:</i> Restructuring SOEs, establishing the legal framework for SOEs to operate in a market economy	1985–1993 “Interim regulations on revitalisation of large and medium-sized state owned enterprises” (State Council), 1985	1994–1998 “Transformation of selected SOEs into Joint-Stock Companies” (Government Decree No. 28-CP), 1996	10–11 years
	“Regulations on deepening reform and invigorating state owned enterprises” (State Council), 1986	The first SOE Law, 1995	7 years
	The first SOE Law, 1988		

Table 2. (Cont'd)

Reform Initiatives	Major Events, Policy Documents and Timeframe		Time Lag VN-CN
	China (CN)	Vietnam (VN)	
II. State-owned Enterprise (SOE) and "Level Playing Field" Reforms			
<i>Phase 3: Levelling the playing field and speeding up privatisation</i>	1994 onwards The first Company Law, 1994	1999 onwards The first Enterprise Law, 1999	5 years
	The revised Company Law, 2005, taking effect on 1 Jan. 2006	The revised Enterprise Law, 2005, taking effect on 1 Jan. 2006	0 years
	NA	Investment law, 2005, taking effect on 1 July 2006	NA
III. Embracing Globalisation			
Attracting FDI	Law on Sino-foreign joint ventures, 1979	Foreign Investment Law, 1987	8 years
		Law on Industrial Zone and Export-Processing Zone, 1994	
Bilateral trade agreement with the US	1979	2000	21 years
Admitted to the WTO	2001	2006	5 years
IV. Financial Reforms			
Banking sector reform	"Decision of State Council on Reform of the Financial System", 1993	"Law on State Bank and Law on Credit Institutions", 1997	4 years
Introduction of VAT	"The Provisional Regulation of the People's Republic of China on Value-added Tax", 1993	"Law on Value-added Tax", 1997	4 years

Table 2. *(Cont'd)*

Reform Initiatives	Major Events, Policy Documents and Timeframe		Time Lag VN-CN
	China (CN)	Vietnam (VN)	
IV. Financial Reforms			
Unifying the corporate income tax code for all sectors and reducing the corporate tax rate to 25%	“(New) Corporate Income Tax Law”, 2007, taking effect on 1 Jan. 2008	Introduced in 2008	1 year
Opening of the stock market	Establishment of the Shanghai Stock Exchange (SSE), 1990	Establishment of Ho Chi Minh City Stock Exchange (HOSE), 2000	10 years
The first major state-owned bank is listed on the stock market	Industrial and Commercial Bank of China (ICBC), 2006	Vietnam Commercial Bank (Vietcombank), 2007	1 year

- Legalising the formation and growth of the private sector. This step was taken by China in 1982 through a constitutional amendment, placing the private sector as a “supplement to the socialist economy”. Vietnam followed suit in 1990 with the introduction of the “Private Business Law”.
- SOE and “level playing field” reforms were conducted in three phases. The first phase (1979–1984 for China and 1987–1994 for Vietnam) focussed on giving SOEs more autonomy and making them more commerce-oriented while eradicating the command economy. The second phase (1985–1993 for China and 1994–1998 for Vietnam) aimed to restructure SOEs while establishing a legal framework for SOEs to operate in a market economy. The third phase (1994 onwards for China and 1999 for Vietnam) sought to level the playing field for all players in the economy and speed up privatisation.
- Embracing globalisation, promoting FDI and exports. Both countries have proactively embraced globalisation, making great efforts to attract FDI and promote exports. The two countries also introduced laws for attracting FDI shortly after the launch of reforms (China: 1979; Vietnam: 1987).
- Financial reforms. Both countries started with banking sector reform, separating the specialised major state-owned commercial banks from the central bank and putting them on a more strictly commercial footing with newly established joint stock and private banks. It took each country more than a decade from the launch of their reforms to establish their first stock market exchanges (China in 1990; Vietnam in 2000).

Table 2 also indicates that Vietnam has accelerated the pace of its reforms to catch up with China. The time lag for similar reform milestones/initiatives has decreased over time. For example, Vietnam legalised the private sector in 1990, eight years after China, but it levelled the business playing field with a unified enterprise law in 1999, only five years after China, and it revised this law at the same time as China did in 2006. Vietnam also passed its investment law in 2005, which fundamentally created a level playing field for the business sector, while no similar law has been passed in China. This observation suggests that Vietnam has become increasingly proactive and independent in fostering its economic reforms, especially in the legal framework area. The key difference between the two countries, therefore, lies not in a willingness to carry out reforms, but likely in other leadership-related factors such as vision, commitment and the effectiveness of implementation.

Dissimilarities

The two countries have notable dissimilarities, such as population scale, historical characteristics and effectiveness of leadership. The scale and historical factors give each country certain advantages, which are expected to have a significant impact on economic performance. The sheer size of China makes it remarkably attractive as a market as well as a source of skilled and unskilled labour. China's longer period of peaceful development makes its political system less preoccupied with war legacies and more accountable for the country's developmental progress.

On the other hand, Vietnam's smaller size perhaps makes it more nimble. In addition, Vietnam has a "latecomer" advantage that allows it to study and learn from China's reform experiences without having to pay for the costs of experimentation. The rise of China has also made Vietnam a highly attractive place for FDI as foreign investors try to diversify their investments with the formula "China plus one".

As such, each country can leverage some significant advantages from its own characteristics to foster economic performance. However, the effectiveness of leadership has appeared to be critical in a country's ability to exploit its endowed advantages and turn them into superior performance.

Divergence in Economic Performance

As Vietnam's economic reforms extend back 20 years and China's 30 years, comparative analyses of growth for the two countries can be based on a broad

timeframe. The first timeframe for analysis is the initial 20 years of reform (1978–1998 for China and 1986–2006 for Vietnam), during which the two countries underwent similar stages of reform and development. The second timeframe is the past 20 years (1986–2006), during which both China and Vietnam were exposed to the same external environment.

To analyse the growth patterns of the two countries, the episodes of sustained growth accelerations for each country or the episodes of growth divergence between the two are identified.

Sustained Growth Acceleration Episode (SGAE)¹⁶

Concerning the growth pattern of a country, a period $[t, t + k]$ (from year t to year $t + k$) is defined as an SGAE if it meets the following conditions:

- $k \geq 5$; the SGAE must last at least five years.
- $g_{t-1} > 0$; the growth in year $t - 1$, the year before the SGAE, is positive.
- $g_{t+i} > g_{t-1} + a$ for $0 \leq i \leq k$ and $a \geq 2.0\%$; the growth rate in any year during the period $[t, t + k]$ is higher than the growth rate in the year just before the episode by at least one per cent. This period is called a *moderate* SGAE if, and a *rapid* SGAE if $2.0\% \leq a \leq 3.0\%$, and a *rapid* SGAE if $a \geq 3.0\%$.

Growth Divergence Episode (GDE)

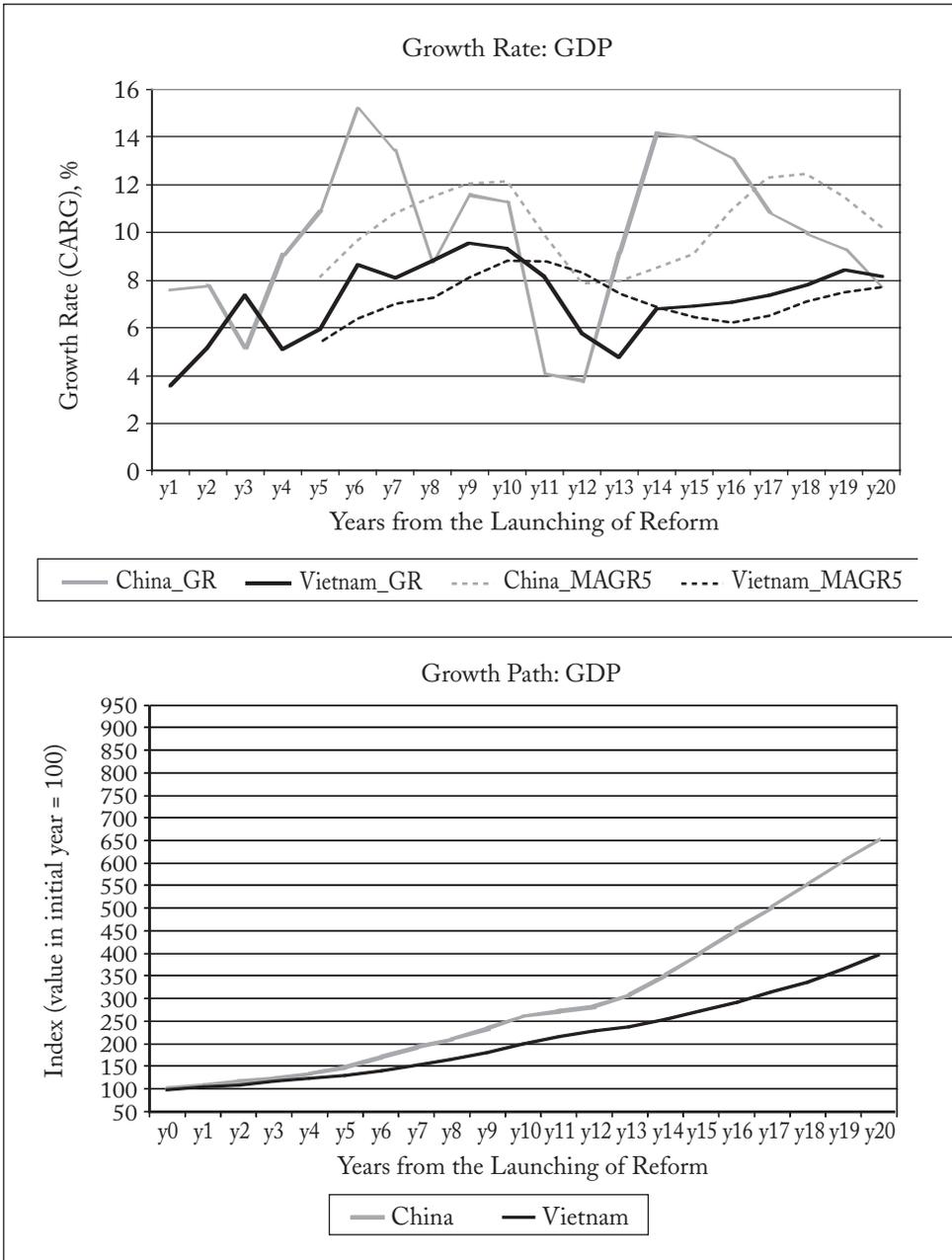
Concerning the growth patterns of two countries X and Y, a period $[t, t + k]$ is defined as a GDE led by country X if the following conditions are met:

- $k \geq 5$; the GDE must last at least five years.
- $g_{t-1}^X \leq g_{t-1}^Y$; the growth rate of country X is not higher than that of country Y in year $t - 1$, the year just before the GDE.
- $g_{t+i}^X \geq g_{t+i}^Y$ for $0 \leq i \leq k$ and the strict inequality $g_{t+i}^X > g_{t+i}^Y$ takes place in at least $(k - 1)$ years.

The patterns and sources of economic growth experienced by Vietnam and China during the two 20-year timeframes are captured in Figures 4A, 4B and Table 3.

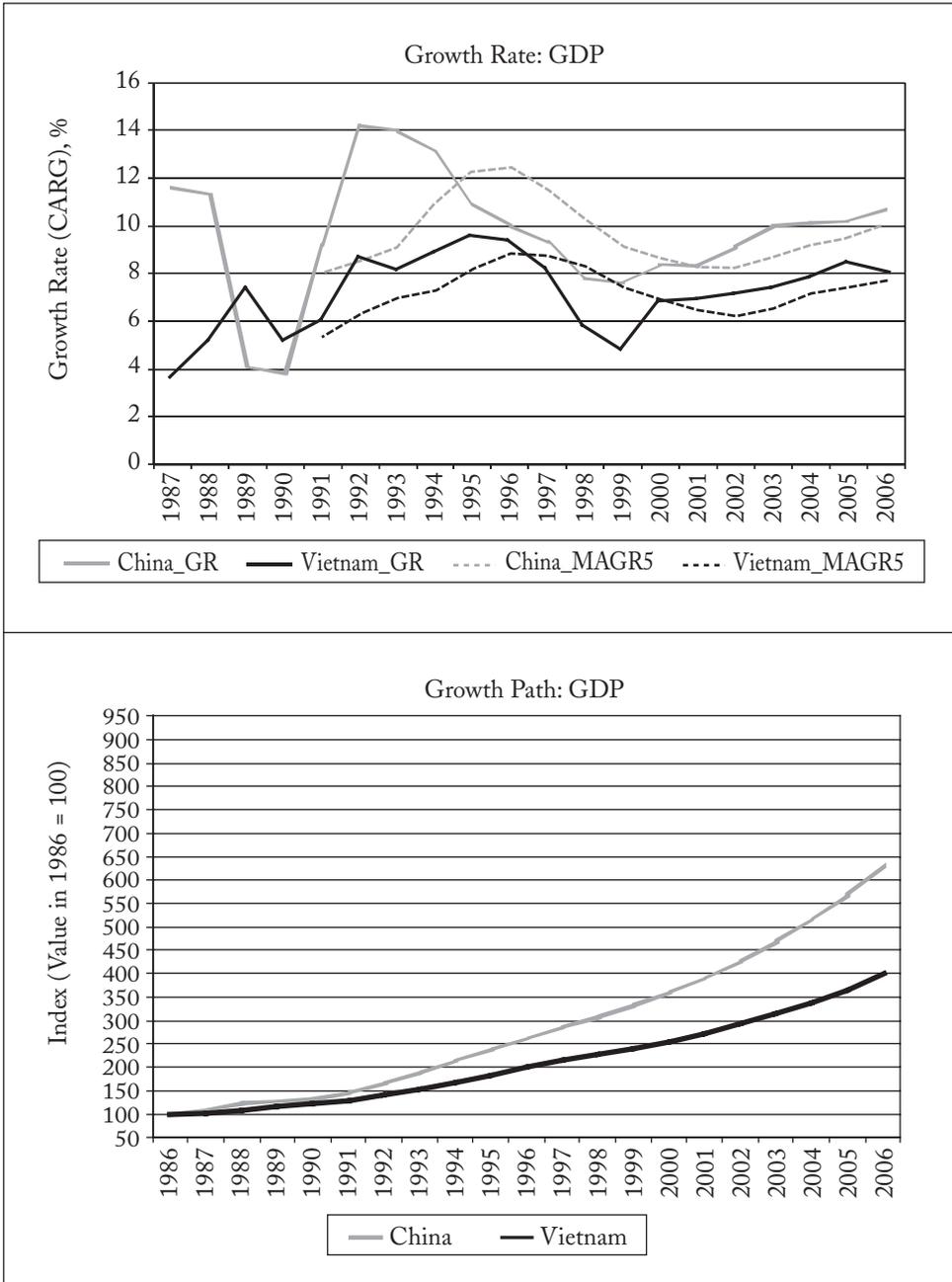
¹⁶ This definition is inspired by Hausmann, Pritchett and Rodrik. See, Ricardo Hausman, Lant Pritchett and Dani Rodrik “Growth Accelerations”, *Journal of Economic Growth* 10 (2005): 303–29.

Figure 4A. *Economic Growth during the First 20 Years of Reform (China: 1978–1998; Vietnam: 1986–2006)*



Note: MAGR5 means 5-year moving average growth rate.
Source: WDI.

Figure 4B. *Economic Growth during the Period 1986–2006*



Note: MAGR5 means 5-year moving average growth rate.
Source: WDI.

Table 3. *Economic Growth Patterns*

	Period GDP Growth Rate (CAGR), %				
	0–5	5–10	10–15	15–20	0–20
The first 20 years of reform					
China (1978–1998) (CN1)	8.1	12.1	9.0	10.2	9.8
Vietnam (1986–2006) (VN)	5.4	8.9	6.5	7.8	7.1
Growth Gap (CN1-VN)	2.7	3.2	2.5	2.4	2.7
The past 20 years of reform					
China (1986–2006) (CN2)	7.9	12.4	8.3	10.0	9.7
Vietnam (1986–2006) (VN)	5.4	8.9	6.5	7.8	7.1
Growth Gap (CN2-VN)	2.5	3.5	1.8	2.3	2.6

Source: Author's calculation based on data from WDI.

The First 20 Years of Reform (Vietnam: 1986–2006; China: 1978–1998)

In the first 20 years of reform, Vietnam experienced two moderate SGAEs. One was from year 6 to year 11, denoted as $[y6 \div y11]$ and the other was $[y14 \div y20]$. At the same time, China underwent two rapid SGAEs. One was $[y4 \div y10]$ and the other was $[y13 \div y20]$ (Figure 4A, Upper panel).

The two SGAEs for Vietnam and China were rather similar in timing. The first SGAE, which started after a few years of reform, was enabled mainly by unshackling resources mismanaged in the old system for more efficient uses driven by market forces. The second SGAE, which started only after 13–14 years of reform, was the result of new investments made during the reform period. Therefore, the magnitude of the first SGAE depended on the severity of previous mismanagement and the decisiveness of the reformist leadership, while the second SGAE was determined by the depth and consistency of reform, which laid the foundation for longer term growth.

Interestingly, the two SGAEs, $[y6 \div y11]$ and $[y14 \div y20]$ for Vietnam, and $[y4 \div y10]$ and $[y13 \div y20]$ for China, nearly coincided with the two GDEs $[y4 \div y10]$ and $[y13 \div y19]$, during which the growth divergence in favour of China occurred. This means that the growth divergence between Vietnam and China occurred not during the period of Vietnam's growth slowdown, but when both countries enjoyed accelerated growth. In fact, Vietnam's growth

increased but did so at a slower pace than China's. This observation implies that the growth divergence between these two countries could be even more pronounced in good times than bad.

The two GDEs have enabled China to far outperform Vietnam in growth during the first 20 years of the reform timeframe. The 5-year moving average of China's GDP growth rate curve is well above Vietnam's, except for year 12 (year 1990 for China), when China suffered the consequences of the Tiananmen Square Incident. This curve ranges between 8.0 per cent and 12.5 per cent for China and moves in a lower range of 5.0 per cent to 8.5 per cent for Vietnam (Figure 4A, Upper panel).

More specifically, China's average GDP growth rate over the 20-year reform time frame was 9.8 per cent, exceeding Vietnam's 7.1 per cent by 2.7 per cent and there existed a notable gap between the two countries in each of the four 5-year sub-periods of the first 20-year reform timeframe (Table 3). After the first 20 years of reform, China's GDP expanded 6.5 times, while Vietnam's rose only 4.0 times. (Figure 4A, Lower panel).

The Past 20 Years, 1986–2006

Over the 20-year period from 1986 to 2006, China enjoyed a rapid SGAE [1991 ÷ 06] over nearly the entire 20-year period, while Vietnam underwent two moderate SGAEs, [1991 ÷ 97] and [2000 ÷ 06]. Furthermore, the SGAE [1991 ÷ 06] is also a GDE, throughout which China's growth rate was well above Vietnam's (Figure 4B, Upper panel). As a result, since 1992, China's GDP growth path has taken off relative to that of Vietnam's (Figure 4B, Lower panel). In fact, 1992 was the critical year marking a remarkable take-off in China. This is discussed further below.

Averaged over 1986–2006, China's GDP growth rate was 9.7 per cent, exceeding Vietnam's 7.1 per cent by a gap of 2.6 per cent and there was a significant gap between the two countries' growth for each of the five-year sub-periods (Table 3). Over the period 1986 to 2006, China's GDP rose nearly six times, while Vietnam's increased only four times (Figure 4B, Lower panel).

Gaps in Efficiency of Growth

Vietnam has lagged behind China not only quantitatively but also in qualitative terms. This is manifested in the gap in total factor productivity (TFP) growth, the agricultural sector's productivity growth and selected development indicators as discussed below.

TFP Growth

China's TFP growth was significantly higher than Vietnam's, as shown in Table 4 for the period 1986 to 2006. It is important to note that TFP growth for Vietnam during the sub-period 1986 to 1996, when the country was in the first phase of reform, was quite high (4.4 per cent), close to that in China (5.6 per cent). However, TFP growth slowed sharply to 1.8 per cent from 1996 to 2006 for Vietnam while remaining high at 4.5 per cent for China. The slowdown in TFP growth and the widening gap between Vietnam and China suggests that the efficiency of Vietnam's economic growth notably deteriorated.

Table 4. *Sources of GDP Growth, 1986–2006*

Period	China				Vietnam			
	GDP Growth	Growth Contribution			GDP Growth	Growth Contribution		
		Capital	Labour	TFP		Capital	Labour	TFP
1986–1996	10.2	3.7	0.9	5.6	7.2	1.8	1.0	4.4
1996–2006	9.2	4.0	0.7	4.5	7.1	3.6	1.7	1.8
1986–2006	9.7	3.8	0.8	5.1	7.1	2.7	1.3	3.1

Note: The key assumptions for this calculation exercise include: (i) capital stock is estimated based on the Perpetual Inventory Method (PIM) with the depreciation of aggregate capital at 7 per cent; and (ii) the share of input in GDP is 0.35 for capital and 0.65 for labour.

Source: Author's calculation based on WDI.

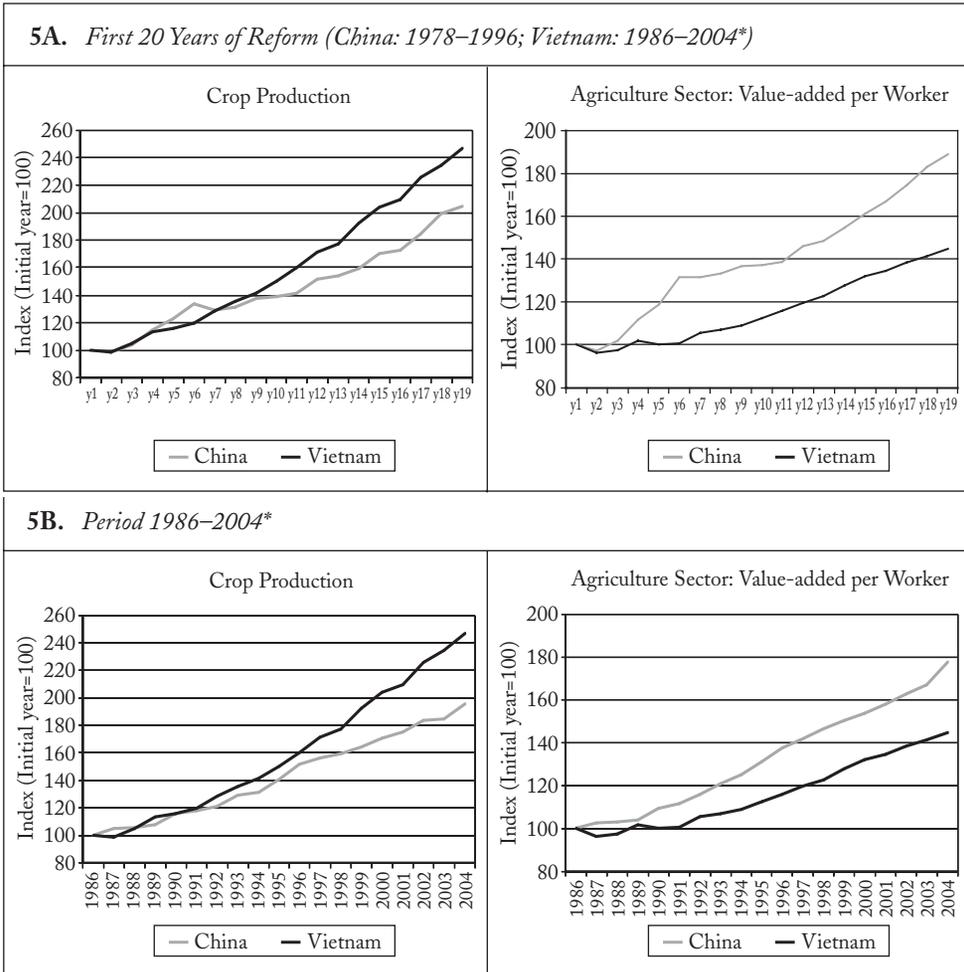
The Agricultural Sector's Productivity Growth

The agricultural sectors in China and Vietnam were very similar at the beginning of their reforms, especially in terms of the sectors' share of employment and the yield per arable hectare.

The agricultural sector of both countries enjoyed high growth during the reforms. However, their growth patterns varied in efficiency. With regard to production output, Vietnam outperformed China in both timeframes (Figures 5A and 5B, Upper panel), implying that Vietnam potentially has a distinct competitive advantage in this sector. However, in terms of the agricultural sector's productivity, measured as value added per worker, China grew significantly faster than Vietnam in both time frames (Figures 5A and 5B, Lower panel).

The sharp contrast between the two countries in the growth performance of crop production (led by Vietnam) and productivity (led by China) shows a notable gap in the efficiency of growth between the two countries.

Figure 5. *Agricultural Sector Growth: Production Output vs. Productivity*



Note: * The period 1986–2004 instead of 1986–2006 is examined because the data for later years is not available.
Source: WDI .

Contrasts in Development Indicators

Comparing China and Vietnam on social development indicators reveals a mixed picture. Vietnam appears highly competitive with China in terms of the basic measures of human development. However, Vietnam pales beside China with respect to other indicators such as research productivity, AIDS prevalence and traffic accidents.

Basic Human Capital Indicators

Vietnam has caught up with China in life expectancy and school enrolment while markedly surpassing China in terms of child mortality (since 2000), internet penetration (since 2004) and rate of students studying in the US (since 2006) (Table 5).

Table 5. *Human Capital: Basic Indicators*

Indicator	China	Vietnam
Life expectancy at birth (years)		
1990	69	65
2000	70	69
2005	72	71
Child mortality rate under 5 (per 1,000)		
1990	49	53
2000	41	30
2005	27	19
Literacy of adults (%)		
1989–1990	77.8	87.6
1999–2000	90.9	90.3
School enrolment, primary		
1991	125.9	106.7
2001	117.4	103.5
2006	111.2	90.3
School enrolment, secondary		
1990–1991	48.7	32.2
2000–2001	62.9	64.6
2005	74.3	75.8
School enrolment, tertiary		
1991	3.0	1.9
2000	7.6	9.5
2005	20.3	16.0
Students studying in the US (per 100,000 population)*		
2005	4.8	5.5
2006	5.2	7.2
Internet penetration per 1,000 population		
1996	0.13	0.001
2000	17.8	2.6
2004	72.5	77.3
2006	104.4	174.6

Sources: WDI, *Institute of International Education (IIE) at <<http://opendoors.iienetwork.org/?p=28633>>.

Research Productivity

The research productivity of a country can be assessed on the basis of such indicators as the rates of patent applications filed to the local and American patent offices and the rate of published scientific and technical journal articles.

As shown in Table 6, Vietnam is far behind China in these measures in both magnitude and growth. For example, the rate (per one million residents) of patents filed to the local patent office in China rose from 6.4 in 1991 to 20.1 in 2000 and to 71.4 in 2005, while for Vietnam it was 0.55 in 1991 and 0.44 in 2000.¹⁷ The gap in the rate (per one million residents) of published scientific and technical journal articles between China and Vietnam was also large and widening, from 5.4 vs. 1.0 (5.4 times) in 1991 to 31.9 vs. 2.7 (11.8 times) in 2005.

Table 6. *Research Productivity*

Units: rate per one million people

Year	No. of Applications filed by residents to				No. of Scientific and Technical Journal Articles	
	Local Patent Office		US Patent Office		China	Vietnam
	China	Vietnam	China	Vietnam	China	Vietnam
1991	6.41	0.55	0.10	0.0	5.4	1.0
1992	8.60	0.49	0.11	0.0	6.0	1.1
1993	10.25	0.45	0.11	0.0	6.4	1.0
1994	9.39	0.31	0.10	0.01	6.6	0.9
1995	8.31	0.32	0.13	0.0	7.5	1.4
1996	9.55	0.50	0.21	0.01	8.6	1.6
1997	10.30	0.40	0.18	0.03	9.9	1.6
1998	11.05	NA	0.23	0.01	11.1	1.3
1999	12.44	0.48	0.22	0.01	12.5	1.4
2000	20.07	0.44	0.35	0.01	14.6	1.9
2001	23.62	NA	0.55	0.06	16.6	2.0
2002	31.09	NA	0.75	0.01	18.2	1.8
2003	44.06	NA	0.96	0.01	22.3	2.5
2004	50.60	NA	1.32	0.04	26.9	2.0
2005	71.4	NA	1.79	0.07	31.9	2.7

Sources: Author's computation; data from WIPO (for the number of applications filed to the US Patent office) and WDI (for the number of applications filed to the local patent office and the number of scientific and technical journal articles).

¹⁷ The data in WDI for Vietnam is missing from 2001 onwards.

Rates of Death caused by AIDS and Traffic Accidents¹⁸

As shown in Table 7, the rates of death (per 100,000 people) caused by AIDS and traffic accidents were much higher and grew more rapidly in Vietnam than China. It is worth noting that the difference in these rates must be judged with caution because the two countries are vastly different in size and geography. However, the widening of the differences between the two countries on these rates should be taken seriously because it reflects a gap in government effectiveness.

- The rate of deaths caused by AIDS jumped from 10.9 (per 100,000 people) in 2003 to 15.7 in 2005 (a 44 per cent increase) for Vietnam, while these figures were 2.0 and 2.4 for China, respectively. Vietnam's death rate caused by AIDS was 5.5 times higher than China's in 2003 and 6.5 times higher in 2005.
- The rate of fatal traffic accidents rose 176 per cent in Vietnam from 7.9 in 1998 to 13.9 in 2003, while this growth was 131 per cent in China, from 6.2 in 1998 to 8.1 in 2003. Vietnam's rate of fatal traffic accidents was 1.3 times higher than China's in 1998 and 1.7 times in 2003.

Table 7. *Death Rates (per 100,000 people) caused by AIDS and Traffic Accidents*

	Deaths Caused by AIDS			Deaths Caused by Traffic Accidents		
	2003	2005	2005/2003	1998	2003	2003/1998
China	2	2.4	120%	6.2	8.1	131%
Vietnam	10.9	15.7	144%	7.9	13.9	176%
Vietnam/China	5.5	6.5	1.2	1.3	1.7	1.3

Source: Computed from WHO (2006) and World Bank (2006).

Explaining the Growth Divergence using the Determinants of Growth Model

The growth literature initiated by the seminal work of Barro sheds light on the factors explaining the variations in economic growth performance across countries.¹⁹ These can be grouped into four interrelated categories.

¹⁸ The data are available only for the periods reported in Table 7.

¹⁹ Robert J. Barro, "Economic Growth in a Cross Section of Countries", *The Quarterly Journal of Economics* 106, no. 22 (1991): 407–43.

- The initial level of income is expected to have a negative effect on growth. That is, a country with a lower income tends to grow faster than a country with a higher income, all else being equal. This is called the conditional convergence effect.²⁰
- Basic human capital is proxied by various variables such as education (e.g., school enrolment, years of schooling) and health (e.g., life expectancy at birth). These factors have a positive impact on growth.²¹
- The variables capturing the quality of institutions include rule of law,²² property rights,²³ corruption²⁴ and political instability.²⁵ According to these studies, better maintenance of the rule of law and property rights has a positive effect, while corruption and political instability have a negative effect on growth.
- Government-related factors include an array of aspects, ranging from the leadership's commitment to reform to government effectiveness. Hausman, Pritchett and Rodrik analysed the growth acceleration patterns of 110 countries over 36 years (1957–1992) and the factors underlying those patterns, and found that the most important determinant of sustained acceleration in economic growth is “a major change in economic policy”.²⁶ Their findings suggest that for transitional economies such as Vietnam and China, the leadership's decisiveness, pioneering and commitment in making strategic shifts to deepen economic reform, as well as the government's effectiveness in executing reform policies, play a crucial role in boosting and sustaining the country's high performance.

²⁰ Barro, “Economic Growth in a Cross Section of Countries”; and R. Barro and Sala-i-Martin, *Economic Growth* (McGraw-Hill: New York, 1995).

²¹ Barro, “Economic Growth in a Cross Section of Countries”; and Robert J. Barro, *Determinants of Economic Growth: A Cross-Country Empirical Study* (Cambridge, MA: MIT Press, 1997).

²² Barro, “Economic Growth in a Cross Section of Countries”; and Dani Rodrik, Arvind Subramanian and Trebbi Francesco, “Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development”, *Journal of Economic Growth* 9, no. 2 (2004): 131–65.

²³ Stijn Claessens and Luc Laeven, “Financial Development, Property Rights, and Growth”, *The Journal of Finance* 58, no. 6 (2003): 2401–436.

²⁴ Paolo Mauro, “Corruption and Growth”, *The Quarterly Journal of Economics* 110, no. 3 (1995): 681–712.

²⁵ John Luke Gallup, Jeffrey Sachs and Andrew Mellinger, “Geography and Economic Development”, *NBER Working Paper* No. W6849 (1998).

²⁶ Hausman, Pritchett and Rodrik “Growth Accelerations”, pp. 303–29.

Initial Level of Income

Vietnam's per capita income in 1986 was lower than China's by 20 to 30 per cent (Vietnam: US\$203, purchasing power parity \$1,031; China: US\$311, purchasing power parity \$1,289).²⁷ This means that the initial level of income or conditional convergence effect is in favour of Vietnam, and is hence not a factor in explaining China's faster growth performance.

Basic Human Capital

While basic human capital is influenced by policy, it is more fundamentally shaped by social legacies. Vietnam and China have striking similarities in human capital endowment due to their closeness in geography, culture and history.²⁸ In fact, as presented above, Vietnam is highly competitive with China on the basic measures of human capital, namely educational attainment, health care and information technology penetration. This implies that basic human capital is not a factor causing the growth divergence between China and Vietnam.

Institutions

The differences between China and Vietnam in institutions are based on a set of variables that includes political stability, voice and accountability (an indicator of democracy), rule of law and regulatory quality, as provided by the World Bank Governance Indicators, composed by Kaufmann *et al.*²⁹ The mean and median of each of these indicators for China and Vietnam are compared to reveal which country has an advantage over the other (see Table 8).³⁰

²⁷ See *World Bank Development Indicators Database* [15 Oct. 2008].

²⁸ Brantly Womack, *China and Vietnam: The Politics of Asymmetry* (Cambridge: Cambridge University Press, 2006).

²⁹ This dataset covers 212 countries and six dimensions of governance: (i) Voice and Accountability; (ii) Political Stability; (iii) Government Effectiveness; (iv) Regulatory Quality; (v) Rule of Law and (vi) Control of Corruption. Each index ranges from -2.5 to +2.5 (higher is better). The data for 1996–2006 is available at <<http://www.govindicators.org>> [10 Oct. 2008]. See Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi, "Governance Matters VI: Governance Indicators for 1996–2006", *World Bank Policy Research Working Paper* No. 4280 (2007).

³⁰ The data for these indicators is available for only the 1996–2006 period.

Table 8. *Institutional Indices for China and Vietnam*

Factors	Effect on Growth	China	Vietnam	Advantage
<i>Governance indices*</i>				
Political Stability	+	-0.23 (-0.24)	0.29 (0.31)	V
Rule of Law	+	-0.40 (-0.40)	-0.54 (-0.53)	C
Regulatory Quality	+	-0.27 (-0.29)	-0.57 (-0.58)	C
Voice and Accountability	+/?	-1.52 (-1.53)	-1.45 (-1.47)	V

Note: * Each indicator is averaged for 1996–2006, the period for which the data is available. Numbers in parentheses are the median.

Source: World Bank Governance Indicators.

Political Stability

Political stability was defined by Kaufmann *et al* as “the likelihood that the government will not be destabilised by unconstitutional or violent means, including terrorism”.³¹ Vietnam is clearly better positioned in this regard than China. Vietnam is comfortably in the positive zone with the mean score (over time) of +0.29, while China is in the negative zone (-0.23). As political stability has a solid impact on investment and growth, this factor should be considered a plus for Vietnam compared to China in its effect on economic growth.

Democracy

Democracy or “voice and accountability” was defined by Kaufmann *et al* as “the extent to which a country’s citizens are able to participate in selecting their government as well as freedom of expression, freedom of association, and a media.”³² For this measure, both China and Vietnam are very weak, as their indexes are far below 0. China (-1.52) is a bit weaker than Vietnam (-1.45). On the other hand, Barro points out that “one cannot conclude [from empirical evidence] that more or less democracy is a critical element for economic growth.”³³ That is, democracy is not a factor explaining the divergence between China and Vietnam during their economic reforms.

³¹ Kaufmann *et al.*, “Governance Matters VI: Governance Indicators for 1996–2006”.

³² Ibid.

³³ Barro, *Determinants of Economic Growth: A Cross-Country Empirical Study*.

Rule of Law

Rule of law was defined by Kaufmann *et al* as “the extent to which agents have confidence in and abide by the rules of society, including the quality of contract enforcement, property rights, the police and the courts, as well as the likelihood of crime and violence.”³⁴ Both China and Vietnam are in the negative zone (below the average country) and Vietnam is slightly weaker than China in this measure (−0.54 vs. −0.40). As “rule of law” has a strong impact on growth, this factor should have some effect on the gap in growth performance between China and Vietnam.

Regulatory Quality

As defined by Kaufmann *et al.*, regulatory quality is “the ability of the government to provide sound policies and regulations that enable and promote private sector development”.³⁵ On this measure, both countries are weak, falling in the negative zone. However, China is significantly stronger than Vietnam (−0.27 vs. −0.57). This observation suggests that regulatory quality, to some extent, is a factor causing the China-Vietnam divergence in growth performance.

In summary, the gaps in regulatory quality and to a lesser extent, rule of law are the two institutional factors in which China has some advantage over Vietnam. Vietnam, however, has a clear advantage over China in terms of political stability. Due to these trade-offs, institutions seem not to be the decisive factor explaining the divergence between the two countries.

Leadership and Government Effectiveness

The gap in leadership commitment to reform is measured on the basis of two pieces of evidence: decisiveness in making strategic decisions at critical junctures of economic reform and efforts made to streamline the bureaucracy.

Decisiveness in making strategic decisions at critical junctures

As noted above, there were moments marking notable divergences between China and Vietnam in growth, especially in the industry and service sectors.

³⁴ Kaufmann *et al.*, “Governance Matters VI: Governance Indicators for 1996–2006”.

³⁵ Ibid.

The critical moments were an uptick in growth in China in 1991 and a slowdown in Vietnam's growth in 1999 (Figures 4A and 4B, Lower panel).

After the first ten years of reform, both China and Vietnam had been able to escape from economic hardship and enter a more comfortable stage of development, but a stage in which it was harder to make decisive and difficult decisions. The economic reforms have made China and Vietnam deviate farther from their ideology of socialism. This may have seriously upset some influential members of the leadership, whose power was based on loyalty to the past rather than future achievements.

The two forces mentioned had put China (in the early 1990s) as well as Vietnam (in the late 1990s) at risk of falling into political deadlock and indecisiveness in making strategic decisions. In this situation, the leadership-related factors such as vision, decisiveness and execution capability played a critical role in decisively moving the economic reforms forward.

For China in 1991, Chen Yun, the most powerful leader after Deng Xiaoping in post-Tiananmen China, along with his allies launched a series of attacks against reform, including a call for abolishing special economic zones.³⁶ Facing these critical challenges, Deng Xiaoping did not compromise, and instead decided to undertake a pre-emptive step by launching a trip to southern China in January 1992 to rally support for accelerating reforms.

Deng's trip is believed to have "produced both short-term and long-term effects on China's political and economic development" although "the economic effects are far more clear-cut".³⁷ Economic growth surged from 9 per cent from 1978 to 1991 to 12 per cent from 1991 to 1996, while total FDI flows amounted to US\$156 billion over 1991 to 1996 compared to US\$23.3 billion for 1978 to 1991 (see Table 1).³⁸

For Vietnam, a slowdown in reform efforts was observed some time after 1995, which cumulated in Vietnam's refusal to sign a trade agreement with the United States in 1999. As a US trade official involved in this process noted, "When you compare this to the effort put forward by China during

³⁶ Suisheng Zhao, "Deng Xiaoping's Southern Tour: Elite Politics in Post-Tiananmen China", *Asian Survey* 33, no. 8 (1993): 745.

³⁷ John Wong, "The Economics of the Nanxun", Chapter 3 in *The Nanxun Legacy and China's Development in the Post-Deng era*, John Wong and Zheng Yongnian, eds (Singapore: Singapore University Press, 2001), p. 43.

trade negotiations, [...] it shows how Vietnam is simply not convinced about opening up.”³⁹ Perkins stated:

“Vietnam’s initial refusal to sign a trade agreement with the United States, an agreement that its own officials had negotiated, is clear evidence of the reluctance of many officials, even in the top leadership, to accept the kind of industrial policy that is likely to be the most appropriate for their country”.⁴⁰

However, it is important to note that Vietnam signed the trade agreement in July 2000, just less than one year after its initial refusal. Also in 1999, Vietnam passed the enterprise law, only five years after China’s own passing of its enterprise law (Table 2), which marked a prominent change in the creation of a level playing field for Vietnam’s business sector. These examples reveal that the Vietnamese leadership, while lacking foresight and decisiveness in making strategic decisions, was willing and able to make significant changes once they became obviously necessary.

Streamlining the bureaucracy

China and Vietnam are both burdened with a large and overstuffed public sector, which is among the main causes of red tape, corruption, incompetence and inefficiency. Therefore, streamlining the public sector is a good indicator of the depth of a country’s commitment to reform. In this endeavour, China and Vietnam have gone in opposite directions. As shown in Table 9, China consistently and drastically reduced its public sector’s share of employment relative to the entire economy by 27 per cent between 1995 and 2000 and by 22 per cent from 2000 to 2005, while Vietnam increased its public sector’s share of employment relative to the economy by 1.3 per cent over 1995 to 2000 and 9.3 per cent from 2000 to 2005.

³⁸ Ibid, p. 44.

³⁹ Thomas Crampton, “Politburo Is Hesitating on Pact, Official Says: U.S. Aide Is Pessimistic On Hanoi Trade Accord”. See *Herald Tribune* at <http://www.iht.com/articles/1999/09/11/viet.2.t_0.php> [11 Sept. 1999].

⁴⁰ Dwight Perkins, “Industrial and Financial Policy in China and Vietnam”, in *Rethinking the East Asian Miracle* (World Bank Publication): Joseph E. Stiglitz and Shahid Yusuf, eds (World Bank and Oxford University Press, 2001).

Table 9. *Employment Growth, 1995–2000 and 2000–2005 for Vietnam vs. China*

Sector	China		Vietnam	
	1995–2000	2000–2005	1995–2000	2000–2005
The Economy [E], %	5.9	5.2	13.9	13.6
The Public Sector (Government, Party, and SOEs) (P), %	–21.1	–17.0	15.2	22.9
Public sector expansion (+) or reduction (–) relative to the economy (P–E), %	–27.0	–22.2	+1.3	+9.3

Sources: Author’s calculation based on national statistical data (Vietnam: Statistical Yearbooks, 2001–2006, Establishment Census 2002; China: Statistical Yearbooks, 2005 and 2006).

Government Effectiveness

In addition to the leadership’s commitment to reform, government effectiveness is critical to the performance of a country. Vietnam is notably below China in terms of the World Bank measure of government effectiveness, as shown in Figure 6 (Upper panel) for the period 1996–2007. More alarmingly, this gap has been widening since 2005, with China on the rise and Vietnam on the decline.⁴¹

The gap in government effectiveness between the two countries can also be seen in the pace of SOE sector reforms, control of corruption, pattern of energy consumption and efficacy of openness.

Pace of SOE Sector Reforms

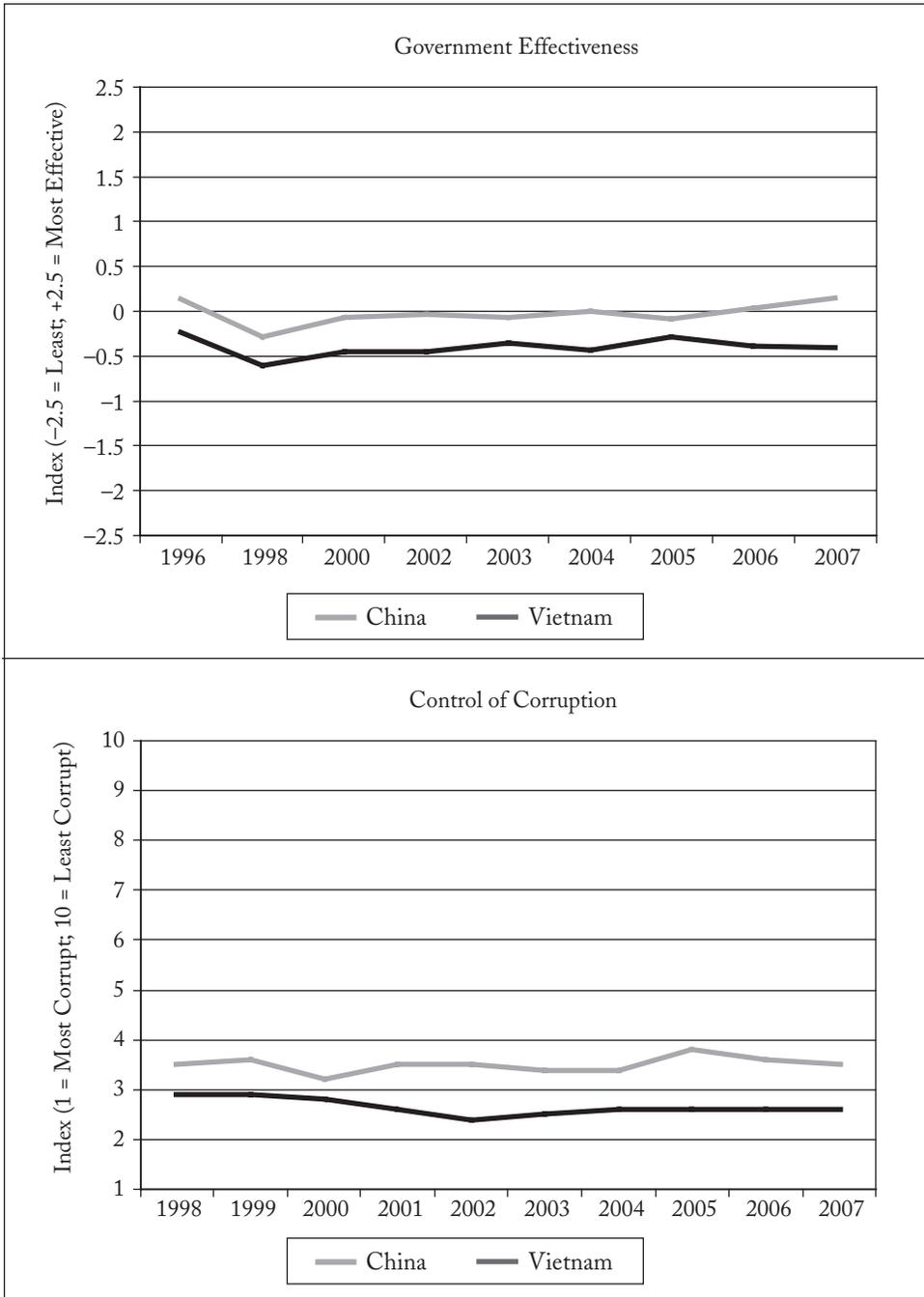
The SOE sector has been problematic for both China and Vietnam, but Vietnam has been far behind China in reforming it. Perkins pointed out that Vietnam was much less reliant on market forces than was China in reforming the SOE sector.⁴²

“Both China and Vietnam have experimented with a shareholding system [...]. In Vietnam, as of 1998, only a dozen state firms were corporatized, while the number in China was in the many thousands. Shareholding could become the vehicle for creating boards of directors who would ensure that plant managers

⁴¹ World Bank notes that “[Vietnam has a] reputation for slow decision making and inefficient transparency”. See World Bank, “Vietnam — Implementing Reforms for Growth and Poverty Reduction”, *Country Development Report* (2002): 6

⁴² Perkins, “Industrial and Financial Policy in China and Vietnam”.

Figure 6. *The Gap in Government Effectiveness*



Sources: *World Bank Governance Indicators* (for government effectiveness) and *Transparency International* (for control of corruption).

concentrated mainly on making profits rather than on pleasing their government and party superiors”.⁴³

and

“The mergers and acquisitions process in China, therefore, has begun to take on some of the characteristics of similar processes in market economies, although the government’s role remains large. [At the same time], Vietnam’s government-directed approach in creating state-owned conglomerates, following the Japanese and Korean models appears to be little more than a repackaging of existing arrangements without a change in business behaviour. [...] It is hard to see what contribution these new, larger units will make to Vietnam’s international competitiveness”.⁴⁴

With regard to privatisation, China has also been more effective than Vietnam. As shown in Table 10, as a percentage of GDP in 2000, the total value of proceeds from privatisation over the period 1990 to 2005 was 4.8 per cent and the average size of each transaction was \$252 million, comparable to figures for neighbouring countries such as Thailand, Indonesia, Malaysia and the Philippines. These figures are much smaller for Vietnam, which are only 1 per cent and 3 million, respectively.

Table 10. *Privatisation Transactions over the Period 1990–2005*

Country	Total Number of Transactions	Total Proceeds		Average Transaction Size (US\$ millions)
		(US\$ millions)	Relative to GDP in 2000, %*	
China	229	57,706	4.8	252.0
Vietnam	107	318	1.0	3.0
Indonesia	35	8,418	5.1	240.5
Malaysia	50	12,394	13.7	247.9
Philippines	79	4,180	5.5	52.9
Thailand	23	5,946	4.8	258.5

Sources: Author’s calculation from the World Bank’s Privatisation Transactions database; GDP data from WDI.

⁴³ Zhao, “Deng Xiaoping’s Southern Tour: Elite Politics in Post-Tiananmen China”, p. 269.

⁴⁴ *Ibid.*, p. 272.

The Control of Corruption

Institutions (such as transparency, democracy) and government effectiveness (such as strong leadership, execution capability) have a major impact on the control of corruption. As discussed above, institutions in both China and Vietnam remain weak. As a result, corruption is a serious problem in both countries and their success in controlling this problem remains limited. However, China has been consistently rated above Vietnam on this effort, as indicated by the gap between them in the Transparency International (TI) Index (Figure 6, lower panel). China's higher score on control of corruption is mainly due to its more effective government. In fact, China and Vietnam have handled the scandals associated with high-ranking officials very differently. In solving these cases, the Chinese leadership has demonstrated their highest level of toughness and resolution, while the Vietnamese leadership has shown a reluctance to be decisive in these efforts. The most notable evidence is Japan's decision in December 2008 to suspend development aid to Vietnam in order to press the government to take stronger measures to fight corruption.⁴⁵

Patterns of Energy Consumption

Energy is increasingly becoming a scarce and strategic resource. Thus, reducing the energy intensity of a country's economic development implies wisdom and strategic thinking. The energy consumption patterns of the two countries indicate that China is more strategically effective than Vietnam on this issue (Table 11).

The energy intensity of China's economy, measured as kilograms of oil equivalent per US\$1,000 of GDP, was 1.95 in 1990, much higher than that of Vietnam (1.62). However, China decisively reduced this intensity from 0.94 in 2000 to 0.91 in 2005 while the figures for Vietnam were 1.2 in 2000 and 1.15 in 2005 (Panel A).

Furthermore, as observed for the period 1990 to 2005, China's intensity of electric power consumption fell while Vietnam's rose. At the economy-wide level, the difference in growth rates between GDP and electric energy consumption was +0.4 per cent for China and -6.5 per cent for Vietnam. For the industry sector, this difference was +3.3 percentage points for China and -3.4 percentage points for Vietnam (Panel B).

⁴⁵ "Vietnam Aid Loans Suspended", *Strait Times* at <http://www.straitstimes.com/Breakingper cent2BNews/Money/Story/STIStory_310286.html> [4 Dec. 2008].

Table 11. *Efficiency of Energy Consumption*

A. Energy Consumption per 1,000 US\$ of GDP* (kg of oil equivalent)			
	1990	2000	2005
Vietnam	1.62	1.20	1.15
China	1.95	0.94	0.91
B. Electricity Consumption for Growth, %			
	1990–2005 Growth (CAGR)		Electricity Savings (II) – (I)
	Electricity Consumption (I)	Value-Added (II)	
<i>China</i>			
Economy	9.7	10.1	+0.4
Industrial Sector	9.3	12.6	+3.3
<i>Vietnam</i>			
Economy	14.1	7.6	–6.5
Industrial Sector	14.3	10.9	–3.4

Note: * The 2000 price level.

Sources: *Key World Energy Statistics 2007*, International Energy Agency; *China's Yearbook 2006*; Vietnam's Ministry of Industry and Trade (for electricity consumption by sector).

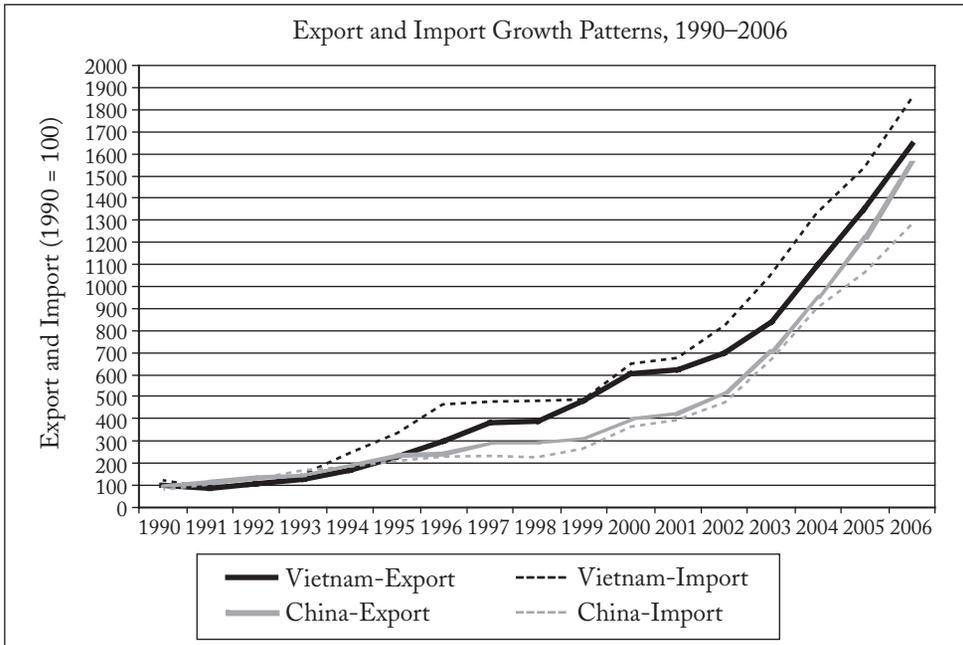
Efficacy of Openness

Openness has a significant positive impact on economic growth.⁴⁶ On the two widely-used metrics of openness — the ratio of total trade to GDP and the weighted mean of tariffs, Vietnam is more open than China.⁴⁷ Since the launch of the reforms in 1986, Vietnam has rapidly increased its openness to the world. These simple openness measures, therefore, do not explain why Vietnam has lagged behind China in growth performance.

This calls for a deeper investigation into the efficacy of openness of the two countries with respect to their integration into the world economy. It is obvious that the two countries have achieved rapid growth in both exports and imports. However, China's exports have grown faster than its imports, while the reverse pattern was observed for Vietnam (Figure 7).

⁴⁶ Jeffrey Sachs and Andrew Warner, "Economic Reform and the Process of Global Integration", *Brookings Papers on Economic Activity* 26, no. 1 (Economic Studies Program, The Brookings Institution, 1995): 1–118.

⁴⁷ In 2000, the merchandise trade to GDP ratio was 87.9 per cent for Vietnam and 44.6 per cent for China, while the average tariffs were 15 per cent and 20 per cent, respectively.

Figure 7. *Export and Import Growth*

Source: WDI.

Furthermore, Vietnam was slower than China in moving up the technology ladder.⁴⁸ For Vietnam, the share of low technology and agricultural products fluctuated at 57–58 per cent during 2000–2005 and declined very little (by 0.6 percentage points), moving from 58.1 per cent in 2000 to 57.5 per cent in 2005. At the same time, this figure for China fell sharply by 12.9 percentage points, from 44.9 per cent in 2000 to 32 per cent in 2005. On the other hand, the share of the high-tech industry in Vietnam's exports was small and rose little (by only 1.8 per cent) from 5.8 per cent in 2000 to 7.8 per cent in 2005, while this figure went up drastically for China, reaching 41.3 per cent in 2005 from 28.9 per cent in 2000, a rise of 12.3 per cent. In particular, China has effectively embraced the boom in the Information and Communication Technology (ICT) market for expanding its exports (the share of the ICT industry in China's exports rose by 9.0 percentage points, from 15.3 per cent in 2000 to 24.2 per cent in 2005), while Vietnam's gain in these exports was modest (from 2.8 per cent in 2000 to 3.9 per cent in 2005) (Table 12).

⁴⁸ The data is available only for the 2000–2005 period.

Table 12. *Structural Changes in Exports and Imports, 2000–2005*

Industry	2000	2005	Change
China: Export Structure, % (Total = 100%)			
High Technology	28.9	41.3	+12.3
<i>of which: ICT Industry</i>	15.3	24.2	+9.0
Medium-High Technology	10.4	11.1	+0.7
Medium-Low Technology and Mining	15.8	15.7	-0.1
Low Technology and Agriculture	44.9	32	-12.9
China: Import Structure, % (Total = 100%)			
High Technology	31.3	37.6	+6.3
<i>of which: ICT Industry</i>	11.3	13	+1.7
Medium-High Technology	19.3	17.8	-1.5
Medium-Low Technology and Mining	29	31.6	+2.6
Low Technology and Agriculture	20.3	13.1	-7.3
Vietnam: Export Structure, % (Total = 100%)			
High Technology	5.8	7.6	+1.8
<i>of which: ICT Industry</i>	2.8	3.9	+1.0
Medium-High Technology	2.3	3.7	+1.4
Medium-Low Technology and Mining	33.8	31.2	-2.7
Low Technology and Agriculture	58.1	57.5	-0.6
Vietnam: Import Structure, % (Total = 100 per cent)			
High Technology	14.3	15	+0.6
<i>of which: ICT Industry</i>	5.3	5.4	+0.1
Medium-High Technology	28.3	21.8	-6.5
Medium-Low Technology and Mining	28.7	36.2	+7.5
Low Technology and Agriculture	28.6	27	-1.5

Note: The classification of technology is based on OECD (2006) for manufacturing industries.

Sources: Author's calculation based on data from UNTAC.

Note also that the driver of import growth in China over the period 2000–2005 was high technology, with an increase in its share of exports of 6.2 per cent from 31.3 per cent in 2000 to 37.6 per cent in 2005, while for Vietnam medium-low technology and mining (oil and gas) products drove this growth, with this sector's share increasing by 7.5 per cent from 28.7 per cent in 2000 to 36.2 per cent in 2005.

The findings suggest that China has been more strategic than Vietnam in both exports and imports with a notable push made in moving up the technol-

ogy ladder. Vietnam has been slower than many other East Asian economies in exploiting the rapid growth of the Asian market driven by China. During the period 1990–2006, Asia's share in Vietnam's total exports declined from 39.2 per cent to 36.5 per cent, while this share rose rapidly for Korea (from 34 per cent to 51 per cent), Taiwan (38.2 per cent to 64 per cent), Singapore (47.1 per cent to 63.4 per cent), Hong Kong (42.3 per cent to 61.9 per cent), Thailand (37.8 per cent to 53.3 per cent) and the Philippines (34.8 per cent to 64.9 per cent).⁴⁹

The analyses reveal a significant gap in the efficacy of openness between the two countries, which is related to the effectiveness of each country's government in carrying out industrial policy. The analyses also explain why simple measures of openness, such as trade-to-GDP, are not robust predictors of the variation in growth.

Conclusion

This study provides important insights into the determinants of economic growth and growth divergence in China and Vietnam. The two countries initiated their economic reforms from comparable economic and social conditions and have followed rather similar approaches to reform and economic management. Since the launch of reforms, both countries have made impressive achievements in their growth performance. However, their growth patterns have significantly diverged. China has far outperformed Vietnam in both the pace and efficiency of growth. This parallels a gap between the Asian Tigers such as Korea and Taiwan on the one hand and ASEAN economies such as Indonesia and Thailand on the other.

This study finds that the growth divergence between China and Vietnam is substantial not only quantitatively but also qualitatively, and that the gap in economic growth between the two countries enlarged during good times, when both countries accelerated their growth with China outperforming Vietnam. A key finding was that disparity in government effectiveness has been the main factor explaining the divergence in economic performance. This paper suggests that for a developing country where institutional quality is usually weak and takes a long time to develop, enhancing government effectiveness is a critical step in fostering economic performance and creating the necessary conditions for upgrading institutional performance.

⁴⁹ Asian Development Bank, "Key Indicators 2007" (ADB, 2007).

This study also shows that while China has an advantage in government effectiveness, its institutional foundation remains weak, which is rather comparable with Vietnam. Simple indicators such as the trade-to-GDP ratio for openness or schooling for human capital are not robust predictors of variations in economic growth.

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