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Vietnam's Economic Sustainable Development Key Factors

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I. Importance of Sustainable Development

Sustainable development of an economy is the development process in close, reasonable and harmonious combination of three areas of development, namely, economic growth, improvement of social issues and environmental protection (The world's summit conference on sustainable development, Johannesbug, 2002).

The Vietnam's socio-economic development strategy in the 2001-2010 period considers sustainable development as a fast and effective evolution, economic growth in parallel with social equality and environmental protection; and socio-political stability and secured national defense.

As a result, sustainable requires two conditions:

+ Quantity: indicated by the growth rate of gross domestic/national product (GDP, GNP) or gross national income (GNI) in a year.

+ Quality: indicated by long-term expansion attached with good effects on the environment and social equality, which are often seen in four factors:

1. High total factor productivity, helping maintain growth rate in long run and preventing economic detrimental changes from outside environment. According to the neo-classic model (Solow, 1956), GDP = Y(t) = F[K(t), A(t).L(t)], where A(t) is technological advance, knowledge and labor efficiency and called TFP = A(t). The higher TFP, the faster economic growth; Y is indicated by a Cobb – Douglas production function:

$Y = AK^{\alpha} . L^{1-\alpha}$ and $TFP = g_A = g_{Y/L} - g_{K/L}$

K: Capital input

L: Labor input.

g_a, $g_{y/L}$, $g_{k/L}$ are respectively growth rates of technological advance, yield over labor and capital over labor; therefore, TFP represents efficiency of an economy and degree of allocating and using capital and labor effectively.

The factors of TFP, $g_{y/L}$, $g_{k/L}$, $g_{k/L}$ are calculated by the Solow's growth accounting method.

2. Growth goes along with good environmental preservation and improvement.

3. Growth for promotion of social welfare and poverty reduction.

4. Growth supports renovated democratic institu-

tions.

(North, 1997, Stiglitz, 2001, WB, 2001)

To reach its goals of sustainable development, Vietnam should carry out principles of sustainable development (Panayotou, 1993, Kolodko, 2001, Lê Thị Hường, 1996) as follows:

1. Overcoming failures from the market or the governmental intervention related to policies, institutions, structures and ownership as well as allocation of resources and achievements to regions and residential areas.

2. Preserving natural resources and their reproduction, and waste absorbability; and specifying the size and optimal exploitation rate as well as pollution degree in order to make economic activities environmentally acceptable.

3. Generating motivations for technological innovation, changing the use of exhaustible resources (minerals, oil) into the use of reproductive ones (soil, water, organism, air), and increasing the efficiency in using exhaustible resources.

4. Limiting the economic scale within the supportability of national resources, if not, it will lead to environmental which cannot be recovered or recovered at very high costs.

II. Survey of Sustainable Factors of Selected Economies over the Past Decade

Table 1: GDP growth rate and factors' contributions of East Asian countries from 1960 to 1994 (%)

Country	GDP growth rate	Contributed by		
		Capital	Labor	TFP
China	7.5	41.3	36	22.7
Thailand	7.5	49.3	26.7	24
Malaysia	6.8	50	36.7	13.38
Indonesia	5.6	34	51.8	14.2
Philippines	3.8	55.1	55.4	10.5
Taiwan	8.5	48.2	28.2	23.6
Korea	8.3	51.8	30.1	18.1
Japan	9.2	33.7	27.2	39.1

Source: Crafts (1999)

The above table shows Japan's TFP is 39.1%; Taiwan's TFP = 23.6%, China's TFP = 22.7%, and Thailand's TFP = 24% in the long period (1960 – 1994), so they created a fast growth as we have seen. In the meantime, South Korea's TFP is 18.1%, K = 51.8%, and its average GDP of 8.3% is very high, but due to its capital intensive practice (high saving and investment), as well as Malaysia, Indonesia, Philippines with respective TFP of 13.4%, 14.2%, 10.5%, they were faced with low growth quality, and cycles of recession and even crisis (Asian Crisis in 1997 – 1999). (Nguyễn Thiện Nhân, 2002, Trần Văn Tùng, 2003)

Table 2: Growth accounting of the world's regions from 1960 to 1994 (%)

Region	GDP growth	Contributed by		
		Capital	Labor	TFP
East Asia	4.2	59.5%	14.3	26.2
South Asia	3.3	47.8%	17.4	34.8
Africa	0.3	266.7%	66.7	-233.3
Latin America	1.5	60%	26.7	13.3
Mid East	1.6	93.75%	25	-18.75

Source: Argenor, 2000; HDR, 2001, Trần Thọ Đạt, 2005

Remarks: South Asian countries have an average TFP of 34.8%, East Asia's TFP of 26.2%, so they have rather good growth quality while the African and Mid East countries obtain a negative TFP, namely, - 233.3%, - 18.75%; consequently, their growth quality falls to the bottom and they have to bad effects including losses of recourses, destroyed environment, wrong policies, wars and riots. (Argénor, 2000, Human Development Report, UNDP, 2001)

Table 3: Weighted average of GDP growth of East European countries from 1989 to 2000 (%)

Region	Mid Europe + East Europe (13 countries)	SNG (12 countries)	Total (25 countries)
1989	-0.1	0.3	0.3
1990	-6.6	-3.7	-5.0
1991	-10.7	-6.0	-8.1
1992	-3.2	-14.1	-9.3
1993	0.3	-9.3	-5.1
1994	37	-13.8	-6.0
1995	5.4	-5.2	-0.5
1996	4.1	-3.5	-0.2
1997	3.6	0.9	2.0
1998	2.6	-3.5	-1.1
1999	2.1	2.8	2.5
2000	4.1	5.9	4.8
GDP in 2000 against GDP in 1989	104.1%	59.0%	76.0%

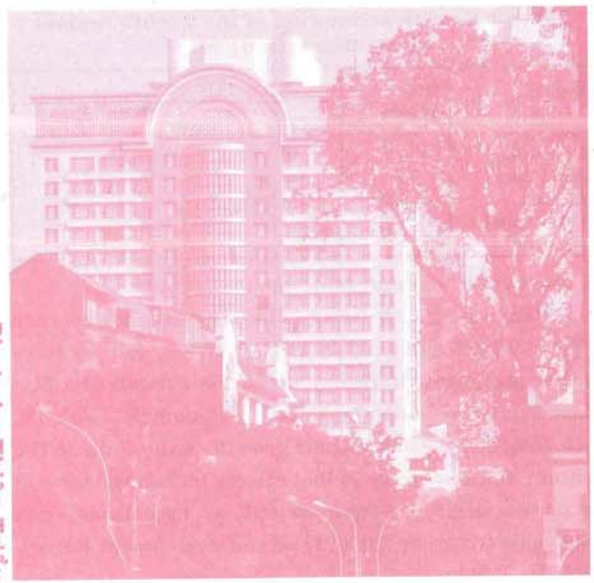
Source: The Bank for European Reconstruction and Development 2000, Kolodko, 2001.

Analysis: The GDP growth of 25 East and Mid European countries was only 75% of that in 1989. This reveals their growth quality is too low and not sustainable because of weaknesses and mistakes in adjustments of policy, institution, and economic restructuring. (Kolodko, 2001)

Table 4: Growth accounting of developed industrial countries (OECD) from 1960 to 1990 (%)

Countries	GDP growth rate	Contributed by		
		Capital	Labor	TFP
France	3.50	58	1	41
Germany	3.20	48	3	49
Italy	4.10	49	3	48
Japan	6.81	35	23	42
The UK	2.49	47	1	52
The US	3.10	43	24	33

Source: Christensen, Jorgenson & Dougherty (1991)



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The above table indicates OECD countries attain sustainable development due to their high TFP from 33% to 52% for the long period (30 years), and become developed industrial countries.

III. Sustainable Development of Vietnam's Economy

1. Analysis of factors making contributions to growth.

Table 5: Growth accounting (%)

Researcher	Analysis period	GDP growth rate	Contributed by				Calculation method
			Capital	Labor	TFP	Business cycle	
Nguyễn Thị Cành	1991-1998	8.03%	73	2.4	24.6	/	Cobb-Douglas function $Y = A.K^{\alpha}.L^{1-\alpha}$
Trương Thị Minh Sâm and associates	1992-1997 1998-2002	8.8% 6.3%	69 57.5	16 20	15 22.5	/	$Y = A.K^{\alpha}.L^{1-\alpha}$
Lê Thanh Nghiệp	1986-1988 1989-1990 1991-1996 1997-2000	4.8 4.9 8.4 6.35	42.7 13.7 37.5 53.0	57.3 55.7 26.8 23.4	0 30.6 35.7 23.6	/	Cobb-Douglas function $Y_t = e^{a+bDt}.K^{\frac{\alpha}{7}}.L^{\frac{\beta}{7}}$ D: Dummy variable $\alpha + \beta = 1$
Phan Ngọc Trung	1998-2002	6.3	57.5	20	22.5	/	

Source: Nguyễn Thị Cành, 2004, Trương Thị Minh Sâm, 2005, Phan Ngọc Trung, 2006, Lê Thanh Nghiệp, 2006.

The above table shows all researchers use the growth accounting method and multifactor regression with three factors of A = TFP, K, and L; however, their results are slightly different due to various analysis periods and statistics. Their TFPs ranging from 15% to 24% are rather appropriate to the Government's, and foreign and local experts' figures.

+ In particular, Mr. Lê Thanh Nghiệp divides analysis periods after renovation and makes qualitative relations between adjustments of strategy, policy and institution with results of growth quality (TFP).

2. In respect of inequality: Organizations and economists often use the following criteria to specify equality degree.

+ Gini coefficient: It is used to measure equality in income distribution (WB, 2001, Stiglitz, 2001) and its value between 0 and 1. The Vietnam's average Gini in the 1990 – 2000 was 0.34 as compared to 0.41 of Asian countries in the 1990s; 0.336 of East European countries from 1993 to 1995 (Trần Văn Tùng, 2003, Kolodko, 2001), and 0.29 of OECD members.

+ Income difference (20% of the richest – 20% of the poorest): This figure of Vietnam was 4.1 (in 1990), up to 8.1 (in 2004) as compared to China's 10.1, Malaysia's 11.6, Thailand's 9.4, Philippines' 8.4, and Indonesia's 5.1 (Trần Văn Tùng, 2003).

3. In respect of human development:

+ HDI (Human Development Index): It is calculated by averages of three indicators: life expectancy, education and per capita GDP (PPP). The Vietnam's HDI reached 0.611 in 1995(ranking 120/177), up to 0.691 in 2000 (ranking 109/177) (Source: UNDP, 2002, Võ Đại Lược, 2005).

+ HPI (Human Poverty Index): It addresses how many percents of population are affected by poverty. Vietnam's HPI was 29.1% in 1999, ranking 45/90, (Văn Phước & Vân Hà, 2006).

4. Regarding institutions, legislation and human resources: these indicators have been recently used to the sustainable growth of a nation (North, 1997, WB, 2001, Kolodko, 2001, Stiglitz, 2001). The Vietnam's efficiency indexes of legal system, of law enforcement, of corruption, of human resources were respectively in the 1990s: 2.9; 4.1; 2.5; and 3.79 in the measure scale between 1 and 10, with 10 is the best. (World Development Report, 2001).

5. On environmental management: The Vietnam's general targets must be reached by 2010: Fifty percent (50%) of business and production entities are granted certificates of ISO 14001; 70% of industrial parks have good system of waste water treatment which collect 90% of solid effluents; 95% of urban population and 85% of rural population can use clean water; and finally forest coverage ratio amounts to 43%.

In fact, the dust density in air in urban areas is 2-3 times higher than the limit. The number of rural households using clean water accounts for only 35% (2003). Sixty percent of farmland (12/21 million hectares) has bad quality or becomes exhausted (Văn Phước, Vân Hà, 2006). The forest coverage registers only 25%; in addition, one percent of forest areas is destroyed annually and 150 hectares of farmland are exhausted with an annual loss of 150 tonnes/ha (The Socio-economic Development Strategy from 2001 to 2010, Lê Thị Hường, 1996).

IV. Remarks on Vietnam's Sustainable Development

1. The index of technological efficiency (TFP) averages from 20 to 22%, so the economy's total productivity remains low. The GDP growth rate fluctuates between high and low cycles (5% - 8%), indicating the economy's instability.

2. The contribution of the capital factor (K) is increasing over year (from 14% to 73%), indicating high expenditure for growth (savings, and investments from the government and foreign investors) and declining contribution of the labor factor (L) (from 57,3% down to 16%).

3. The inequality degree is on the rise, but remains lower than that of Asian and East European countries and higher than that of OECD countries.

4. The country's human resource development is still weak, indicated by such indexes as HDI, HPI, and human resource index.

5. On the environment: The above analysis reveals the Vietnam's natural environment remains in instable conditions. Therefore, it requires strong institutions and enforcement to protect the environment in accordance with the Government's strategy with participation of the community of people and businesses. Local governments and multinational corporations are required to abide strictly by regulations on environment and technical standards in all areas.

6. The New Institutional Economics (North, 1997) has made significant contributions to the sustainable development of a nation, especially transforming and developing ones. Vietnam is not an exception due to its weaknesses in institutions, legislation and policy indicated by the above-mentioned indexes (III, 4).

Policy, institution and good governance are determinants to sustainable development in addition to other factors ■

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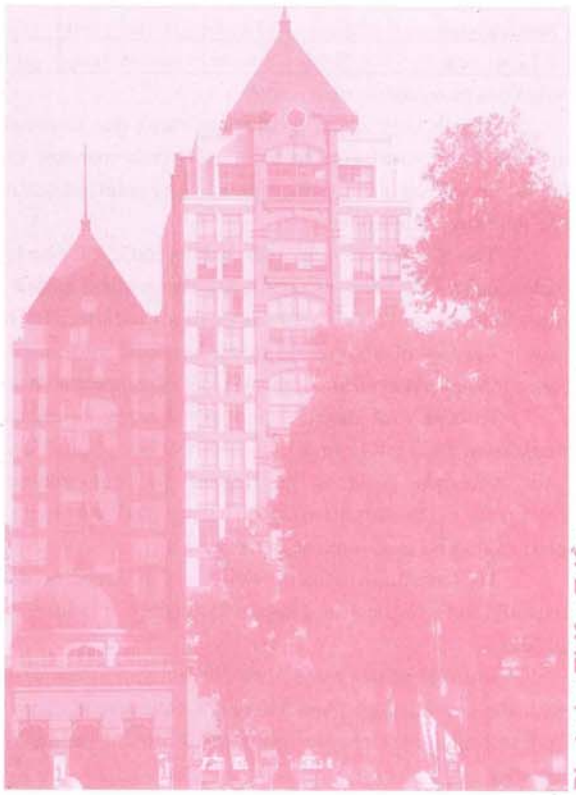

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