

The Vietnam's structure of industry has changed gradually according to the trend of global integration, and the most important feature of this process is the modernization of the industrial sector that aims at producing highly competitive goods. To accelerate this process, strengths and weaknesses of this sector must be examined in order to help work out the most suitable strategy to develop it. In this article, the strengths and weaknesses will be seen from the aspect of global integration.

1. Strengths

In the past 10 years, the industrial sector gained high and stable growth rates as shown in the following table:

Year	Growth rate (%)	Year	Growth rate (%)
1996	14.2	2001	14.6
1997	13.8	2002	14.8
1998	12.5	2003	16.0
1999	11.6	2004	16.0
2000	17.5	2005	17.2

The average growth rate in these years is 16%, higher than the target of 13% set by the VCP 9th Plenary. In comparison with 1995, the industrial output in 2005 rose by four times while the GDP rose by only two times.

As for the rise in added value, encouraging signs have been reported. In 2002, the added value rose by 9.17% and reached an average of 10.20% for the years 2001-05.

- Output of most products of key industries rose steadily over years. A growth rate of 17% or higher could be found in the output of 17 out of 46 key products, including autos, engines and many mechanical products. This fact shows that the industrial sector has made good progress because these products require high technologies.

- The industrial output of the non-public sector gained the highest growth rate in the past few years after the Companies Law. Number of private companies rose quickly: 14,440 in 2000; 21,040 in 2001; 21,523 in 2002; 26,009 in 2003; 36,993 in 2004 and over 45,000 in 2005. Construction companies account for some 30% of this number.

The foreign sector also developed well in the 2000s. Its industrial output rose by 15.7% in 2004. The oil business gained a growth rate of 18.5% - the highest one so far.

At provincial level, many provinces also enjoyed as high growth rates in the industrial output as big cities did. Many of them even gained growth rates higher than the national average. In 2004 for example when the national average was 16%, Bình Dương gained 32.7%; Vĩnh Phúc 25%; Phú Thọ 20.7%; Khánh Hòa 20% and Đồng Nai 19.5%.

The growth of provincial industrial sectors had positive effects on changes in the structure of industry because the

Existing Strengths and Weaknesses of the Industrial Sector

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agriculture still plays an important role in most provinces.

Development of the industrial output has helped promote export. Industrial exports in 2001-05 earned US\$79 billion accounting for 73% of the total export value.

Table 2: Industrial sector and export value

Indicator	2000	2005	Change (times)
National export value (US\$ bn.)	14.57	32.23	2.22
Export from industrial sector (US\$ bn.)	10.20	24.50	2.42
Share of industrial sector in export value (%)	69.97	5.2	6.1

Processing aquatic products and rice is the business that gained the highest growth in their output and modernization. The modernization of this industry has helped promote the export of those two lines of products. The next are wood processing wood and animal feed businesses.

In the industrial output, the manufacturing industry has become more important than the mining industry when it started to make the best use of local sources of raw materials to produce exports.

Table 3: Shares of manufacturing and mining industries in industrial output

Industry	2000	2004	2005
Manufacturing	79.7%	82.9%	84.9%
Mining	13.8%	10.8%	9.1%

This change also shows itself in the labor force employed by each industry. The labor force in the mining industry fell from 6.8% in 2000 to 5.5% in 2005 while that of the manufacturing industry rose from 91% to 91.9%.

In terms of job creation, the industrial sector employed some 3.3 million laborers in 2000 and this figure in 2005 was 5.7 million, equaling 11.6% of the working population.

2. Weaknesses

- Quality of growth is poor, which shows itself in various aspects: high intermediate costs and low rises in the added value in comparison with rises in industrial output. The following table could present this comparison.

Table 4: Rises in industrial output and added value

Year	Rise in output (%)	Rise in added value (%)
2000	17.5	10.8
2001	14.6	9.7
2002	14.8	9.1
2003	16.0	10.3
2004	16.0	11.3
2005	17.0	12.3
2000-05 (average)	16.0	10.3

Large gaps between rises in the industrial output and added value in the past few years shows that the efficiency of the industrial production is slow to improve.

The structure of industrial output fails to change in favorable direction. The mining industry gained high growth rates in many successive years and its output is exported without being processed. In the years 2001-05 for example, oil output rose by 3.5% a year; natural gas by 12.8% and coal by 22.5%.

Supporting industries haven't been developed reasonably. Most of them depend on imported materials with the result that their growth was low and unstable. The following table shows dependence of local industries on imported materials.

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Table 5: Shares of local materials in total supply

Industry	Local materials in total supply (%)
Plastics	10
Cotton for textile	10
Fiber	30
Cloth for exported clothing	20-30
Footwear	25-30
Shipbuilding	20
Materials for making steel	20

The clothing industry, because of the shortage of raw materials, usually works as subcontractors for foreign companies with the result that its added value is small although its export value is huge. According to a rough estimate, the real earnings from over US\$1 billion worth of export from the clothing industry is equal to ones from some US\$300 million worth of export from the handicraft business that used local raw materials. In the years 2001-05, exports from the clothing, footwear and electronics industries earned huge sums of foreign exchange but the added value was small; only 20% in the footwear industry for example, because they had to import raw materials.

- Differences in development levels over provinces will be a barrier to global integration. Most industries concentrate in big cities and provinces in plains. For example, the northern and coastal Central Vietnam comprising 14 provinces account for only 6.3% of the FDI and the Mekong Delta less than 3%.

Newly established industrial companies concentrate mainly in the Hong Delta and eastern South Vietnam. Hà Nội and HCMC house 52% of new companies with 50% of registered capital; and the eastern South Vietnam accounts for 40.7% and 36.5% while the western North Vietnam occupies only 0.94% and 0.79% respectively.

- Industrial development is not intensive enough. High technologies and sciences have only small contributions to the economic growth. The following table shows the shares held by labor, capital and total factor productivity (TFP).

Table 6: Share of factor inputs in the GDP (%)

Factor	1993- 97	1998-2002
Total	100.0	100.0
Capital	69.0	57.5
Labor	16.2	20.0
TFP	15.0	22.5

Thus, the capital has been the most essential factor to the economic growth in the past 10 years. The share of TFP only rose slightly. In the industrial sector, the TFP rose by some 4% a year in 1991-94 and it rose and fell irregularly and stayed low from 1995 on. In the years 1991-2004, the capital

increased by 13.429% a year; labor 14% a year and the TFP 3.016% a year. The share of the TFP in the added value made by industries is small and tends to reduce over years: 68.22% in 1992; 38.36% in 1993; 30.97% in 1994; 17.7% in 1996; 5.87% in 1999; 17.64% in 2000; 9.5% in 2003. Its average share in the industrial added value in 1991-2003 was 23.51%. In the years 1985-2004 its share was 23.21%.

- Effects of the industrial development on the agriculture are limited with the result that the output of well-processed farm products is small and they become less competitive on the world market.

Table 7: Percentage of processed farm products to the total output

Product	2000	2005
Coffee	57%	60%
Rubber	15%	20%
Animal feed	15%	25%
- Well-processed one	8%	10%
Vegetable	7%	15%
- Well-processed one	3%	8%
Forest product	10%	20%
- Well- processed one	2%	5%

Locally-made farm machines and materials account for only a small percentage of machines in use and peasants have to depend on imported ones. The following gives us an example.

Table 8: Shares in market for tractors and diesel engines

Origin	Tractor	Diesel engine
Imported from China	45%	60%
Second -hand contraband	23%	24%
Locally-made machine	25%	12%
Imported from other countries	7%	4%

- Materials supplied by the industrial sector to the agricultural one are of high costs and low quality. In other words, the performance of farm product processing is very poor, as shown in the following example.

Table 9: Production cost of a ton of sugar in Vietnam and some other countries (US\$)

Expense	India	Thailand	Australia	Vietnam
Raw materials	173	176	135	203
- Sugarcane	139	134	122	195
- Transport	34	45	13	35
Processing cost	118	72	76	220

- The industrial development is the main cause of pollution. There are 2017 tradition guilds in Vietnam and they have helped create jobs for rural residents. Most of them, however, pollute the environment seriously, especially

ones recycling waste and making building materials. For example, Chế Đáo village in Hưng Yên dumps from 40 to 60 tons of zinc a year and all villagers suffer diseases relating to zinc; and a village in Hà Tây producing tiles emits 3,774 tons of dust a year.

- The structure of the industrial sector is backward and no effective measure is taken to modernize it. The manufacturing sector seems to make good progress in the past decades in terms of technology and products but in fact it only does subcontract and assembling jobs for foreign companies.

Replacement of technology and machine only reached a level of 7% or 8% a year. Investment in R&D activity is small and usually becomes a waste; it equals only 0.01% of total sales made by industrial concerns. Most of them tend to import cheap machines from China and Taiwan. Even the foreign investors didn't import high technologies to their concerns in Vietnam.

Table 10: Employment of technologies in some ASEAN countries

Standard	High technology	Medium technology	Obsolete technology
Vietnam	20.6%	20.7%	58.7%
Philippines	29.1%	25.5%	45.4%
Thailand	29.8%	22.6%	47.7%
Indonesia	30.8%	26.5%	42.7%
Malaysia	51.1%	24.6%	24.3%
Singapore	73.0%	16.5%	10.5%

Industrial concerns, because of their obsolete technologies, consume more energy and raw materials and produce more pollutants than their counterparts in neighboring countries. For example, local concerns need some 13 liters of water to make a liter of beer instead of an international average of four liters; local steel mills consume a volume of power of 2.57 times higher than the international average while their steel rolling capacity equals only 12.7% of the international average.

Table 11: Waste in the mining industry

Business	Waste (%)	Business	Waste (%)
Underground coal mining	40-60	Oil	50-60
Open coal mining	10-15	Others	15-20
Apatite	26-43		

In short, in spite of remarkable contributions to the economic growth in recent years, the industrial sector has exposed many shortcomings that will become obstacles to its development and effort to integrate into the world market and cope with keen competition there ■