

HUMAN RESOURCE DEVELOPMENT IN THE VIETNAMESE OIL INDUSTRY BY 2020

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I. SOME MAJOR ACHIEVEMENTS OF THE VIETNAMESE OIL INDUSTRY

To overcome difficulties in the early stage by international cooperation, the Vietnamese oil industry has made significant contributions to the country's escape from socio-economic turmoil in the first years of the 1990s and become one of leading sectors of the economy.

First, the oil sector has the largest foreign direct investment inflows, especially in the period of serious shortage of foreign currency. In the 1988-1991 period, the sector's FDI attraction amounted to 41.3% of the total disbursed investment capital (1). At present, the FDI flows into the oil sector also account for a high percentage; 58.9% of the total registered FDI in 2000 and 65.6% of total FDI in the manufacturing industry (2).

Second, the oil sector has topped the list of taxpayers and its payment increased over years from 15% in 1997 to 18% in 1999, 34% in 2000 and 40% in 2001 (Table 1)

Table 1: The oil sector's payment to the state budget

Indicator	1997	1998	1999	2000	2001
(1) State budget (VND bil.)	65,352	72,965	69,500	74,535	86,275
US mil	5,188	5,284	5,585	5,287	5,741
(2) The oil sector's payment (US mil.)	781	692	1,030	1,778	2,300
(2)/(1) (%)	15	13	18	34	40

Source: Vietnam Economic Times, Economic Indicators in 2001-2002

II. RELATIONS BETWEEN OIL PRODUCTION AND HUMAN RESOURCE

To secure a sharp rise in the oil production from 0.04 million tonnes in 1986 to 2.70 million tonnes in 1990; 7.906 million tonnes and 17.811 million tonnes in 2000, the sector has steadily increased its working population from 2,000 at the time of establishment to 15,000. Especially the number of its workers with college and university degree soared rapidly.

Using statistics in the 1991-2001 period and the regression methodology to discompose the relation between productivity and labor quantity and quality; and the SPSS software to process figures, we will acquire the following outcomes (Table 2 and Figures 1,2 and 3):

Table 2: Relations between oil production and labor quantity and quality

Relations	Relation coefficient (R)	Determinant coefficient (R ²)	Linear function
Production-total labor force	0.99	0.97	$Y = 2.13 x_1 - 14,506.53$
Production - Total workers with college and university degree	0.99	0.98	$Y = 4.22 x_2 - 4,389.19$
Production - ratio of workers with college and university degree to total labor force	0.97	0.94	$Y = 1,158 x_3 - 23,558.74$

While x_1 : total working population of the oil sector

x_2 : the number of workers with college and university degree

x_3 : the percentage of workers with college and university degree against total labor force.

Based on outcomes from Table 3 and Figures 1,2 and 3, we may come

and 98% divergence observed in production.

c. Figures 1,2 and 3 and equations in Table 3 show the production is of linear dependence on the quantity, educational attainment and quality of labor force.

2. Conclusion

a. The model selected to examine relations between oil production and workers' quantity, quality and structure is very logical.

b. The model's exactness is very high, even 97% and 99%, so the linear equations may be used to forecast the following years.

III. ORIENTATION OF HUMAN RESOURCE DEVELOPMENT

To implement the Resolution of the ninth Party Congress and build our country into one of NICs by 2020, the oil sector has to make great efforts to become an industrial giant. It plans to increase its production from 17.8 million tonnes in 2000 to 24-26 million tonnes by 2005, 30-32 million tonnes by 2010, 36-38 million tonnes by 2015 and 38-40 million tonnes by 2020; including 150,000-800,000 tonnes exploited overseas by 2005; 3-4 million tonnes by 2010; 4-6 million tonnes by 2015 and 6-8 million tonnes by 2020 [5].

The basic factor needed to reach these targets is an appropriate working population in terms of quantity and quality. Based on the selected model and production plan, we may draw up the orientation of human resource development in the era of industrialization and modernization. Nevertheless, we also should know in the trend of economic globalization,

Figure 1: Linear relation between oil production and labor force

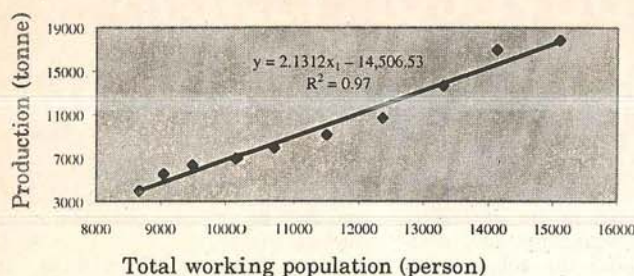


Figure 2: Linear relation between oil production and workers with college and university degree

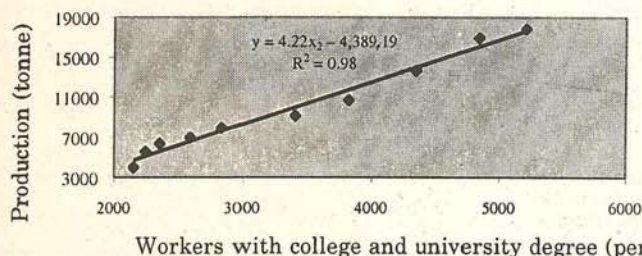
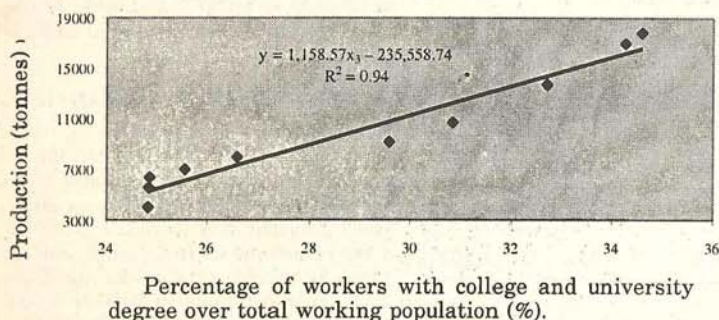


Figure 3: Linear relation between production and the percentage of workers with college and university degree over total working population



technologies develop as fast as lighting and 30% to 50% of them are innovated on average in 7 years. As a

result, the current common trend in developed countries is to train "white

collar" workers soon to replace "blue collar" ones.

According to Petro Vietnam, foreign-invested oil companies including BP-AMACO, JVPC, Petronas Carigali, Unocal employed 55-75% of their workforce with college and university degree in 2001. The International Labor Organization reported in 1995, 100% of working population in developed countries had been trained and many of them have 72% of their total workers graduated from colleges and universities [4].

Combining the above analysis with characteristics of the oil sector, we suggest the percentage of workers with college and university degree in this hi-tech using sector should reach 75% - the level of developed countries in 1995. The development of labor quantity and quality in the Vietnamese oil sector is indicated in the following table:

The human resource development to reach the above targets or 100% trained workers including 72% of them are college and university graduates is a very heavy task. It requires the Vietnamese oil sector as well as the education sector to find effective solutions for achievement. ■

Reference

1. Phạm Đỗ Chí, Trần Nam Bình, *Đánh thức con rồng ngủ quên - Kinh tế VN đi vào thế kỷ 21* (To Wake up the Sleeping Dragon - the Vietnamese Economy Enter the 21st Century), HCMC Publisher, 2001.
2. General Department of Statistics, *Statistical Yearbook*, Thống Kê Publisher, 2001.
3. Vietnam Economic Times, *Vietnamese Economy 2001-2002*
4. Nguyễn Văn Tài, *Phát triển nguồn nhân lực trong sự nghiệp công nghiệp hoá và hiện đại hoá VN* - Human Resource Development in Vietnam Industrialization and Modernization, in Sociology and Humanity Sciences enter the 21st century, HCMC Publisher, 2001.
5. *Người Lao Động* Newspaper, July 18, 2002.

Table 3: Human resource development in the oil sector by 2020

Indicators	2005	2010	2015	2020
Production plan (mil. tonnes)	24-26	30-32	36-38	38-40
Total labor force (person)*	18,078-19,017	20,895-21,834	23,712-24,651	24,651-25,590
Ratio of workers with college and university degree (%) **	42.52-43.74	53.16-54.20	62.47-63.80	71.19-72.00
Trained workers (person)	10,391-10,699	11,108-10,699	8,899-8,924	7,102-7,165
College, university graduates (person)	7,687-8,318	7,687-8,318	14,813-15,727	17,549-18,425

* Calculated by the selected model

** Calculated by the selected model in combination with the maximum 72% by 2020