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LOGISTICS ASPECTS OF MOTOR FUELS PRODUCTION AND DISTRIBUTION IN FRANCE

Abstract: The Author presents motor fuels production and distribution and their logistics features. There is a focus on the motor fuels' market organization and structure as well as geographic localization of infrastructure that determines logistics processes during production and distribution. The author also points on the demand side of the distribution processes of motor fuels. The paper can be an interesting case study and the comparing point for other country petroleum industry.

Keyword: motor fuels, distribution, logistics

Petroleum processing

Rising prices oil crude forces to look for other possibilities for motor fuels prices decreasing. Better organization of the logistics aspects of motor fuels' production and distribution is one of the possibilities for costs reduction. The Author's research is focused on the petroleum industry and motor fuels distribution but the results can be compared for Polish market as sign for future development.

French domestic production of crude oil participates a few percentages only but developed refinery industry satisfied more than 91% of domestic demand. At present, there are 14 refineries (table 1).. Their total production capacity amount to 99 mln tons annually

Table 1 Refineries in France

Firm	Localization	Annual production capacity (10^3 t)
BP	Lavéra	10,2
TOTAL	Donges	11,4
	Feyzin	5,8
	Flandres (Dunkerque)	7,8
	Normandie (Gonfreville)	16,1
	Provence (La Mede)	7,7
	Grandpuits	4,8
SRD (1) (EXXON, TOTAL, BP)	Dunkerque	-
	Fos	5,6
EXXON	Port-Jerôme / Gravenchon	11,5
SHELL	Berre	6,3
	Petit-Couronne	7,0
CRR (2) (SHELL, TOTAL, BP)	Reichstett	4,0
SARA (3) (TOTAL, SHELL, EXXON, TEXACO)	Fort de France	0,8

(1) SRD : Société de la Raffinerie de Dunkerque.
(2) CRR : Compagnie Rhénane de Raffinage.
(3) SARA : Société Anonyme de la Raffinerie des Antilles.

Source: Author elaboration based on: DIREM: La liste des raffineries en France au debut 2004, June 2004 http://www.industrie.gouv.fr/energie/petrole/textes/rn1#m1

The higher number of the refineries belongs to Total – 6, two refineries belong to Shell other petroleum firms British Petroleum, Exxon have one refineries, and other refineries are joint investments (table 1).

The geographical localization of the refineries and petroleum pipelines are presented on the fig 1.

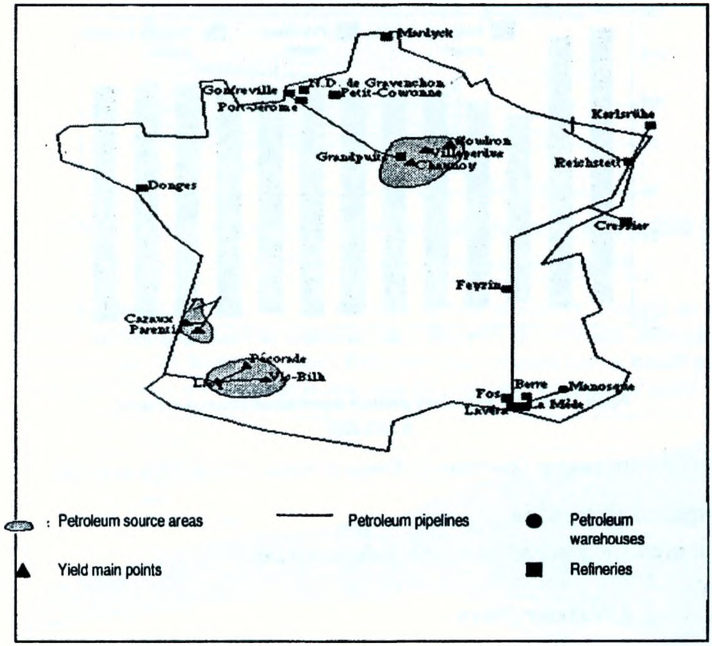

Figure 1 Logistic infrastructure of petroleum production, transport and distribution in France

Source : Author elaboration based on: DIREM : Observatoire de l'Energie en France - *Les statistiques sur le petrol.*

The figure 1 presents detailed logistics localization of the oil crude yield areas, refineries and petroleum pipelines connecting sea ports, refineries and moreover France with kneeboard countries (Germany and Swiss). French refineries production capacity allows for domestic demand satisfaction as well as for refinery production (petrol especially) export. The export structure of refinery products is presented on the table 2 as well as figure 2 that illustrates the French foreign trade of petroleum and refinery products.

Table2 French refinery products' export

EXPORT	2002 (10^3t)	2003 (10^3t)	2004 (10^3t)
Refinery products' export	19 473	22 497	21 115
of which: European Union (15) countries	11 868	14 780	13 143
other European countries	2 408	2 326	1 910

Source : Author elaboration based on: Observatoire de l'Energie en France - *Les statistiques sur le petrol.*

The main directions of refined products export are European Union countries. In generel, the petroleum and refinery products import-export structure has been fixed during presented period, however imported refinery products amount has been rising and imported petroleum amount has been decreasing.

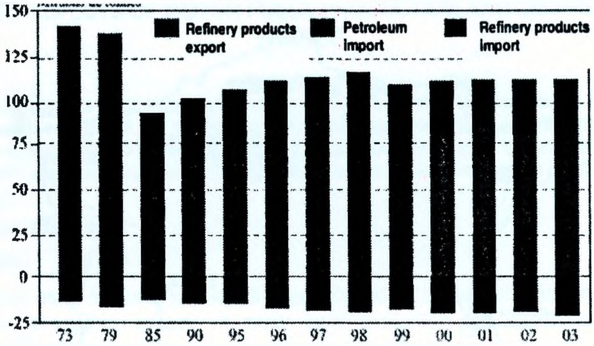

Figure 2 Petroleum and refinery products export-import structure in France, in 1973-2003

Source : Author elaboration based on: Observatoire de l'Energie en France - *Les statistiques sur le pétrol.*

Refinery products distribution

The top three operators on the French motor fuels market are:

- Esso Rep.,
- Total Exploration & Production France,
- Vermilion Rep.

All they participate in the market with about 25% market share other operators share are as follows:

- Lundin (17 %),
- Petrorep. (2 %)
- Géopétrol (5 %)
- Others (5%)

At the moment, petrol industry (except of refineries) in France employ about 123 000 workers. They are employed in following areas:

- distribution - 20 000 workers,
- research in production process - 8 200 workers,
- heating oil trade - 31 000 workers,
- motor fuels trade - 64 500 workers.

Transport sector has the great share (56%) in petroleum products consumption in France. Industry sectors connected with energy production and road surfaces are second consumer with 22% share. The other 22% of consumption are divided among households, agriculture and non energy sectors (service mainly) (compare fig. 3).

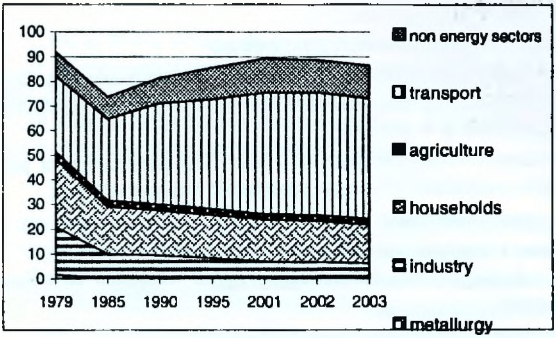

Figure 3 Refinery products' consumption according to sectors in France, in 1970-2003 [mln ton]

Source : Author elaboration based on DGEMP-DIREM : *L'industrie pétrolière en 2003*, June 2004.

Diesel and unleaded petrol Super 95 are the main refinery products in demand on the French market. There is decreasing demand for unleaded petrol Super 98. There is also decreasing demand for ARS (Anti-Récession des Soupapes) petrol. ARS petrol is a makeshift fuel for leaded petrol, it was introduced in 2000 in France and it is used in older cars not adjustable for unleaded petrol.

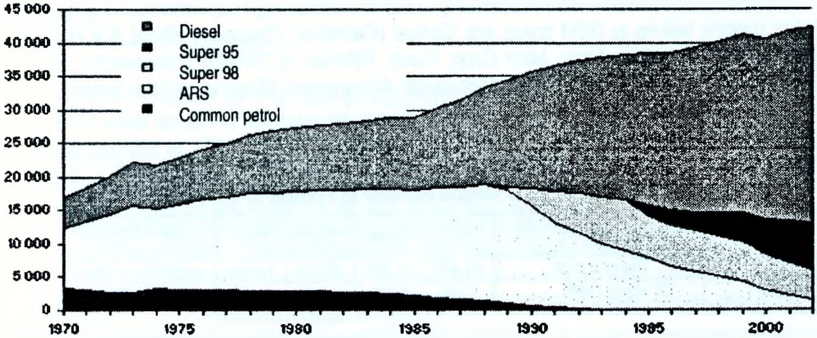

Figure 4 Petrol and diesel demand development in France, in 1970-2000

Source : Author elaboration based on DGEMP-DIREM : *L'industrie pétrolière en 2003*, June 2004.

Considering the motor fuel consumption in France, in the period from 1970, one can notice stable increase of diesel consumption. ARS petrol consumption has been decreasing.

Motor fuels distribution is provided by three following channels:

- wholesale (this offer is directed for transport firms);
- sale for distributors (fuels warehouse owners), those supply petrol station, small enterprises and supermarkets petrol stations with motor fuels;
- direct sale for distribution network and petrol station.

The refinery products are transported n France territory using following transport means:

- petroleum pipelines (45,1%),
- car cisterns (29,4%),
- rail cisterns (7,2%),

– inland water punts (9,5%).

Crude oil is transported using sea oilers and pipelines.

In last few years, motor fuels distribution using the wholesale channel has been on the same level – about 4,5 Mm³ in 2003. Petrol amounted to 2,2 % (0,1 Mm³) of total distribution using this channel and diesel participated in 97,8 % (4,4 Mm³).

Sale for distributors in 2003 amounted to 5 Mm³. The participation of petrol and diesel were respectively 0,4 Mm³ and 4,6 Mm³. The main operators in this segment are :

- associated petroleum enterprises - 68 %,
- warehouse owner not associated in any organization - 20 %.

Direct sale for distribution network and petrol station amounted 41,9 Mm³ and it has been decreasing in relation to previous year.

The domestic motor fuels distribution network consists of

- traditional petrol stations,
- GMS (Grande et Moyenne Surface) petrol stations.

Traditional petrol stations operate under patronage of French Union of Petroleum Industry (*l'Union française des industries pétrolières – UFIP*) or the petrol stations are property petroleum firms e.g.AGIP, BP France, Esso SAF, Société des Pétroles Shell, Total and there are also decreasing number of independent filling stations.

GMS petrol stations are stations operating under the firm of large supermarkets and hypermarkets. Petrol stations belong to GSM group are: Carfuel (*Carrefour, Champion, Shopi, 8 à Huit*), Distridyn (*Casino, Géant, Leader Price, Maxi Czop, Cora*), Pétroles et Dérivés (*Intermarché, Bricomarché, Ecomarché*), Petrovex (*Auchan, Atac, Mammouth, Maximarché, Rapidmarché,*) et Siplec (*Leclerc*).

Significant decreasing number of petrol stations can be observed in France since 1973, then there was 49 400 petrol stations, during in 2002 there were 14 950 and in 2003 - 14 530 (see table 3).

Table 3 Petrol station number in France, in 1980-2003

	1980	1999	2000	2001	2002	2003
Petrol station	40 400	16 700	16 230	15 600	14 950	14 530
Of which: GMS.......	1 290	4 485	4 362	4 417	4 541	4541

Source : Author elaboration based on Observatoire de l'Energie en France - *Les statistiques sur le pétrol*

On the other hand, there is observed increase of petrol stations operating under the marks of supermarkets and hypermarkets (GSM. In 1980, there were 1290 such petrol stations, in 2003 their number has risen to 4541.

The share of particular types of petrol stations in motor fuel distribution in 2003 is presented in table 4.

Table 4 Distribution structure of motor fuels in France (2003)

	Petrol		Diesel		Total	
Petrol stations	**Mm³**	**%**	**Mm³**	**%**	**Mm³**	**%**
Of which: petrol firm stations	7,7	46,9	19,6	56,0	27,3	53,1
GMS	7,8	47,6	10,9	31,2	18,7	36,4
Independent firm stations	0,7	4,3	4,0	11,4	4,7	9,1
Others	0,2	1,2	0,5	1,4	0,7	1,4
Total	**16,4**	**100**	**35,0**	**100**	**51,4**	**100**

Source : Author elaboration based on Observatoire de l'Energie en France - *Les statistiques sur le pétrol*

The rising importance of GSM stations can be noticed in distribution of refinery products. The share of those station amounted to 36,4% of total sale in this market channel. It is an effect of special policy: Motor fuels sale is not the main aim of their existence. The principle of GSM petrol station existence is invitation of potential consumers for visiting and shopping in the supermarket. Attractive price of the motor fuels on those stations supports the consumer choice of particular supermarket network. Therefore, profits from petrol sale is not the main aim of those stations.

Conclusion

Presented logistics aspects of French petroleum market allow for following remarks. French petroleum industry is a developed industry that production capacity is almost enough for the domestic demand. Contrary French petroleum industry is depended on the foreign oil crude supply. The distribution is divided in three channels and GSM stations ownership of supermarkets plays more and more important role the distribution network. Above mentioned considerations can be an example what development direction can follow other country petrol market in the future.

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ACCOUNTANCY OF POLISH ENTERPRISES IN TRANSITON PROCESSES

Abstract: Polish accountancy, in recent years has significantly approached the international solution. This creates favourable conditions for development of the enterprises with international structure. Accepting the regulations started by the European Union is a proper step toward this. Although the significant relation of the concurrence of the regulations is observed, there is still a lot to be done for full harmonization of Polish balance law with the EU regulations. Since 2005, the consolidated financial reports of the issuers of stocks which are designed to turnover and banks are prepared in Poland according to IAS. Several units, according to the regulations of the Accounting Act can choose to work under IAS. For the remaining units, in terms of accountancy the valid source is the Accounting Act and the regulations issued on the basis of it.

Keywords: accountancy, harmonization, accountancy in Poland

1. Introduction

Enterprises in Poland, during their business activity are obliged, after fulfilling some criteria, to keep accountancy according to the balance law. The accountancy is a basic source of economic information for the business units. It gathers all the necessary data which characterize the operation of enterprises and it plays a service role in relation to different levels of management, delivering the necessary information. It is therefore a crucial element of the information system of a company. The paper brings closer the concept and meaning of the accountancy for the operation of business units in Poland in relation to economic transition and harmonization processes in accountancy.