Changes that have occurred in the basic conditions in the global hydrocarbon industry, With the impact on the Competitive of Algeria's hydrocarbons, period: 2011-2019

التغيرات التي طرأت على الشروط القاعدية في صناعة المحروقات العالمية، مع التأثير على تنافسية محروقات الجزائر للفترة: 2011-2019

-**Nadhir Mayah**, *MCB, University of Emir Abdelkader, Constantine, n.mayah30@gmail.com*
-**Adel Mayah**, *MCA, University of Mohamed Kheider, Biskra, mayah.adel2015@gmail.com*

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الملخص:

يهدف هذا البحث إلى رصد بعض الشروط القاعدية لصناعة المحروقات العالمية، قصد الوصول إلى تحليل التأثيرات البينية: الهيكل–السلوك–الأداء. وابراز تلك التغيرات على تنافسية محروقات الجزائر للفترة: 2011–2019، مستخدما المنهج الوصفي التحليلي، معتمدا أساسا على مؤشر هرشمان–هرفندال HHI، تم التوصل إلى بعض النتائج، حيث هيمنت عام 2019 محروقات: الولايات المتحدة، السعودية، روسيا، على الصناعة بقوة: 46.9%، التي أفقد محروقات الجزائر قوتها من:1.99% "كحصة سوقية" إلى: 0.42% كقوة صناعية. مع تأثير بدرجة أضعف من الدول التي تتراوح حصتها السوقية ما بين:]1.99%–5.61%[. عامل التطور التكنولوجي أحدث قوة مهمة، في المقابل تدعيم ضعيف لعاملي الجودة، والجيوسياسية التي اكتسبتها محروقات الجزائر.

الكلمات المفتاحية: الصناعة، الشروط القاعدية، صناعة المحروقات، الاستراتيجية التنافسية.

Abstract:

This research aims to monitor some basic conditions for the global hydrocarbon industry, In order to access the analysis of intra-effects: Structure- Conduct –Performance, highlight these changes in the competitiveness of Algeria's hydrocarbons for the period: 2011-2019, Using the descriptive analytical method, relying mainly on the Herfindahl-Hirschman Index (HHI), Some results have been reached, as 2019 is dominated by hydrocarbons: the United States, Saudi Arabia, Russia, On the industry with a power: 46.9%, which caused the hydrocarbons of Algeria to lose their strength from: 1.99% as a "market share" to: 0.42% as an industrial power. With a weaker effect Of the countries whose market share ranges:]1.99%-5.61%]. The technological development factor is the latest important force, in contrast, weak support for the quality and geopolitical factors that Algeria's hydrocarbons have gained.

Key words: *Industry; Basic conditions; Hydrocarbon industry; Competitive strategy.*

01- Introduction:

Amidst the growing concern about developments in hydrocarbons prices and their repercussions on the Algerian economy, economists, especially experts in hydrocarbons, seek to know the Competitive of Algeria's hydrocarbons, and did you take advantage of some basic variables from the demand and supply sides (basic conditions) for this industry, the basic conditions act as the primary driver of the industry mechanism (see Figure.01), This influence can be, directly or indirectly, with a profound effect on the industry and its constituent organizations through: structure, conduct, and performance. From here we ask the main question that this research revolves around.

a- The main question: The main question can be asked as follows: To what extent has Algeria's hydrocarbons exploited the developments that have taken place in the basic conditions in the global hydrocarbon industry, especially at this time when there is a great technological development?

b- Sub-questions: The main question can be asked through the following sub-questions:

1- What are the components of the base conditions for industry, in order to properly control them?

2- How do the basic conditions of the industry develop due to the factors affecting it in an unstable environment?

3- Does Algerian hydrocarbons have a competitive strategy that helps it face competition?

c- Hypotheses: In order to address the main question, hypotheses have been developed that are considered the most likely to answer the previous questions, and the validity of these hypotheses will be tested through research, namely:

1- It is not possible to comprehend all the factors that make up the basic conditions for the hydrocarbon industry, and this is due to the inability to set limits for this industry;

2- The weak effectiveness of the competitive strategy for Algeria's hydrocarbons is due to the unstable industry movement.

d- Research objectives: This study aims to:

1- Preparing an application framework for the hydrocarbons industry with the aim of tracking the pace of the new economic and social context, and this in terms of defining the objectives of the dynamism of the industry trends;

2- Highlighting prospects for keeping pace with the hydrocarbon industry environment, and this is through activating the industry system within the macroeconomic system.

e- Research model: In the study of this research (period: 2011-2019) we relied on two approaches: description and analysis, and the purpose of these two approaches is to describe an analysis and disclosure of some aspects related to the industry and the available competitive strategy.

f- Previous studies: Several studies have dealt with the analysis of the hydrocarbon industry, including:

- Book:(John Lipczynski & al, **Industrial Organization: Competition, Strategy, Policy**, 2005): Highlight the strong link between the theory and analysis of industrial economics using engaging case studies. It also supported new case studies on industries relevant to the 21st century.

- Study: (Bureau of Economics of the Federal Trade Commission, **The Petroleum Industry: Mergers, Structural Change, And Antitrust Enforcement**, 2004): This study presented structural analyzes of the petroleum industry using some important indicators to indicate changes in the structure, strategies, and performance.

- Study: (Michael Pickford & al, **The Petrol Industry: Deregulation, Entry And Competition**, 2001): This study presents the possible cases when there is complete economic freedom, and with the lifting of regulatory restrictions to let the industry operate automatically.

02. The basic conditions and the industrial analysis model

Industry is the center of attention of organizations, whereas within its framework the formulation and implementation of its competitive strategy, Economic theories and management theories have contributed to presenting several concepts and tools related on the one hand to analyzing the industry in terms of shape and structure and on the other hand by providing a set of competitive strategies through which to improve and continue the performance of industrial organizations.

Here we present a simple subtraction of the components of base conditions and influence trends in a model:

02-01. Basic components of the basal conditions:

The structural analysis of the industry examines the characteristics of the cost function of the organization which are important determinants of the organization and the industry structure. It is essential to understand the interactions between the determinants of organization size and industry size. The first is, the big part of the cost function positioning (the organization costs case). The latter is determined by the setting of the industry's demand curve. The interaction between these two structures (called: basal conditions). (John C. Panzar, 2007, p:33)

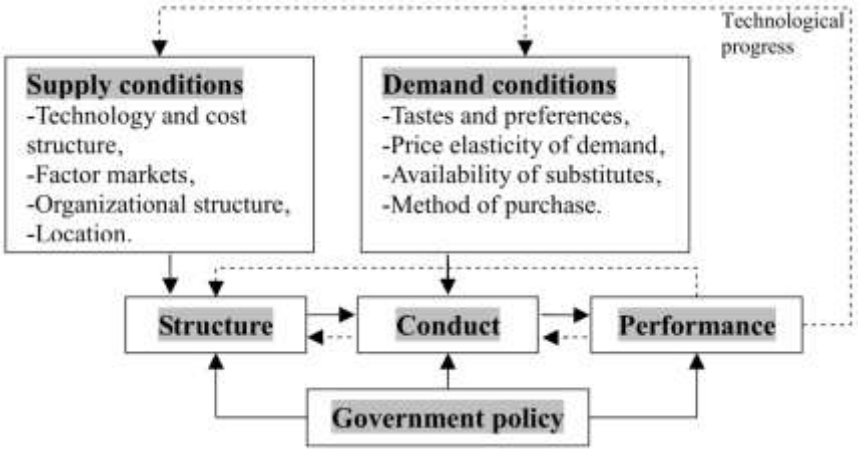
So the basic conditions, are the characteristics of the industry that can be considered the first presentation of the industry data in the very short period, and this means a set of constraints and opportunities that organizations seek to adapt to, and that they try to exploit or change them in their favor. (Philippe Moati, 2003, p:73)

02-02. Outline of the structure–conduct–performance paradigm

Seminal early contributions in industrial organization include Mason [1939, 1949] & Bain [1951, 1956, 1959]. Mason and Bain are credited with the development of the SCP paradigm. According to this approach, the structure of a market influences the conduct

of the firms operating in the market, which in turn influences the performance of those firms. (John Lipczynski & al , 2005, p:06). See the illustration below:

Figure 01: The structure–conduct–performance paradigm



Source: John Lipczynski & al , 2005, p:07

The base conditions in an industry analysis are explained by the primary factors determining the structure, divided between:

A- Producer factors (Supply conditions): including, Technology and cost structure, Factor markets, Organizational structure, Location,..

B- Factors for consumers (Demand conditions): including, Tastes and preferences, Price elasticity of demand, Availability of substitutes, Method of purchase,..

03. Significance of industrial concentration, trend of the base conditions

In order to anticipate some potential developments in the basic conditions, the Industrial Concentration Index is used.

03-01. Industrial concentration in the hydrocarbon industry

Market share and concentration data are important. However, they provide only the starting point for analyzing the competitive impact of a merger. In accord with the Guidelines, the FTC assesses many additional market factors before determining whether to challenge a merger. Over time, as the economic analysis of mergers has become more sophisticated and the agencies have discovered through experience that market structure is sometimes not the best indicator of market performance, calculations of concentration have become less significant. (Bureau of Economics of the Federal Trade, 2004, p.25)

03-02. The industrial concentration of the hydrocarbons industry: the hydrocarbon power of Algeria

Here we do some calculations on one of the most popular indicators (HHI index) to know the capacity of Algerian hydrocarbons in terms of impact on the global

hydrocarbon industry, especially in terms of prices through demand or the flow of the product and its quality (differentiation).

The Herfindahl-Hirschman index is the sum of the squares of market shares and it is a common measure of market concentration. The mathematical formula of an index: $HHI = \sum_{i=1}^{n} S_i^2$, Where S is the market share, n is the number of organizations in the industry. The Herfindahl-Hirschman index can vary between 0 (perfect competition) and 1 (monopoly). Fewer firms and larger variations in market shares increase H, indicating a greater degree of concentration. (Jeffrey Church, & al, 2000, p.239-240). In order to calculate this, we first use the illustrative table below that shows producing petroleum and other liquids for twenty (20) countries that produce the most.

Table No. 01: Total oil production and other liquids for the first 20 countries in the world and this year 2019

N°	Countries	Thousand barrels per day	N0	Countries	Thousand barrels per day
01	United State	16234	11	Venezuela	2554
02	Saudi Arabia	12008	12	Mexico	2722
03	Russia	11845	13	Nigeria	2322
04	China	4802	14	Qatar	2049
05	Canada	4507	15	Norway	1959
06	Iraq	4161	16	Angola	1856
07	Arab Emirates	3380	17	Kazakhstan	1762
08	Iran	3347	18	Algeria	1699
09	Brazil	3178	19	Colombia	1132
10	Kuwait	2755	20	United kingdom	1105

Source: eia beta, International Energy Statistics, 2019

Assume that the hydrocarbon industry in the world is controlled by these twenty (20) countries only (Statistics here are approximate). So, to measure the industrial concentration ratio for all these countries above, we calculate using the Hirschman & Herfindahl (HHI) Knowing the market share of each country, see the table below.

From the table below, after we have made some minor measurements related to measuring industrial concentration (of market power) using the well-known index HHI, and its ratio to the total industry (assuming that the industry includes the first 20 countries in the world) And comparing this ratio to the market share ratio for each, and the following results were drawn:

1-This industry includes four levels of acquisitions based on the market share ratios specific to each country. Leadership in this industry comes from a group that includes three (03) countries, namely, the United States, Saudi Arabia, and Russia, With a market share, respectively, 18.99%, 14.05%, 13.86% (in the field of [13% -19%]), The second group (in the field of [3% -6%]), which is the countries whose ranking comes from Venezuela to China, and the third group (in the range of [1.99% -3%]), which is the

countries whose ranking comes from Algeria to Mexico, and the last group includes each of Colombia and the United Kingdom.

Table No. 02: Industrial concentration and private market share of oil and other liquids production for the first 20 countries in the world and this year 2019

Unit: thousand barrels per day

N°	Countries	Production	market share	HHI	HHI ratio
01	United State	16234	18.99	3.606201	38.27
02	Saudi Arabia	12008	14.05	1.974025	20.95
03	Russia	11845	13.86	1.920996	20.38
04	China	4802	05.61	0.314721	03.33
05	Canada	4507	05.27	0.277729	02.95
06	Iraq	4161	04.87	0.237169	02.52
07	Arab Emirates	3380	03.95	0.156025	01.66
08	Iran	3347	03.91	0.152881	01.62
09	Brazil	3178	03.72	0.138384	01.47
10	Kuwait	2755	03.22	0.103684	01.10
11	Venezuela	2754	03.22	0.103684	01.10
12	Mexico	2522	02.95	0.087025	00.92
13	Nigeria	2322	02.72	0.073984	00.78
14	Qatar	2049	02.40	0.057600	00.61
15	Norway	1959	02.29	0.052441	00.56
16	Angola	1856	02.17	0.047089	00.50
17	Kazakhstan	1762	02.06	0.042436	00.45
18	Algeria	1699	01.99	0.039601	00.42
19	Colombia	1232	01.44	0.020736	00.22
20	United kingdom	1105	01.29	0.016641	00.18
	Σ	85477	100%	9.423052	100%

Source: Prepared by the researcher based on the data of the previous table.

2-The power of dominance in the global hydrocarbon industry comes from three (03) main countries, namely, the United States, Russia, and Saudi Arabia, Which came in the first group, with evidence that the HHI ratio (to the total) is greater than the market share, for example in the United States its market share is 18.99% in contrast that its HHI ratio is also 38.27%, and in Algeria, for example, we find that the market share It is 1.99%. In contrast, the HHI rate is only 0.42% (1.99%> 0.42%).

3-There is a possibility for the first three dominant countries in: the power of creating additional demand and controlling it, for example, the United States: there is a potential demand of: 38.27-18.99 = 19.28 in the potential market share, while in Algeria it is a negative state, that is, without a potential impact.

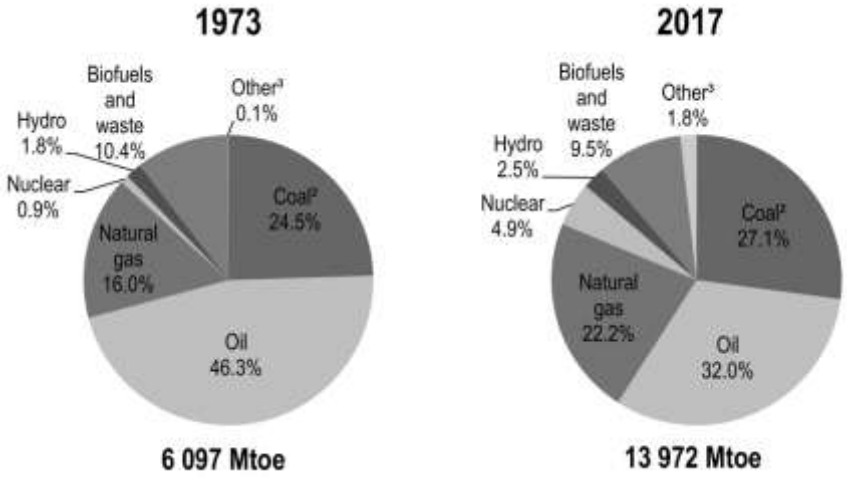
04. Some effects of the trend of basal conditions

We shall briefly discuss here, some other developments that could occur under the condition of market share distribution (previous table) in the industry.

04-01. Increase the total supply, and diversify replacement products:

Globalization has not only generated a tendency towards increasing integration and interdependence between economies, But it also generated another tendency that is almost counter to the first trend, It is the increase in competition between these economies, which is reflected in the global energy organizations, It is the intensification of competition between these economies, which is reflected in the global energy organizations. As this competition created a quantitative demand for energy, in addition to other factors, it increased the diversity of other energy products (electrical, nuclear, solar,..), meaning there is an additional offer, see the figure below.

Figure 02: World[1] total primary energy supply, Between the two years: 1973-2017, (TPES) by source



[1]. World includes international aviation and international marine bunkers.
[2]. In these graphs, peat and oil shale are aggregated with coal.
[3]. Includes geothermal, solar, wind, tide/wave/ocean, heat and other sources.
Mtoe: Million tonnes of oil equivalent

Source: Key World Energy Statistics 2019, 2019, p.06

We note from the figure that there is a significant increase in the demand (which creates a supply) for energy between 1973-2017, by %229.16, as well as the important dependence on some modern energy materials such as, nuclear, solar, and others.

04-02. USA and the development of other energies

The economics of the multiproduct firm has received much interest in the literature. Panzar and Willig [1981] & Baumol et al. [1982] proposed the concept of economies of scope, measuring the benefits (in terms of cost reduction) for a firm to produce more than one output. This scheme has stimulated the economic analysis of multiproduct industries (Jean-Paul Chavas, & al , 2010, p.229), The definition can be expressed by the following equation:

$CT(X_1, X_2) < C(X_1, 0) + C(0, X_2)$,Where: C the total cost function, X_1, X_2 the two products produced.

We notice from the previous table that the United States of America leads the production of petroleum and some other energy materials, with a market share of 18.99% and an industrial power (greater than the market share) of 38.27%, and this is a result of its technological superiority in the production and modern energy industry.

04-03. The tendency towards vertical integration

Vertical integration may arise from technological economies of integration. In particular, less of the other intermediate inputs may be required in order to obtain the same output in the downstream process when the firm has integrated one of the upstream processes. A typical example is the energy savings from not having to reheat steel in the production of steel sheet. Even though the down stream production process has a well-defined production frontier given a set of intermediate inputs purchased through contracts or markets. (Martin K. Perry, 2007, p.187)

From the previous table, the market shares of the three countries leading the production of petroleum and some other liquid materials were: 18.99%, 14.05%, 13.86%, as for the country of China it was: 5.61 %, so the squares of shares are: 3.6%, 1.97%, 1.92%, 0.31%, so the concentration of the first four countries is: (HHI = 7.8%). Now suppose that the first three countries with the most production are fully integrated (merger), so the industry concentration is:

$([18.99\%+14.05\%+13.86\%]^2 + [5.61\%]^2)$, it is: (HHI = 22.31%), and thus integration increased the degree of concentration by 14.51%.

Some mergers that have occurred in the hydrocarbon industry: (wikipedia, Seven Sisters (oil companies))

a- Anglo-Iranian Oil Company (originally Anglo-Persian; now BP);

b- Standard Oil Company of California (SoCal, later Chevron);

c- Gulf Oil (now merged into Chevron);

d- Texaco (now merged into Chevron);

e- Standard Oil Company of New Jersey (Esso, later Exxon, now part of ExxonMobil);

f- Standard Oil Company of New York (Socony, later Mobil, now part of ExxonMobil).

The question posed, why has this industry witnessed an acceleration towards heading to vertical integrations (especially)? The answer is simple, due to the change of the basic conditions of the industry, we will mention some of them: (Kaouthar Lajili & al, 2007, p.338-351)

a-Significant increase in demand (volume) and uncertainty, which makes the contractor more risky (under conditions of asset privacy);

b- A high level of asset specificity (human, location, or physical capital and dedicated capital, temporal and spatial convergence);

c- High frequency of transactions (increased costs);

d- A small number of potential business partners;

e- Low uncertainty about timing of asset privacy obsolescence;

d- Increased complexity, as the industry demands high technology.

05. Non-price competition in the Algerian hydrocarbon industry

Here we take a look at the potential competition in the Algerian hydrocarbon industry, given the available and potential baseline conditions.

05-01. Non-price competition

There are inherent risks when used sonatrach company (The hydrocarbon monopoly in Algeria) Price as a means of promoting Hydrocarbons sales, this is because of the global industry that devolves into an oligopoly structure -Because lowering prices could lead to a price war- (With an almost homogeneous product). In an oligopoly with a homogeneous product, in which all the hydrocarbon industry companies focus on non-price competition forms as a policy of differentiating between international hydrocarbons companies, in addition to stimulating the amount of additional hydrocarbons sales. Where sonatrach should take into special consideration:

1- Decision coordination: especially between OPEC companies, and even other countries;

2- Preserving and increasing the market share: especially by using the quality advantage of hydrocarbons, approaching European markets;

3- Other periodic efforts: such as promoting the brand and quality of service.

Non-price competition—characterised by one observer as "gentlemanly competition"—has resulted in market shares being relatively stable over many years. Nonetheless, it is said that a successful promotion can lead to a market share gain of 1-2%. The big gainer it was Shell, which has increased its share by about 3.5% since 1996 despite Challenge's entry, while Mobil seems to have been the big loser (down 6.7%). A major factor in Shell's success appears to have been the "Fly Buys" loyalty scheme, in which it is a shareholder and participant. (Michael Pickford & al, 2001, p.54-55)

05-02. Differentiation of Algerian petroleum

Algerian oil, "Sahara Blend", is considered one of the best types of oil for the countries that are members of OPEC and this is due to their increasing demand. And almost devoid of sulfur Souffre with only 0.14% (light oil), and the low cost of its exploitation and production and the quality of the produced derivatives, it benefits from additional fees compared to Brent in the North Sea, where it nearly became a world reference oil. See oil prices on the spot market of OPEC countries below:

Table No. 03: Spot prices for various types of oil in OPEC for the period 2011-2015

Unit: dollar/barrel

Countries	Oil Type	2011	2012	2013	2014	2015
Algeria	Saharan Blend	112.92	111.49	109.38	99.68	52.79
Angola	Girassol	111.57	112.21	109.14	99.19	52.96
Ecuador	Oriente	101.03	102.76	97.74	87.31	44.94
Iran	Iran Heavy	106.11	109.06	105.73	96.18	48.80
Iraq	Basrah Light	106.17	107.96	103.60	94.45	47.87
Kuwait	Kuwait Export	105.63	108.93	105.04	95.32	48.13
Libya	Ess Sider	111.90	111.86	108.51	98.51	51.38
Nigeria	Bonny Light	114.15	113.66	111.36	100.85	52.95
Qatar	Marine	106.53	109.26	105.32	96.39	50.71
Saudi Arabia	Arab Light	107.82	110.22	106.53	97.18	49.85
Arab Emirates	Murban	109.77	111.76	108.21	99.45	53.87
Venezuela	Merey	97.94	100.06	96.66	86.88	41.11
OPEC	ORB	107.46	109.45	109.38	96.29	49.49

Source: OPEC: Annual Statistical Bulletin 2016, p.86.

If we track the spot prices of the various oil fields of OPEC countries for the year 2015 only, and we assumed that the difference in prices is mainly due to the quality of the oil (we neglected the transportation costs), this we can accurately track the quality of Algerian oil from the "Saharan Blend" type compared with other types of oil, (Statistically, assuming the quality of Algerian oil is the basis) See the explanatory table below.

Table No. 04: OPEC countries' oil quality for Algeria's "Saharan Blend" oil, in 2015

	Algeria	Angola	Ecuador	Iran	Iraq	Kuwait
Oil Type	Saharan Blend	Girassol	Oriente	Iran Heavy	Basrah Light	Kuwait Export
Quality ratio	%100	%100.32	%85.12	%92.44	%90.68	%91.17
	Libya	Nigeria	Qatar	Saudi Arabia	Arab Emirates	Venezuela
Oil Type	Ess Sider	Bonny Light	Marine	Arab Light	Murban	Merey
Quality ratio	%97.32	%100.30	%96.05	%94.43	%102.04	%77.87

Source: Prepared by the researcher based on the data of the previous table.

We notice from the above table (for the year 2015) that the Algerian oil "Saharan Blend" ranks first among the finest types of petroleum in OPEC. If we divide these types into three (03) basic sections, It (Algerian oil) comes in the first row alongside the oil of Angola, "Girassol," Nigeria, "Bonny Light," and the United Arab Emirates "Murban," as for the second row, it comes from Libya's "Ess Sider" oil, Qatar's "Marine" oil, Saudi "Arab Light", Iran "Heavy", and Iraq "Basrah Light", while the third and final row comes from "Oriente" oil, and Venezuela's "Merey" oil. ".

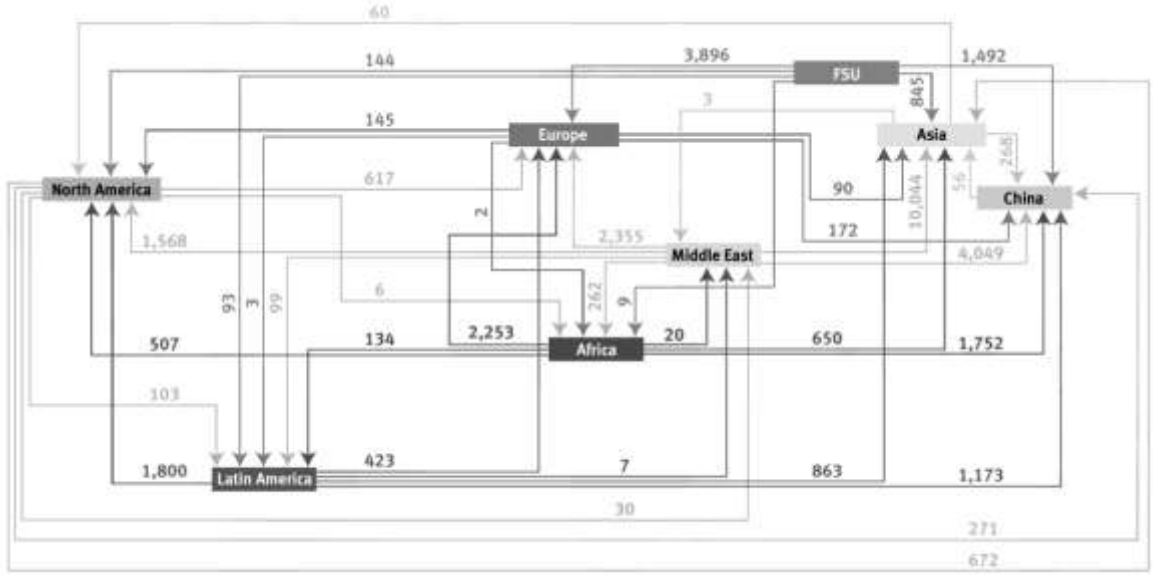
05-03. The Competitive of Algeria's hydrocarbons through daily oil flows

Organization of OPEC years of foundation until the year 1970 since, Its affiliated oil organizations almost completely controlled oil prices and imposed their prices on the producers. Except after this period, semi-alternative products appeared, and other economic factors changed the shape of the prevailing competitive strategy by moving towards non-price aspects.

Vickrey (1964) can be credited with developing several important themes of spatial competition. He formulated the circle model, finding overentry at the equilibrium, and noting that there may be multiple equilibria under localized competition because a new entrant must fit in a niche between existing firms. An entrant's expected market space is substantially smaller than an incumbent's. This effect is exacerbated because entrants rationally expect incumbent firms will react to new entry (in a new Bertrand-Nash price equilibrium) by cutting prices. (Simon P. Anderson, 2005, p.06). Before starting a simple analysis of the Algerian oil competitiveness, we extend a map related to oil flows around the world:

Figure 03: Quantities and trend of daily oil export flows between different regions of the world in 2018

Unit: 1000 barrels/day



Source: OPEC: Annual Statistical Bulletin 2019, p.62.

From a map of oil flows in 2015, with a unit measuring 1,000 barrels per day, we note the following (considering Algeria restricted in the continent of Africa):

1- The outputs of Africa to Europe 2253, of which its inputs are: 2, it will lead to outputs: 2251+

2- The outputs of Africa to North America are 507 inputs, of which: 6, they refer to the outputs: 501+

3- Africa's outputs to China, 1752, its inputs, of which: 0, translate into outputs: 1752+

4- The outputs of Africa to Asia (excluding China and the Middle East countries) 650 of which: 0, leads to outputs: 650+

5- The outputs of Africa to Latin America 134, its inputs are: 0, and they refer to the outputs: 134+

From which the flows of Africa (including Algeria sonatrach) are generally very positive, although Algeria has regional competitors like Nigeria, Angola.

In contrast, we have accurate statistics of Algerian oil flows towards some of the main regions spread across the world:

Table No. 05: Daily flows of Algerian crude oil to some destinations, between 2014-2018

Unit: 1000 barrels/day

	Destination	2014	2015	2016	2017	2018
Algeria		582.5	605.4	541.1	569.7	532.2
	Europe	246.3	243.3	220.5	255.8	244.7
	North America	114.8	111.9	108.5	117.1	95.6
	Asia and Pacific	90.4	114.0	52.9	68.7	91.2
	Latin America	69.7	65.7	73.5	75.2	51.7
	Africa	60.7	67.6	63.2	48.0	47.9
	Middle East	0.6	2.9	22.5	4.9	1.1

Source: OPEC: Annual Statistical Bulletin 2019, p.58.

From the previous figure and table, we infer on the map the amount of African oil (Algeria, Nigeria, Angola,...) the direction of six (06) regions in the world:

1- Algeria's strategic location geographically, as well as its location in terms of approaching the markets.

2- The geographical distance from the three most important (03) sites of most production and export: the United States, Russia, and the Gulf countries.

With a more in-depth analysis, we do a simple analysis of the existing and potential competitiveness of Algeria's hydrocarbons starting from 2018, see the following table. Then we will give some comments.

1- Governmental policies: although it is the most important factor (especially after 1970) controlling the international hydrocarbon industry, this element kept it constant at the level of impact: Politique =1;

2- The rate of oil flows/day: there is a difference between the flow rates towards the six regions (06) in the world, but there is a strong flow of Algerian oil between (03) regions: Europe 45.98%, North America 17.96%, Asia and Pacific 17.14%;

3- Estimated distance / km: The smaller the distance between Algeria and one of the directions for export, the more Algeria has an advantage in spatial competition, if we notice that the most important market for Algeria is: Europe in the first place (1000 km);

Table No. 06: Existing and potential competitive characteristics of Algeria's hydrocarbons 2018

Unit: 1000 barrels/day

	Europe	North America	Asia and Pacific	Latin America	Africa	Middle East
Oil flow Algeria	244.7	95.6	91.2	51.7	47.9	1.1
Flow rate/day	%45.98	%17.96	%17.14	%9.72	%9.00	%0.20
Estimated distance/km	1000	8500	11000	7500	1500	6000
Potential export features/ Destination	Proximity to markets +Quality	Quality	Quality	Quality	Proximity to markets	Quality
Competitors to Algeria	Middle East+ Russia+…	USA+ Venezuela + Saudi Arabia+..	Russia+ China+ Canada+ USA+…	Russia+ China+ Canada+ USA+…	Nigeria+ Angola+ Middle East+…	USA+ China+ Middle East+…
Competitive strategy/ Potentiel	Price	Price + Differen-tiation	Differen-tiation	Differen-tiation	Price	Differen -tiation

Source: Prepared by the researcher based on the data of the previous table and other data.

3- Estimated distance / km: The smaller the distance between Algeria and one of the directions for export, the more Algeria has an advantage in spatial competition, if we notice that the most important market for Algeria is: Europe in the first place (1000 km);

4- Potential export advantages/destination: these advantages are controlled by: the estimated distance (Algeria towards the exporting destination), existing competitors, government policies, and others;

5- Existing competing countries for Algeria / region: We mention that Algeria competes with:

A-Countries outside the OPEC organization in the first degree (especially: the United States, Russia), and OPEC countries in the second degree (especially: Saudi Arabia);

B- There is a variation in the form of the competitive strategy, as it may be different according to the direction of export (such as strategic groups), for example: the direction: Algeria-Europe The competitive strategy that must be adopted is the price strategy (the strategy of controlling through costs).

06. Conclusion

In such sectoral analyzes, we use modern industrial organization, where it focuses on the dynamics of the industry and its mode of operation, It depends on the analysis using the well-known model: SCP (structure-conduct-performance), In the sense that it focuses on two main axes, namely the organization and the industry (the sector), Where the organization takes through its different behaviors in the industry according to the different types of industry structure on the one hand, and the reflection of all this on the organization's performance and development in the industry. In this research, some results were monitored, the following hypotheses tested, and the following suggestions were tested.

06-01. Results: Among the most important results:

- In the global hydrocarbon industry (and other liquids), there are three (03) highly competitive countries (2019): the United States (power: 18.99%), followed by a convergence between Saudi Arabia (power: 14.05%) and Russia (power: 13.86%).

- Although Algeria ranks 18th in 2019, with the production of hydrocarbons and some other liquids, with a market share of approximately 1.99%, it has no more than 0.42% of market control; This is mainly due to the market power of countries that exceed their market share: > 1.99%.

- The tendency towards vertical integration in the hydrocarbon industry was the result of: a large increase in demand, an increase in the level of asset specificity, the frequency of transactions, an increase in complexity,..

- The low percentage of concentration index (HHI) in relation to the market share of Algeria (1.99%> 0.42%) makes it lose many advantages, among which is the contribution to building the basic conditions for the industry.

- Algeria's hydrocarbons benefit from some dollars per barrel in addition to its declared global price, and this is the result of:

First: Approaching the most important markets (Europe),

Second: Transportation of hydrocarbons internationally by pipelines,

Third: The quality of oil.

- Algeria is geographically located in the most strategic region in the world (formerly called the region / middle land), due to the differentiation of import / export areas, Algeria can benefit from following the appropriate strategy for each region in the world. However, these strategies are very limited, because there are great pressure factors, including: the tremendous technological development (leading to: cost reduction, diversification of energy sources, absorption of demand quantities,..), economic and political power.

06-02. Test hypotheses for research: We will discuss briefly the validity or negation of the two hypotheses (02) previously laid, which serve the main question and even the sub-questions, in the following:

1- The first hypothesis: which came with the formula: [It is not possible to comprehend all the factors that make up the basic conditions for the hydrocarbon industry, and this is due to the inability to set limits for this industry]: Where it is considered a "valid hypothesis", as evidenced by, The boundaries of the hydrocarbons industry has expanded at a continuous speed, from the oil and gas industry to the energy industry. It was difficult to define limits for the industry and this is because of its instability, so there is also the instability in its basic conditions.

2-The second hypothesis: it came with the formula: [The weak effectiveness of the competitive strategy for Algeria's hydrocarbons is due to the unstable industry movement]: It is considered a "valid hypothesis], as well, evidenced by, So there is instability in the basic conditions of the hydrocarbons industry, rapid changes may appear in the (structure-conduct-performance), This affects the weakness of the competitive strategy (conduct) of Algerian hydrocarbons, It may have a certain level of

power through applications of experimental game theories (action/reaction) that experience short-term effectiveness.

06-03. Suggestions: We include some suggestions addressed to the Algerian government:

1- Diversification and intensification of various energy products, such as solar, nuclear, and electrical energy;

2- Cooperation in various forms between all local and foreign industries;

3- Joining economic and political blocs and concluding cooperation agreements.

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