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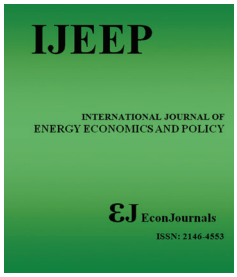
Provided in Cooperation with:
International Journal of Energy Economics and Policy (IJEEP)

Reference: Osintseva, Marina A. (2021). Differentiation of oil production break-even level among world oil companies. In: International Journal of Energy Economics and Policy 11 (4), S. 249 - 256.
https://www.econjournals.com/index.php/ijeep/article/download/11260/5918.
doi:10.32479/ijeep.11260.



International Journal of Energy Economics and Policy

ISSN: 2146-4553

available at http: www.econjournals.com

International Journal of Energy Economics and Policy, 2021, 11(4), 249-256.

Differentiation of Oil Production Break-even Level among World Oil Companies

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Received: 03 February 2021 **Accepted:** 02 May 2021 **DOI:** https://doi.org/10.32479/ijeep.11260

ABSTRACT

The issue of modern development in the oil industry has become extremely urgent. In 2020, for the 1st time in history, the exchange price of oil crossed the negative threshold, radically changing the understanding of economic processes in the industry. This paper examines the consequences of this stressful situation in the context of the financial stability of global oil companies in conjunction with ensuring the budgetary balance for resource-exporting countries. In the course of the study, the factors that influence the pricing in the oil market have been clarified. The authors have calculated break-even oil prices for the world's largest oil companies Saudi Aramco (SAU), ExxonMobil (USA), British Petroleum (GBR), and Rosneft (RUS). An analysis of the fiscal break-even of oil prices has shown that Russia, compared to the Gulf countries, has a greater margin of budgetary stability, since the break-even price of oil is several times lower than in Iran, Iraq, and Saudi Arabia. Based on the assessment of the operating leverage of the oil companies, a limit was set for the decline in profits as a result of the drop in oil production. The calculation of the target price for large global companies has shown that Rosneft has the highest price level due to high variable costs, and the target price for Saudi Aramco is approximately at the same level. ExxonMobil and BP's target price levels are lower. The results obtained confirm the need to continue searching for solutions to optimize costs to lower the breakeven level of oil production.

Keywords: Oil, Break-even Price, Prime Cost, Pricing Factors, Budget Balance, Oil Market, Price Shocks
JEL Classifications: L21, G31, Q49

1. INTRODUCTION

Oil will remain the main source of energy for the foreseeable future, necessitating a balance between global supply and demand. The world oil market is heterogeneous and has its own regional characteristics (Khudoynatov, 2014). The main oil consumers, the countries of the Asia-Pacific region and North America, are the most vulnerable to economic shocks (Raputsoane, 2019; Rau, 2017). Crisis events in these markets caused sharp fluctuations in oil prices. This volatility does not go unnoticed by oil companies. When oil prices and profitability of companies rise, the oil industry expands into new territories (Kleinberg, 2014). In such conditions, economic assessments come to the fore, since it becomes important to allocate limited investments and capital as efficiently as possible. Funding for oil production projects is based on price expectations, which are closely related to the break-even point. In this regard, it seems relevant to study the impact of price fluctuations on the operational financial stability of oil companies.

In most countries, the current break-even level of oil prices tends to grow and in some cases approach or exceed the spot price (Caceres and Medina, 2012). It should be borne in mind that domestic prices in the markets of producing countries differ significantly from the world exchange prices. Lost incomes depending on the break-even level in this case, as a rule, are covered by export supplies. However, the sharp drop in oil prices in late March – early April 2020 caused a serious crisis in a number of countries focused on the exports of natural resources. The category of dependent countries should include Russia, Brazil, Saudi Arabia, Argentina, Qatar, Nigeria, Venezuela, and Kuwait (Rau, 2017).

The coronavirus epidemic and the forced measures to combat it are having an increasingly negative effect on demand in the global oil market. In the second half of March 2020, oil prices more than halved, updating their minimum values since 2002-2003, and then crossed the line of negative values for the 1st time in history. In this situation, OPEC+ participants announced plans to cut production. In this context, one of the popular behavior patterns of oil-exporting countries suggests that oil producers tend to keep production levels unchanged as long as prices are sufficient to meet their budget obligations. This means that the production policy of an oil-exporting country could undergo drastic and unexpected changes as oil prices cross the financial break-even level (Clayton and Levi, 2015).

Episodes of spikes and falls in commodity prices lead to volatility in the budget revenues of exporting countries. However, for countries where overall deficits cannot be easily financed, a break-even oil price can play a very important role. It is important to emphasize here that if the short- and medium-term vectors of development of the world oil market can still be outlined from the standpoint of the interaction of the main factors, then the long-term prospects cannot be assessed outside the context of the ongoing global energy transformation (Gromov, 2018); its essence is revealed in structural changes, where the share of traditional types of energy is gradually decreasing in favor of the electric power industry (Kuzmin et al., 2019; Miciuła and Stępień, 2019; Primova, 2015). The transformation processes are clearly projected in the oil price.

It is these reasons that predetermined the goal of this study, which is to assess the level of break-even oil production among the global oil companies. To do this, the authors will give a brief description of the world oil market, analyze the dynamics of pricing, and assess the impact of changes in oil prices on the financial condition of the largest oil-producing companies.

2. LITERATURE REVIEW

Various criteria are used when comparing the economic attractiveness of oil projects. Kleinberg et al. (2018) clarify the objectives of several benchmarks and the factors influencing them. The main factors are climatic conditions, oil production depth, infrastructure development, availability of advanced oil production technologies, environmental requirements, and remoteness from key consumers. Recent trends in the context of value-forming factors in the world oil market are studied in Mukaydekh and Mukaydekh (2017). They note changeable dominance in the relationship between fundamental and non-fundamental factors. At the same time, the break-even point is considered as the most complete assessment of the economic viability of the project (Brealey et al., 2009).

Kleinberg et al. (2018) note fiscal (financial) break-even and external break-even points. The break-even costs of a full cycle and all of its components are essentially technical and economic in nature. A financial break-even point has a completely different nature – it is the price of oil needed to finance spending, for those countries that are heavily dependent on oil exports to finance the state budget (Clayton and Levi, 2015). Where the government is a large shareholder in oil companies, as is often the case in highly resource-dependent countries, the financial break-even point depends on corporate dividends and similar payments (Kleinberg et al., 2018). Tax policies in different countries also have a significant impact on the final cost of oil production. Direct and indirect taxes can include up to 2/3 of the cost of oil (Nurtdinova, 2010; Volkonskii and Kuzovkin, 2019; Weijermars, 2015). External break-even implies additional aspects of production activities, such as social costs, environmental impact, etc. (Greenstone and Looney, 2012; Health Effects Institute, 2015; Jackson et al., 2014; United States Environmental Protection Agency, 2016).

In recent publications, the price of break-even oil production is increasingly discussed in relation to shale oil, or rather, in the context of the implementation effectiveness of such projects. So, Garanina (2014) cites some data on the break-even price of shale oil in the United States and Canada and claims that production is high-risk and low-profit. The active development of shale oil appears to play a large role in securing long-term prices. Grushevenko and Kulagina (2019) assessed the competitiveness of unconventional oils and made a forecast of their further potential production. In their opinion, a break-even oil price is a price at which the net present value of a given oil production project is positive and the internal rate of return is at an acceptable level for the operator (usually in the range from 10% to 20%). However, the current price dynamics do not make it possible to fully achieve the desired level of profitability.

Isain (2015) examines modern forms of oil pricing, including the nature of the influence of various factors: demand, supply, exchange rates, and geopolitical risks. According to common practice, in the long run, the oil price shock does not lead to an increase in the exchange rate, but in the short run, such effects do appear (Ydyrys et al., 2018). The outlook for the future development of the global oil market is also associated with uncertainty about climate and energy policies, changing demographics, global economic growth, and shifting economic power between regions, as well as technological progress (Gromov, 2018).

An analysis of production processes has revealed a strong relationship between oil price and marginal costs (Toews and Naumov, 2015). However, oil wells that are expected to exhibit higher marginal costs can be tapped if the oil price and the profitability of the well are high enough. All other things being equal, an increase in drilling costs shifts the averaging curve upward so that the break-even point of the well can only be reached at a higher oil price. The search for cost optimization solutions has led to the fact that companies in the oil industry are no longer vertically integrated. Kellogg (2011) explains this based on the calculation of capital costs for drilling wells and operating costs. Rig outsourcing became the primary optimization option. This reduces the overall requirement to maintain aggregate rig capacity and creates savings in transportation and mobilization costs (Adelman, 1993; IHS, 2014).

From the point of view of microeconomics, oil prices should not fall below the marginal costs of its production (Kolpakov,

2014). In the context of globalization, the world oil market is presented as a single interconnected object, as a result of which the marginal costs of oil production should be considered not in a specific country, but in the world as a whole. Kolpakov (2014) believes that the cost of oil production is likely to rise. This is due to the depletion of cheap reserves, an increase in exploration costs, and the need to introduce into development new production regions characterized by more difficult conditions for the development of the resource potential. In modern conditions, when the price of oil exceeds the marginal cost of its production, the assumption that the price significantly reflects the level of operating costs does not find convincing arguments in its support. The manifested cross-correlation of these values may be due to a reverse causality – oil prices affect the costs level of oil companies. Such influence can be exerted not so much directly as indirectly. Kolpakov (2014) draws attention to the fact that in the world oil market there are some examples of both direct and reverse relationships between the level of oil prices and the cost of its production. This requires additional study of the causes of such anomalies.

Despite the presence of a wide range of studies in the subject area, there is a lack of publications devoted to comparative analysis and monitoring of the oil production break-even level among the main global players. This circumstance is key in identifying the comparative competitive advantages of oil companies in the market. This research is intended to provide greater clarity on this issue.

3. METHOD

The study was carried out in two stages. At the first stage, the structure of the cost of oil production for the main oil-producing countries was analyzed based on statistical data (UK, Brazil, Nigeria, Venezuela, Canada, USA, Norway, Indonesia, Russia, Iraq, Saudi Arabia, and Iran). At the second stage, the break-even price of oil production by the world's largest oil companies (including Saudi Aramco, Exxon Mobil, British Petroleum, and Rosneft) was estimated.

Analytical indicators of the study include the calculation of the break-even point, operating leverage, and target price.

To calculate the break-even oil price ($P_{e.v}$), the following equation was used:

$$P_{e.v} = VC + \frac{FC}{E(Q)} \quad (1)$$

where VC is the cost per unit of production; FC – fixed costs; E (Q) – volume.

The methodology for calculating the operating leverage is as follows:

$$OL = \frac{E(Q)\times(P-VC)}{P\times E(Q)-VC\times E(Q)-FC} \quad (2)$$

$$OL = \frac{E(Q)\times(P-VC)}{EP}$$

$$Ol = \frac{GM}{EP} = \frac{EP+FC}{EP} = 1+\frac{FC}{EP}$$

where *OL* – operating leverage, *P* – price, *EP* – profit, *GM* – gross margin.

The target price (or sufficient price), in addition to fixed and variable production costs, takes into account the restrictions on profit in terms of the normal level of return-on-investment capital and sales.

As a result, the formula for identifying the target price will look like this:

$$TP = P_{e.v} + \frac{\%R\times Cap}{E(Q)} \quad (3)$$

where %*R* – the sufficient or normal level of return on capital (return on equity); *Cap* – investment capital; *TP* – the target price.

The empirical base of the study was made up of static data and reports of oil companies.

4. RESULTS AND DISCUSSION

The main supplier of oil to the world market regionally remains the Middle East, headed by Saudi Arabia, and in the organizational sense – OPEC, which includes most of the oil-producing countries of the Middle East region. The three leading countries in oil production include Russia, Saudi Arabia, and the United States. Each of these countries experienced a significant reduction in production at different times, but since 2014, they have been producing oil within their production capabilities, adjusting to the needs of the economy. In 2019, the rate of global economic growth declined more seriously than before – from 3.6% to 2.9% (World Bank, 2020). This was the lowest result since the 2008-2009 crisis. The pandemic and the accompanying recession in the first half of 2020 have driven the global economy into a difficult period. At the end of 2019, a decrease in GDP growth rates was recorded in almost all major economies and macro regions of the world. Trade conflicts were one of the reasons for the economic slowdown. Their settlement has come into question due to new political tensions in the context of the pandemic.

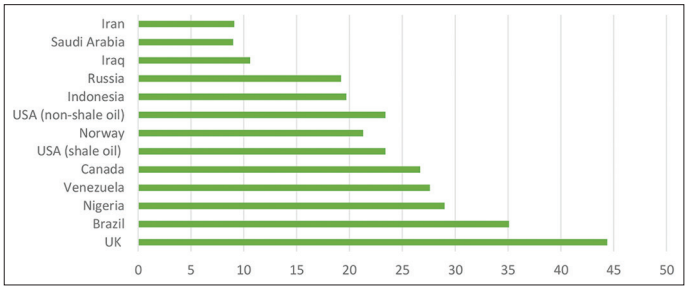
The impact of the COVID-19 outbreak and its adverse impact on the energy market for transport and industry have become the main reasons for a downward revision of oil consumption forecasts. The achieved production level in 2019 will be strongly corrected in view of the new economic crisis that has begun. The total global oil demand in 2020 is now expected to reach 99.73 million barrels per day (OPEC, 2020). The dynamics of oil production and consumption in the world in 2019 are presented in Table 1.

In 2019, there was a cumulative oil surplus, which was reflected in the behavior of players in the market. According to the International Energy Agency (IEA), oil supply in February 2020 versus January 2020 decreased by 0.6 million barrels per day. The main decline in oil production fell on Libya (–0.7 million barrels per day) and Brazil (–0.2 million barrels per day). Commercial stocks of oil and petroleum products in the OECD countries in January 2020 increased by 1.6%. Due to the spread of the coronavirus, the IEA lowered its forecast for oil demand in 2020 in March, expecting that it will decrease for the 1st time since 2009 (by 90 thousand barrels per day to the level of 2019). OPEC also lowered its forecast for growth in oil demand in 2020 from 1 million barrels per day to 60 thousand barrels per day (Analytical Center under the Government of the Russian Federation, 2020).

The process of oil production is complicated by many factors, making the cost of oil production varying significantly between countries and regions. A comparative review of oil production costs was carried out by Rystad Energy (Figure 1).

Saudi Arabia is the world leader in terms of the total cost of one barrel of oil – the cost of production, including taxes, administrative and transportation costs, is USD 9/bbl. Countries such as Iran and Iraq are also characterized by the lowest total cost of oil production, the cost being USD 9.1/bbl. and USD 10.6// bbl., respectively. At the same time, Venezuela, with the largest oil deposits, has a total cost of USD 27.6/bbl., which is explained by the fact that the overwhelming part of oil deposits is represented by grades of extra-heavy oil, being more costly.

Figure 1: Cost of oil production, USD/bbl



Source: Rystad Energy, 2016

Table 1: Dynamics of oil production and consumption in the world in 2019 (million bbl./day)

Countries	2019			
	1Q	2Q	3Q	4Q
Production				
OPEC	36.2	35.6	35.0	35.3
Saudi Arabia	12.1	11.8	11.5	12.0
USA	16.6	17.1	17.2	17.9
Russia	11.7	11.5	11.6	11.6
Other countries	23.5	24.1	24.9	24.8
World	100.1	100.1	100.2	101.6
Consumption				
China	13.0	13.7	13.8	14.1
Europe (OECD)	13.9	14.1	14.6	14.0
USA	20.6	20.7	21.0	20.9
Other countries	51.6	50.7	51.3	51.9
World	99.1	99.2	100.7	100.9
Deficiency (–)/surplus (+)				
World	+1	+0.9	-0.5	+0.7

Source: Analytical Center under the Government of the Russian Federation, 2020

The highest level of production oil costs is observed in the UK – USD 17.4/bbl., the lowest is in Iraq, USD 1.9/bbl. (Table 2).

Excluding taxes, the cost of oil production in Russia and other large producers is USD 10-25 versus USD 40-50 for shale oil producers. Despite the success in increasing oil production, most shale oil companies are deliberately unprofitable.

The fiscal balance is affected by oil prices (an example of the variable influence of oil prices for the Russian federal budget is given in Annex). Russia's 2020 budget is balanced at USD 45 per barrel for Brent (USD 42 per barrel for Urals), with a budget surplus of 0.4% of GDP. At a price of USD 55/bbl., the surplus will amount to 2.3% of GDP.

According to forecasts for 2020, the fiscal break-even of the oil price for Saudi Arabia will be USD 78.3 per barrel. The forecast of the external break-even price for oil in Saudi Arabia for the same period of time will be USD 58.1/bbl (Statista, 2020b). For Russia, the fiscal break-even price for covering government expenditures is USD 42/bbl., in Iraq – USD 62.5/bbl., in Saudi Arabia – USD 86.5/bbl., in Iran – USD 155.6/bbl. As a rule, Russia and the Middle East countries of the Persian Gulf can withstand lower oil prices for some time due to accumulated savings, opportunities for credit borrowing, and policies in regulating exchange rates. The current oil prices are clearly not sufficiently stable, and their level creates certain threats to budget stability. High external break-even rates indicate this danger (Energy Intelligence, 2020). A forecast of external breakeven oil prices for 2020-2021 is presented in Table 3.

The oil price may remain under pressure in the short term, both due to macroeconomic conditions and due to competition, as large players will seek to use this situation to increase their market share, crowding out some players, primarily shale companies (Yudin et al., 2020). Many countries may be interested in relatively cheap oil to cut production stimulus spending and accelerate economic recovery.

Table 2: Structure of oil production costs

Country	Costs, USD/bbl.				Total
	Capital	Administration/ transport	Production	Gross taxes	
UK	22.7	4.3	17.4	0	44.4
Brazil	16.1	2.8	9.5	6.7	35.1
Nigeria	13.1	3	8.8	4.1	29
Venezuela	6.7	2.5	7.9	10.5	27.6
Canada	9.7	2.9	11.6	2.5	26.7
USA (shale oil)	7.6	3.5	5.9	6.4	23.4
Norway	13.8	3.1	4.4	0	21.3
USA (non-shale oil)	7.6	3.5	5.9	6.4	23.4
Indonesia	7.7	3.6	6.9	1.5	19.7
Russia	5.1	2.7	3	8.4	19.2
Iraq	5	2.5	2.2	0.9	10.6
Saudi Arabia	3.5	2.5	3	0	9
Iran	4.5	2.7	1.9	0	9.1

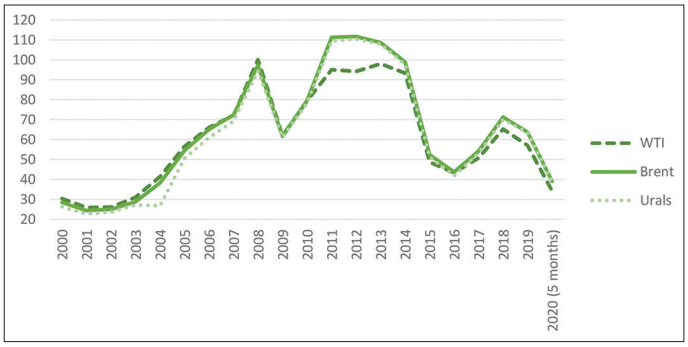
Source: Rystad Energy, 2016

Common brands of oil in the market are WTI, Brent, Urals, etc. The peak of oil price growth in modern history was in 2011-2014; since 2014, there has been a progressive decline in oil prices. The demand for oil brands also changed – the cost of WTI oil until 2010 was higher than the cost of Urals and Brent oil, and from 2020 – the opposite. In 2020, due to restrictions caused by COVID-19, oil prices during exchange trading fell to negative values for the 1st time, forcing a radical revision of the oil pricing process. The dynamics of the average annual price of oil of the indicated brands are shown in Figure 2.

Consider the indicators of the break-even oil price for the global oil companies (Saudi Aramco, British Petroleum, ExxonMobil, and Rosneft).

Saudi Aramco's revenue in 2019 decreased by 14.32% compared to 2018 and amounted to USD 329.8 billion. Saudi Aramco's operating costs decreased by 2.34% and amounted to USD 146.3 billion. A decrease in revenue was caused by a decrease in the average selling price of crude oil from USD 70/bbl. to USD 64.6/bbl. The discount of Arab Light oil price to Brent oil price is 19.6% (OilPrice, 2020). Crude oil sales were down 7.21% to 5,105.3 million barrels. The break-even selling price of crude oil in 2019 increased from USD 49.9/bbl. up to USD 52.9/bbl. (Table 4).

Figure 2: Dynamics of the average annual price of WTI, Brent, and Urals, USD/bbl



Source: Interfax, 2020

Table 3: Forecast of external break-even oil prices

Countries	External break-even oil price, USD/bbl.	
	2020	2021
Algeria	95.5	109.5
Angola	64.7	61.2
Equatorial Guinea	76.2	72.2
Gabonese Republic	66.8	63.8
Iran	83.3	83.0
Iraq	59.6	57.0
Kazakhstan	63.5	64.7
Kuwait	52.9	48.8
Nigeria	68.1	63.4
Oman	84.4	84.6
Qatar	55.2	53.8
Russia	42.0	38.7
Saudi Arabia	62.7	61.7
UAE	37.1	36.1
Venezuela	26.7	27.9
Average, USD/bbl.	62.6	61.8

Source: Energy Intelligence, 2020

In order to identify the effect of Saudi Aramco's operating leverage in 2019, the profit margin was calculated. The company's gross margin in 2018 was USD 260.8 billion, in 2019 – USD 205.6 billion. The operating (gross) profit decreased from USD 238.8 billion in 2018 to USD 179.9 billion in 2019. Thus, 1% of the increase in sales accounted for an increase in profits of 0.85%.

ExxonMobil's revenue from sales in 2019 decreased by 8.49% to USD 255.6 billion. The average crude oil sales price decreased from USD 52.7/bbl. to USD 48.6/bbl. The discount of the price of WTI crude oil to the price of Brent crude oil is 7.9% (OilPrice, 2020). Variable unit costs decreased by 5.2% to USD 33.1/bbl. The growth rate of operating costs exceeded the growth rate of revenue. The break-even selling price of crude oil in 2019 decreased from USD 35.1/bbl. to USD 33.3/bbl. (Table 5).

In 2018, the gross margin was USD 86.4 billion, in 2019 – USD 75 billion. The operating profit decreased over this period from USD 20.8 billion to USD 11.6 billion, respectively. Thus, 1% of ExxonMobil's revenue growth accounted for 0.29% of profit growth.

British Petroleum's revenues in 2019 decreased by 6.8% to USD 278.4 billion, operating costs decreased by 4.65% to USD 270.7 billion. The average crude oil sale price changed over the period from USD 43.5/bbl. to USD 38.0/bbl. The break-even selling price of crude oil in 2019 decreased from USD 37.0/bbl. to USD 30.9/bbl. (Table 6).

Table 4: The main cost indicators of the oil company Saudi Aramco

Parameter	2018	2019
Variable costs, USD billion	124.1	124.2
Fixed costs, USD billion	22.0	25.7
Average selling price of Urals crude oil, USD/bbl.	70	64.6
Crude oil sales, million barrels	5,496	5,105.3
Break-even crude oil selling price, USD/bbl.	49.9	52.9
Target comparable price for Brent, USD/bbl.	44.3	
Operating leverage strength	0.85	

Source: Investing.com, 2020; Saudi Aramco, 2020

Table 5: The main cost indicators of the oil company ExxonMobil

Parameter	2018	2019
Variable costs, USD billion	192.9	180.6
Fixed costs, USD billion	65.6	63.4
Average selling price of Urals crude oil, USD/bbl.	52.7	48.6
Crude oil sales, million barrels	5,512	5,452
Break-even crude oil selling price, USD/bbl.	35.1	33.3
Target comparable price for Brent, USD/bbl.	30.9	
Operating leverage strength	0.29	

Source: ExxonMobil, 2020; Investing.com, 2020; Statista, 2020a

Table 6: The main cost indicators of the oil company British petroleum

Parameter	2018	2019
Variable costs, USD billion	253.7	232.7
Fixed costs, USD billion	30.1	38.0
Average selling price of Urals crude oil, USD/bbl.	43.5	38
Crude oil sales, million barrels	6,866.7	7,563.2
Break-even crude oil selling price, USD/bbl.	37.0	30.9
Target comparable price for Brent, USD/bbl.	30.9	
Operating leverage strength	–0.09	

Source: BP, 2020a; Investing.com, 2020

In 2018, the gross margin was USD 45 billion, in 2019 – USD 45.7 billion. Operating profit increased by 148.3% to USD 37 billion because of the negative effect of operating leverage.

Rosneft's revenue from sales in 2019 increased by 2.05% to USD 134.1 billion. The growth rate of revenue exceeded the growth rate of operating costs. The average crude oil sale price fell from USD 69.8/bbl. to USD 63.4/bbl. The discount of the price of Urals oil to the price of Brent oil is 8.3%. Unit costs rose by 3.8% to USD 54.4/bbl. The break-even selling price of crude oil in 2019 increased from USD 52.7/bbl. up to 54.7 USD/bbl. (Table 7).

The gross margin changed insignificantly – USD 62.5 billion in 2018 against USD 61.1 billion in 2019, while operating profit increased by 17.4% to USD 20.2 billion. A negative value of operating leverage indicates a negative rate of change of EBIT. Rosneft's profit from sales is falling at a faster pace compared to revenue.

Taking into account the fact that the average daily oil production in Saudi Aramco in 2020 will amount to 8.5 million barrels per day (Rambler News Service, 2020); BP – 10.41 thousand barrels (BP, 2020b); ExxonMobil – 6.6 thousand barrels; Rosneft in the context of OPEC arrangements (Prime Business News Agency, 2020) – 565.1 thousand tons or 4,142.9 thousand barrels, the authors calculated the possible average daily loss/profit of the considered oil companies under various options for Brent oil prices (Table 8).

From the data, it follows that the decline in Brent oil prices to –40 USD/bbl. will lead to an average daily loss for Saudi Aramco of USD 789.65 million, for ExxonMobil – USD 483.78 thousand, for BP – USD 738.07 thousand, for Rosneft – USD 392.33 million. The opposite situation, when oil prices will be around USD 40/bbl. will ensure profit only for ExxonMobil and BP in the amount of 44.22 thousand dollars per day and 94.73 thousand dollars per day, respectively. For Saudi Aramco and Rosneft, the oil price level being USD 40/bbl. will not allow making a profit under the current taxation regimes and the oil production technologies applied.

Table 7: The main cost indicators of the oil company Rosneft

Parameter	2018	2019
Variable costs, USD billion	68.9	73.0
Fixed costs, USD billion	45.3	40.9
Average selling price of Urals crude oil, USD/bbl.	69.8	63.4
Crude oil sales, million barrels	1,882.5	2,072.6
Break-even crude oil selling price, USD/bbl.	52.7	54.7
Target comparable price for Brent, USD/bbl.	50.4	
Operating leverage strength	–0.13	

Source: Investing.com, 2020; Rosneft, 2020

Table 8: Average daily loss/profit of oil companies under various options for Brent oil prices (from –40 USD/bbl. to +40 USD/bbl.), thousand USD

Oil price	Company			
	Saudi Aramco	ExxonMobil	British Petroleum	Rosneft
–40	–789,650	–483.78	–738.07	–392,333
–30	–704,650	–417.78	–633.97	–350,904
–20	–619,650	–351.78	–529.87	–309,475
–10	–534,650	–285.78	–425.77	–268,046
0	–449,650	–219.78	–321.67	–226,617
10	–364,650	–153.78	–217.57	–185,188
20	–279,650	–87.78	–113.47	–143,759
30	–194,650	–21.78	–9.37	–102,330
40	–109,650	44.22	94.73	–60,900.6

5. CONCLUSION

The price of oil is one of the most important global financial and economic indicators, and its fall testifies not only to an economic decline, but is *per se* capable of provoking economic crises. The factors affecting oil pricing are varied. However, in any case, the oil price is within certain boundaries of the price corridor, where the break-even level is one of the targets. An analysis of the fiscal break-even of oil prices in the countries of the world's largest oil producers showed that the fiscal break-even price of oil production in Russia to cover government spending is significantly lower than in the Gulf countries (48.8% compared to Iraq, twice as low compared to Saudi Arabia and 3.7 times as low compared to Iran). The calculation of the target price for large global companies has shown that Rosneft (Russia) h the highest price level due to high variable costs; the target price for Saudi Aramco (Saudi Arabia) is approximately at the same level. For ExxonMobil (USA) and BP (UK), the price target levels are lower. For Saudi Aramco and Rosneft, the oil price level being USD 40/bbl. will not allow making a profit under the current taxation regimes and the oil production technologies applied. Thus, Saudi Aramco and Rosneft are less resistant to price declines. Similarly, this conclusion applies to ensuring the financial stability of the budget, since the economies of Russia and Saudi Arabia are dependent on the export of mineral wealth. In this context, it is necessary to continue the search for solutions to optimize costs to reduce the break-even level of oil production.

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ANNEX

Table: Influence of the price factor on the budget balance of Russia

Indicators	Oil price (Urals, USD/bbl.)							
	15	20	25	30	35	40	45	50
Average tax (Mineral extraction tax+export duty), USD/bbl.	0	4.2	8.8	13.3	17.8	22.4	26.9	31.4
Change in taxes (%)			112.0	51.1	33.8	25.3	20.2	16.8
Share of taxes in the price of oil (Urals)			35.3	44.5	51.0	–55.9	59.7	62.8
Oil and gas budget revenues, shock absorbers	16.2	13.8	10.8	8.4	7.2	4.8	3.6	1.1
Additional oil and gas budget revenues, USD billion	–42	–36	–24	–15.6	–3.6	4.8	13.2	22.8
% of GDP	–3.5	–2.7	–1.7	–1.0	–0.2	0.3	0.8	1.4
Budget deficit/surplus as % of GDP, including damping revenues	–8.1	–6.1	–4.4	–2.9	–1.6	–0.5	0.4	1.4

Source: Yudin et al., 2020