

Analysis of PSC gross split implementation in Russian offshore

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Product Sharing Contract with Gross Split scheme come up as an alternative solution for developing a healthy, fair and sustainable international oil and gas cooperation in Russian offshore [1]. In the application, benefits will be optimal for all parties if all legal requirements and business interests are met. Regarding that, the monitoring process on PSC GS implementation is as crucial as the negotiation process in making suitable terms and conditions for both parties. However, the real problem is negotiation participants (representatives of parties) are not fully aware of all PSC elements, which causes long, uncertain, and repetitive discussion or even results in unfair domination of one party over another. This paper shows the design of the tree and expert analysis to help all parties understand PSC elements, sensitivities, and their interactions before entering negotiation process. The methodology used is a theoretical survey (analysis & synthesis) based on world practices and Russian economical, technical, and geological characteristics. The result depicts both analyses are important materials to prepare all parties for the effective decision making process as well as support the establishment of win-win contract details.

Keywords: Production Sharing Contract (PSC), Gross Split (GS), Host-Government (HG), and International Oil Company (IOC).

1. Introduction

Since the date it's created in 2017, PSC with the new scheme started to implement in more than 42 working areas in Indonesia. The main differences of this hybrid of PSC and concession from others (basic ideas) are as follows: split starts from gross revenue; IOC takes 100% responsibility of E&P cost; and HG can increase/decrease IOC's share by assessing variable (every POD) and progressive components (monthly), design of which is based on existing oil and gas fields calibration. Facing difficulties to explore and develop its resources in certain complex field condition, Russia is obviously in need of applying PSC GS to increase its fiscal attractiveness. Because existing contracts don't have necessary functionality for efficient, simple, certain and transparent interaction with IOCs, while the international collaboration is significant due to the absence of sufficient technologies, facilities, human resources and investments [2]. After all, it's not the same PSC GS scheme to offer to implement in different countries, but the analogy of it by maintaining the basic ideas and adjusting the clauses, which are shown in table 1.

Table 1. PSC basic elements (clauses) [3-18]

	National Legislation	Contract Negotiation
Operational Aspects	Government participation; Ownership transfer; Conflict resolution; Insurance	Work commitment; Relinquishment; Commerciality
Revenue or Production Sharing Elements	Royalties; Taxation; Depreciation rates; Investment credit; Domestic Market; Obligation; Ringfencing	Bonus payments; Cost recovery limits; Production sharing

It's undeniable that there are tendencies from both parties to dominate the contract. The negotiation trade-off between HG and IOCs lies in the clauses above. Thus, every party should analytically and statistically

understand how the elements mean to control each bargain position. This is necessary to establish win-win solution contracts.

2. Tree analysis

Based on all PSC basic elements, decision tree analysis is presented in Fig. 1. The map shows the details of basic elements and possible options of their implementation. Considering a large number of different proposed contracts, the tree allows parties to fast and thoroughly understand how this or that project can be economically effective for all, which is certainly based on comprehensive analysis of their capacity, market conditions, and specific interests. It is worth noting that the assessment of possible solutions in this analysis allows you to determine a strategy for public-private partnership within the framework of commercial, budgetary, social, technological and environmental efficiency [19].

Referring to the map, onshore and Caspian offshore are not a prioritized option due to the fact that Russian companies are able to deal with those fields, except, shale and other unconventional fields, while offshore fields, which require more cost and technologies, are more challengeable. Therefore, by considering their most difficult circumstances the focus is on Sakhalin and Arctic.

3. Expert's analysis

Table 2 presents experts' opinion on each basic element according to survey using multi criterial analysis. The expert Council consisted of about 80 specialists in various fields of science, which allowed us to consolidate the information received and determine the most priority areas for analysis and evaluation. The experts score the level of significance of each criteria and set the rank based on their experiences and objectives. Besides, the table classifies general requirements that HG and IOC are likely to put forward during negotiations.

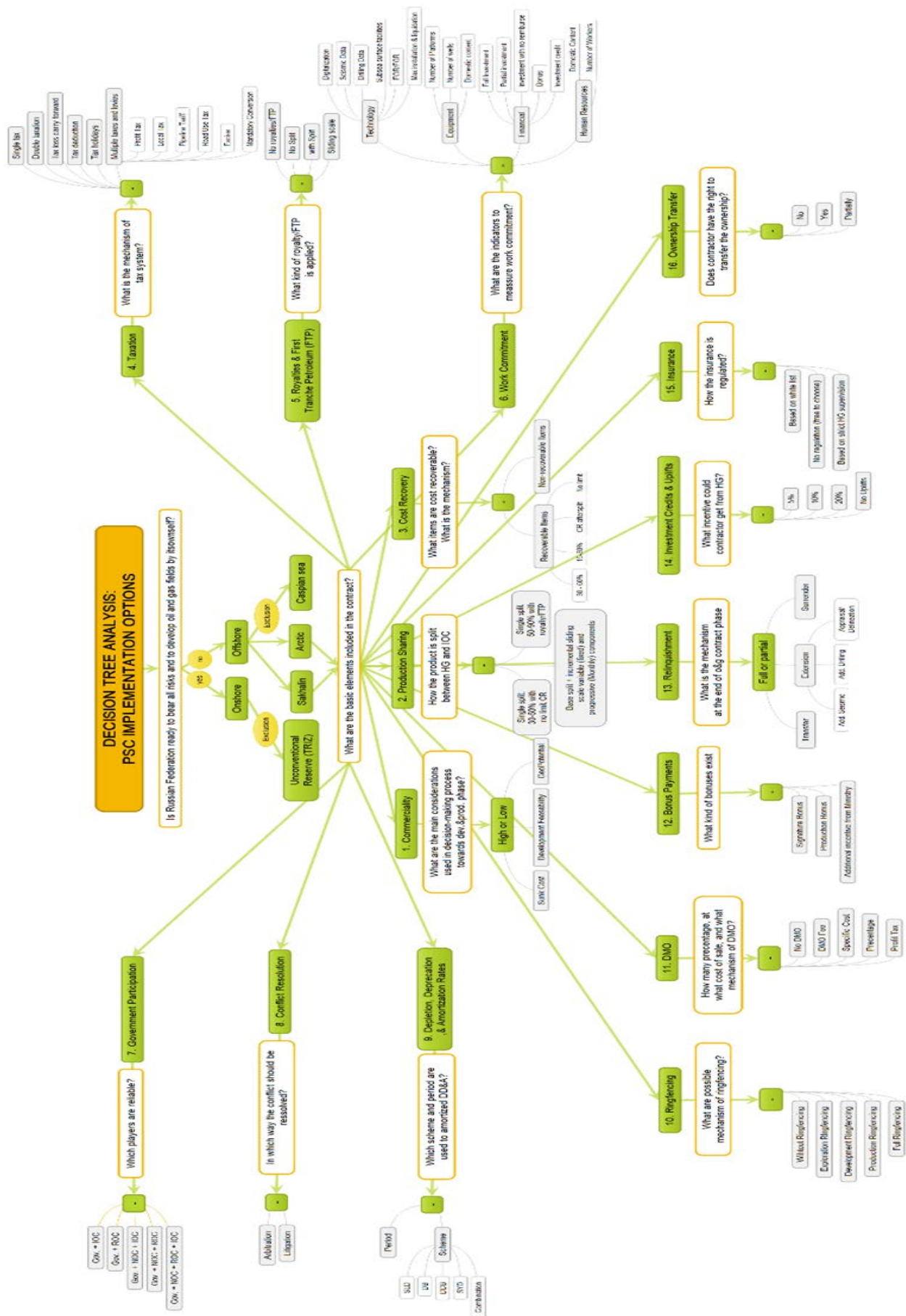


Fig. 1. Decision tree analysis (Created by Authors)

Table 2. Expert analysis: PSC implementation option in Russian offshore (Created by Authors)

Rank	Name	HG	IOC (Contractor)	PSC GS (Optimum)	Note
1	Commerciality	Low sunk cost, high development feasibility, & high geopotential.			Considering high risks in exploration phase, Contractor tends to recover sunk cost maximally. Geopotential is the key to decide whether field development is feasible in high sunk cost.
2	Product sharing	Single split: 50-90% share with high royalty/FTP	Single split: 30-50% with no limit CR	Base split + variable (fixed) and progressive (monthly) components	Incremental sliding scale production sharing guarantees flexibility, fairness, simplicity, transparency & certainty of HG and Contractor's share.
3	Cost recovery	30-60 %, after recovering capital cost 15-30%	40% and higher, No limit	After gross split with 50% limit	Cost Recovery by IOC after gross revenue split stimulates work efficiency of the contractor
4	Taxation	Multiple taxes and levies	Single tax, tax holidays, tax deduction and TLCF	Taxes (Profit, local, road use), pipeline tariff, excise, mandatory conversion, TLCF, Tax deduction	Fiscal incentive supports contractor with financial risks. In Indonesian GSS profit tax is the one and only tax. But in Russia, considering the taxation habit, some key taxes are put in to Russian GSS.
5	Royalties & FTP	Yes, with no split	No or yes, with balanced split	Replaced by gross revenue split and Incremental sliding scale components	Mostly, cost recovery weighs on HG's take. Therefore, to secure total take, HG sets 5-20% royalties, which results in increase of contractor's burden.
6	Work commitment	Tech: Seismic, & Drilling Data (exp), digitalization, EOR (Dev&Prod), max site restoration; Financial: Full investment with(out) reimbursement; Equipment: high domestic content, sufficient number of wells and platform. HR: high domestic content	Tech: Seismic data. Financial: partial investment with reimbursement & investment credit. Equipment: minimal number of wells and platform. HR: min domestic content, sufficient reliable workers	Tech: Seismic, & Drilling Data in exploration. Financial: partial or full investment with reimbursement. Domestic content min 25%. Equipment, HR, Tech based on variable and progressive components (sliding scale system).	In gross split, work commitment is valued not only by reliable seismic and drilling data and delineation, but also signature bonus. In dev. & prod. phase, incentive components automatically respond to contractor work commitment. The stronger the commitment is made, the more contractor's take is increased, and vice versa.
7	Gov participation	Gov+NOC+ROC+IOC	Gov+IOC	Gov+NOC+IOC	In IOC's view, working with many parties is not preferable due to different cultures. Though risk can be spread. In HG's view, involvement of National & private Russian companies makes it easier to control fraud, balance dominant power and learn science-tech from IOC. Overall, collaboration is needed but with limited players. NOC's carried through exploration, has 15% interests.
8	Conflict resolution	Arbitration, local litigation as an alternative	Arbitration	International Arbitration, and International litigation as alternative	Applying basic principles (Certainty, Efficiency and Simplicity), GSS gets rid of many conflict potentials. But when it appears, the mechanism of resolution has to be transparent, cheap, effective and efficient.
9	DD&A Rates	Long period with SLD scheme	Short period with DDB scheme	Period CAPEX $\leq \frac{1}{2}$ of WP (DDB); OPEX $\leq \frac{2}{3}$ of WP (SLD)	GSS facilitates contractor to better amortize its capex & opex. The title to equip belongs to HG. WP is working period.
10	Ringfencing	Yes	No	Yes	HG motivates contractor to do efficiency in order to maximize its total take
11	DMO	Yes, 25%, at specific lower cost	No DMO or 25% DMO at market cost	Yes, 25%, at market cost	IOC has already consumer. For HG, DMO can help fulfill national

Rank	Name	HG	IOC (Contractor)	PSC GS (Optimum)	Note
			+ DMO Fee		demand as well as activate refinery.
12	Bonus payments	Signature and production Bonus	Ministerial	Signature, prod and ministerial (sliding scale)	Production bonuses to HG is regulated in progressive component with sliding scale approach. While ministerial bonuses to contractor depends not only on uneconomic condition, but also commitment to efficiency
13	Relinquishment	No extension of exploration and dev phase, surrender full territory	Extension of exploration, transfer or surrender part of territory	Possible extension of exploration	Government will decide whether or not extension is worthy to be granted. HG considers contractor commitments to seismic & drilling data, & appraisal)
14	Investment credit & uplifts	No	Yes, 5-20%	Replaced by sliding scale components	Such an incentive has been represented by variable and progressive components
15	Insurance	Regulated based on strict HG's supervision	No regulation (free to determine)	Regulated: Determined based on white list	Contractors and subcontractor are obliged to be adequately insured in reputable companies written on the white list
16	Ownership transfer	No	Yes	Partially in the form of participation, not ownership	Ownership belongs to HG. Contractor can transfer not the ownership, but participation interests.

It also provides optimum requirements in the form of PSC GS. As it can be seen from table 2, PSC GS allows HG and IOC to come to an understanding and to identify common goals in running the collaborative projects. In addition, what will be given special attention is described in notes. Changing the ratio of costs and potential benefits when applying the PSA will significantly increase commercial, budgetary, technological and scientific efficiency (figure 2.)

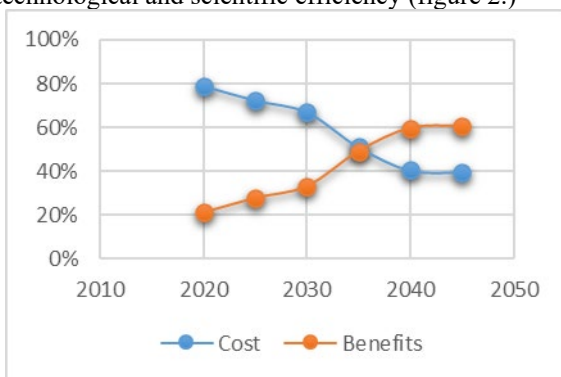


Figure 2. The balance of costs and benefits of a project enable SRP on the Russian shelf (forecast) - compiled by the authors

Based on the table, commerciality, product sharing, cost recovery, taxation, and royalties are key elements in the contract. Therefore, all parties will focus negotiating the terms and conditions for these elements. However, all elements play crucial roles in the contract. For instance, 25% uplift and ownership transfer can significantly benefit IOC, although 5 above elements belong to HG.

4. Conclusion

To sum up, using both analyzes can prepare negotiation participants with the picture of PSC elements, sensitivities, and their interactions; improve mutual understanding in setting goals; and reduce

potential disputes. Thus, all parties are able to save the time of signing contracts, minimize costs at further stages of running project, and achieve win-win solution. As we've known, disputes and renegotiation are time-consuming, costly, and sometimes manipulative. In addition, the cross-analysis gave results in terms of improving project efficiency by 14.7% for the studied objects of the Arctic and Sakhalin. Thus, the decision to include the PSA synthesis model in the framework of forecast projects for the development of the continental shelf may become promising in terms of commercial efficiency. It will also present an opportunity to improve the scientific and technical potential of the oil and gas industry not only in Russia but also in other countries on the world energy market.

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