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Social and Financial Mechanisms for Coordinating State and Investor Interests in Oil and Gas Projects

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Abstract: Production sharing agreements (PSAs) combine the allocation of petroleum production with contract-specific rules for recovering eligible project costs. This study examines the social and financial mechanisms through which the interests of the state and investors can be coordinated in oil and gas projects implemented under PSAs in Uzbekistan. The research applies doctrinal legal analysis, comparative literature review, and qualitative economic analysis to the current PSA and tax framework, with legal sources verified as of 11 September 2026. The findings show that social expenditures should not become recoverable merely because they have a social purpose; their treatment should be assessed against three cumulative criteria: social necessity, economic justification, and a clear contractual basis. Where the statutory general social-tax rate is applicable, PSA documentation should specify the payer, tax base, accounting, reporting, and recoverable-cost status rather than attempt to create or replace the tax rule itself. Voluntary medical insurance may be treated as a project cost only where its necessity and contractual recoverability are demonstrable. The study also develops a proportional mechanism for protecting operator-funded investment in local workforce training while preserving an employee's freedom to terminate employment. The proposed framework strengthens cost predictability, reduces later disputes over cost recovery, and links social protection and human-capital development to the financial logic of PSA projects without expanding contractual obligations beyond what is economically and legally justified.

Keywords: production sharing agreement; recoverable costs; social tax; voluntary medical insurance; human capital

Citation: Mansurov O. Z. Social and Financial Mechanisms for Coordinating State and Investor Interests in Oil and Gas Projects. Companies: Problems and Solutions. American Journal of Economics and Business Management 2026, 9(9), 378-384.

Received: 10th Jun 2026

Revised: 11th Jul 2026

Accepted: 11th Aug 2026

Published: 12st Sep 2026



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1. Introduction

Oil and gas projects typically require large up-front capital commitments, advanced technology, specialized labor, and long investment cycles. Production sharing agreements (PSAs) are one contractual model used to allocate exploration and production rights, project risks, recoverable costs, and the resulting production between a host state and an investor. Under the Law of the Republic of Uzbekistan "On Production Sharing Agreements," a PSA is a contract under which the investor performs the relevant works at its own expense and risk, while the agreement establishes the conditions for carrying out the project and recovering allowable costs [1].

International literature emphasizes that the economic logic of a PSA depends on the interaction between cost recovery and the subsequent division of profit production. The United Nations handbook on extractive-industry taxation describes production-sharing systems as arrangements in which a defined portion of production may be allocated to cost recovery before the remaining production is divided between the parties [2]. Johnston similarly shows that cost-recovery limits, eligible-cost definitions, and the production-sharing formula are interdependent elements of petroleum fiscal design [3]. Consequently,

a decision to classify an expenditure as recoverable can affect not only the investor's cash flow but also the volume of production available for subsequent sharing.

Previous research on Uzbekistan has discussed the legal nature of PSAs and the broader fiscal and customs mechanisms used to balance public and investor interests [4, 5]. A narrower issue remains insufficiently developed: how employment-related social expenditures social tax, medical insurance, and local workforce development should be integrated into the PSA cost-recovery architecture without transforming social policy objectives into open-ended financial obligations for either party.

The objective of this study is to develop a legally consistent and economically balanced framework for coordinating state and investor interests through social-tax treatment, medical-insurance cost rules, and human-capital safeguards in oil and gas projects implemented under PSAs in Uzbekistan [6].

2. Materials and Methods

The study uses a qualitative legal-economic design. First, doctrinal analysis was applied to the Law of the Republic of Uzbekistan "On Production Sharing Agreements" and the Tax Code, with attention to the contractual nature of PSAs, allowable-cost recovery, production sharing, and the treatment of employment-related payments. The PSA law was checked in its current publicly accessible version, dated 8 May 2025, and the tax framework was reviewed together with official tax-policy information available for the period under analysis. The general social-tax rate reported for ordinary taxpayers is 12 percent, while statutory exceptions and preferential rates may apply to specific categories.

Second, the legal analysis was triangulated with international sources on extractive-industry fiscal systems and production sharing and with the author's earlier studies on the legal and fiscal architecture of oil and gas projects in Uzbekistan. Third, the study applies a three-part assessment framework social necessity, economic justification, and contractual basis to determine whether a social expenditure can reasonably be treated as recoverable under a PSA.

The analysis also distinguishes a tax obligation from an individual employee's entitlement to a particular social-insurance or pension benefit. This distinction is especially important because the social-insurance framework has continued to evolve; from 1 January 2026, the rules for certain state social-insurance payments refer to insurance contributions to the relevant fund, which means that social tax should not be treated as a one-to-one proxy for a specific employee's future benefit entitlement.

No human participants, animals, clinical interventions, or confidential individual-level data were involved. Therefore, ethics approval was not required. The study does not use inferential statistics; statistical significance tests and p-values are not applicable. Numerical verification was limited to checking the internal consistency of the illustrative training-cost reimbursement example presented below.

3. Result and Discussion

Social-financial basis for coordinating state and investor interests

The analysis indicates that the social dimension of a PSA cannot be separated from its financial architecture. From the state-side perspective, relevant interests include formal employment, financing of social-protection mechanisms, development of local skills, and transparent recognition of project costs. From the investor-side perspective, the central concerns are cost predictability, workforce stability, protection of human-capital investment, and a reduction in disputes over whether a particular expenditure is recoverable [7].

These interests converge at the contractual interface. Article 12 of the PSA law provides that the procedure for recovering allowable costs is to be specified in the

agreement, while Article 15 links the agreement to the division of produced output. Therefore, if an employment-related expenditure is recognized as recoverable, the decision may affect the cost-recovery pool and, indirectly, the quantity of production remaining for further allocation between the state and the investor. This is consistent with the international logic of “cost oil” and “profit oil” described in the extractive-industry literature [8].

Accordingly, the objective is not to maximize the amount of social expenditure charged to a PSA. A more defensible principle is to recognize as recoverable only those expenditures that are socially necessary for the project, economically reasonable in amount, and clearly authorized by the contract or its incorporated cost-recovery rules. This formulation protects the state from an unnecessarily broad cost pool while providing the investor with ex ante predictability [9].

Contractual treatment of social tax in PSAs

Social tax is a statutory payment and should therefore be analyzed first under tax legislation, not created by the PSA itself. The current general tax-policy framework has retained a 12 percent social-tax rate for ordinary taxpayers, while budget organizations and some preferential categories are subject to other rates. For a PSA operator, the legally sound contractual task is not to “establish” a tax rate but to specify how the statutory obligation is operationalized within the project: who is responsible for calculation and payment, what remuneration is included in the tax base, how records and reporting are maintained, and whether the resulting payment is an eligible recoverable cost [10].

This distinction is material. If the statutory rate changes or a statutory exemption applies, a contract that attempts to fix the tax rule independently of legislation could create inconsistency. A contract that instead defines responsibility, documentation, and cost-recovery treatment can remain workable while the tax amount follows applicable law. Table 1 summarizes the main contractual elements that should be defined [11].

Table 1. Main elements for regulating social-tax treatment within a PSA

No.	Issue	What should be specified in the contract	Practical significance
1	Responsible payer	Identify the operator or other PSA participant responsible for calculating and paying the social tax.	Removes ambiguity over tax responsibility.
2	Taxable employment payments	Define the categories of employment remuneration to which the statutory social-tax rules apply.	Clarifies the tax base and documentation.
3	Applicable statutory rate	State that the rate is determined by the tax legislation in force for the relevant taxpayer category.	Avoids conflict between the PSA and tax law.
4	Accounting treatment	Define calculation, documentation, and recognition in accounting and tax records.	Improves auditability and transparency.
5	Reporting procedure	Specify reporting responsibility, timing, and supporting documentation.	Reduces administrative and compliance risk.
6	Recoverable-cost status	State expressly whether legally due social-tax payments are recoverable under the PSA and under what evidence requirements.	Clarifies the economic burden and its effect on the cost-recovery pool.

Source: developed by the author on the basis of the PSA cost-recovery framework and current tax legislation.

Social tax, social protection, and the limits of the pension linkage

For local employees, formal payroll taxation contributes to the financing and institutional recording of social-protection arrangements. Nevertheless, the relationship should be described precisely. Social tax is a fiscal obligation of the taxpayer; it is not, by itself, an actuarial account that mechanically determines the pension amount of a specific employee. Moreover, the rules governing state social insurance have changed over time. The 2026 framework for certain social-insurance payments refers to insurance contributions to the relevant fund, which reinforces the need to separate tax compliance from individual benefit entitlement [12].

The more accurate conclusion is that clear compliance with employment-related tax and social-insurance rules supports formal labor relations and the financing of the social-protection system, while the employee's specific pension or insurance rights arise under the applicable pension, labor, and social-insurance legislation. For the investor, the key PSA issue is whether these legally required payments and related administrative costs are predictable, documentable, and where the agreement permits recoverable [13].

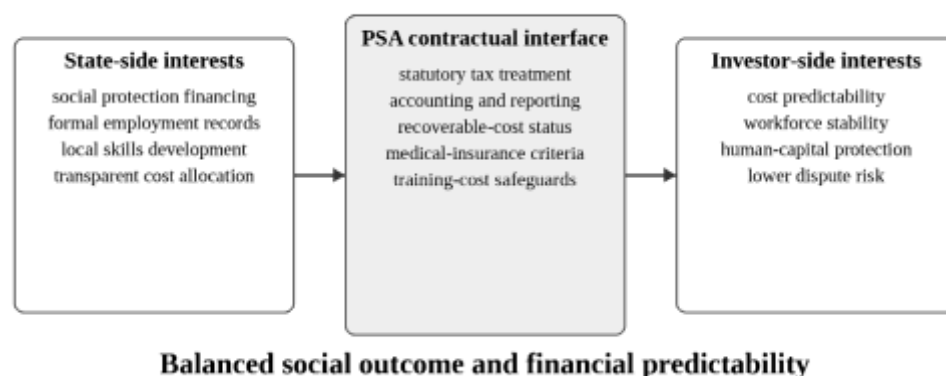


Figure 1. Social-financial interface between state and investor interests in a PSA project

Source: developed by the author based on the analytical framework of this study.

Figure 1 shows that coordination is achieved not by transferring all social costs to one party, but by using the PSA as a transparent interface between statutory obligations and contractual cost allocation. This perspective also limits the risk of double counting: a payment should not be described simultaneously as a statutory tax, a separate social obligation, and a recoverable project cost unless the legal and contractual bases for each treatment are independently established [14].

Voluntary medical insurance and recoverable costs

Voluntary medical insurance may be economically relevant in oil and gas projects because employees can work in remote locations, on rotational schedules, or in conditions where rapid access to medical services is operationally important. Its social usefulness, however, does not automatically make the premium a recoverable PSA cost. If the agreement does not authorize reimbursement of this category, charging it to the cost-recovery pool can indirectly reduce the production available for later profit sharing [15].

The most appropriate solution is an ex ante classification in the PSA, its accounting procedure, or an incorporated personnel policy. Three criteria should be assessed cumulatively, as shown in Table 2.

Table 2. Criteria for evaluating the recoverability of voluntary medical-insurance expenditure

Criterion	Key question	Decision implication
Social necessity	Is the coverage reasonably required by the project's working conditions, remoteness, or workforce-protection needs?	Supports the business and social rationale for the expenditure.
Economic justification	Is the premium level proportionate to market conditions, workforce size, and the project risk profile?	Limits excessive or non-arm's-length expenditure.
Contractual basis	Does the PSA or an incorporated cost-recovery rule authorize this category and define the required evidence?	Determines whether the cost may enter the recoverable-cost pool.

Source: developed by the author.

This approach avoids two extremes. It does not exclude medical insurance merely because it is voluntary, and it does not treat every employee benefit as recoverable merely because it improves working conditions. Instead, the decision becomes auditable: the operator must demonstrate the project need, the reasonableness of the amount, and the contractual authorization. Such documentation also reduces the likelihood of later disputes during cost-recovery audits.

For practical implementation, a PSA-related personnel or accounting regulation can distinguish among (i) mandatory social expenditures arising directly from law, (ii) contractually recoverable social expenditures, and (iii) non-recoverable employee-benefit expenditures. Voluntary medical insurance can then be assigned to the appropriate category according to the conditions of the specific project rather than by a blanket rule.

3.5. Local workforce development and protection of human-capital investment

Local workforce development is both a social outcome and an operational investment. PSA projects may require engineers, geologists, drilling specialists, production personnel, and occupational-safety professionals with project-specific or internationally certified skills. Training local employees can reduce long-run dependence on expatriate specialists, improve continuity, facilitate technology transfer, and expand the domestic skills base. The author's earlier work on PSA legal and economic mechanisms likewise identifies local capability and predictable contractual arrangements as elements of a sustainable state-investor balance [4, 9].

A practical problem arises when the operator funds expensive training and the employee leaves shortly after completing it. A rigid obligation to remain employed for a long period could conflict with the principle of labor mobility, whereas a complete absence of a safeguard can leave the operator bearing a large unrecovered human-capital investment. A proportional reimbursement mechanism offers a middle position, provided that it is permitted by applicable labor law, agreed in writing, limited to documented training expenditure, and designed as reimbursement rather than a punitive penalty.

The core proportional amount can be written as:

$$R_0 = C \times (1 - t/T)$$

where R_0 is the unadjusted reimbursement amount, C is the documented training cost, T is the agreed service period in months, and t is the number of months actually worked after training. If the parties lawfully agree to a financing adjustment, an optional factor may be applied:

$$R = R_0 \times [1 + r \times (t/12)]$$

where r is a contractually agreed annual adjustment rate expressed as a decimal. The rate should be specified in the contract and should not be labelled as the central bank refinancing or policy rate unless the contract expressly links the calculation to an officially defined rate and specifies the relevant date.

For illustration, if documented training cost is USD 10,000, the agreed service period is 60 months, the employee works 17 months, and an illustrative contractual adjustment rate of 8 percent per year is used, then $R_0 = \text{USD } 7,166.67$ and the adjusted amount is $R = \text{USD } 7,978.89$. The calculation was independently recomputed and is numerically consistent. The model has the intended declining-balance property: the longer the employee remains after training, the smaller the reimbursable balance becomes, reaching zero at the end of the agreed period.

Practical implications for PSA drafting

The results support the following drafting and implementation recommendations:

- For new PSAs, state expressly that social-tax liabilities follow the tax legislation in force; the agreement should regulate responsibility, accounting, documentation, and recoverability rather than attempt to establish an independent tax rate.
- Define the evidence required to recognize employment-related taxes and contributions as recoverable project costs, including payroll records, tax reports, and proof of payment.
- Classify voluntary medical-insurance premiums through the three-part test of social necessity, economic justification, and contractual authorization before admitting them to the cost-recovery pool.
- Separate mandatory social costs, recoverable voluntary social costs, and non-recoverable employee benefits in the project's accounting or personnel rules to reduce audit disputes.
- Use local workforce development plans with measurable training outputs, such as certification, competency targets, and transfer of project-specific technical knowledge.
- Where costly operator-funded training is provided, use a written, proportionate reimbursement mechanism tied to the unserved portion of an agreed period and subject to applicable labor law; an illustrative three-to-five-year period may be used only where reasonable for the training concerned.
- Review the legal and tax references incorporated into each PSA periodically, because tax rates, social-insurance rules, and administrative procedures can change during the long life of an oil and gas project.

These recommendations extend the author's prior analysis of the legal and fiscal architecture of PSAs by specifying how social expenditures can be incorporated without weakening the distinction between statutory obligations and contractual cost recovery. They are also consistent with the broader production-sharing literature, which treats cost eligibility and cost recovery as core determinants of the distribution of project value.

4. Conclusion

The study set out to develop a legally consistent and economically balanced framework for coordinating state and investor interests through social-financial mechanisms in PSA-based oil and gas projects. The analysis shows that the central issue is not the volume of social obligations but the quality of their legal and contractual definition. Because recoverable costs can affect the production remaining for subsequent sharing, employment-related expenditures require clear eligibility rules and evidence standards. The statutory social-tax obligation should be implemented in a PSA through explicit allocation of responsibility, accounting, reporting, and recoverable-cost status, while the rate itself must follow the tax legislation applicable to the taxpayer. The analysis also clarifies an important conceptual point: social tax supports the broader social-financing

framework, but it should not be presented as a direct one-to-one determinant of an individual employee's pension or social-insurance entitlement. Voluntary medical insurance should be recoverable only where the expenditure is socially necessary, economically reasonable, and contractually authorized. For local workforce development, a proportional reimbursement model can protect documented operator-funded training expenditure without converting training support into a punitive restriction on labor mobility. Used together, these mechanisms improve cost predictability for the investor, preserve the integrity of the state's share of project value, and strengthen the social effectiveness of PSA projects through transparent rather than open-ended obligations.

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