The oil PSA and its inverse effect on human resource development (HRD)

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Abstract

Created in Indonesia, the production sharing agreement (PSA) is used by the oil industry in developing countries to mitigate risks and ensure profits. The PSA has been discredited in the developed world due to a lack of transparency and perception as a wealth transferor from impoverished to rich. A theoretical discussion and holistic case study on a critical position demonstrates how this 19th-century, neo-colonial contract has an inverse effect on human development capital investments by way of state-guaranteed reimbursements. These reimbursements promote overspending and unstructured development costs. A lack of structure allows the commingling of expenses and hides profits. Effectively, the PSA binds a host nation’s citizens to the decision making of oil investors and ruling elites via personalized transactions that elude public interest and audits. Educational development theories do not consider economic distortions that intentionally weaken social empowerment. The PSA plays a significant role in explaining the ‘resource curse’ that is preventing resource-rich developing countries from significantly advancing their peoples.

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Economic Development/ Employment/ Human Resources/ Oil/ Resource Curse/ Work Skills

Introduction

This study pursues a narrow aspect of the upstream oil business: the ‘production sharing agreement’ (PSA) that has an outsized contextual influence on employment and human resource development in oil-rich economies. Many developing countries with oil and gas resources sign PSAs (in some areas called ‘production sharing contracts’ or (PSCs) with the large multinational oil companies as a direct means to get cash infusions and oil production started (Rutledge, 2004). PSAs confer fiscal security to outside investors in developing countries (Seck, 2002). However, they have been largely barred, in the developed world, as a perceived abuse of bargaining power with inexperienced government officials against well-informed oil executives complemented with savvy legal counsel. Some consider PSAs similar to the colonial concession agreements of the 19th century (Machmud, 1999). From a
sustainability and development standpoint, most of these PSAs are Faustian bargains for a developing country’s citizenry (or the owners) of the natural resource.\(^1\) They are a system designed to ensure a return on investment in perceived risky environments. Simply, despite the fact that PSAs contractually promise local development, it is ambiguous as to how. PSAs, to the benefit of the oil companies, bind a host country to their investment risks through guarantees. There are two main themes of concern for human resource development (HRD): the building block of human capital (Becker, 1993), inside of the PSA. Namely:

While the oil companies do in fact pay large cash bonuses to start these agreements to host governments, the problem is that they are fully reimbursed (Gao, 1993), without audit, for educational outlays, training (including expatriate training), salaries, fees, etc., without any oversight as to the quality of these local development initiatives. PSAs have become the source of tremendous political and social friction over the years between oil companies and host governments.\(^2\) This tension is palpable in the way training is apparently dissected in the companies: to commingle (hide) and mitigate true costs and increase profits. This type of guaranteed reimbursement by the host government to foreign companies becomes questionable as:

a) Under the PSA, all educational and training decisions (HRD) are made by the investing oil company. Local education directives and education ministries are not connected to it. Tech transfer, current skills, and proprietary information flow are then tightly controlled, and in fact are non-existent for key proprietary drivers. Locals gain little strategic knowledge in these operations sectors. An exception to the PSA contractual model is in Malaysia and China, where national economic interest places local knowledge development on the investor; otherwise, there are sanctions.\(^3\)

b) Unstructured or ineffective training is also reimbursed to the oil companies at full costs for what is given, plus an overhead administrative charge (10% is considered normal, Machmud). There is no audit by a host country’s education ministry (if the training is purely an internal corporate matter) and no input by the citizenry over things such as costs, relevancy, market value, and hiring outcomes for this training. This type of training then can be abused as an alternative revenue enhancer for the investing entity. Human development becomes a secondary or tertiary concern as long as the letter of the contract is being met.

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1 \(\text{PSAs in summary (Rutledge, 2004) highlight the following investment characteristics:}\)

- A contract between a multinational oil company and a host government, in which the corporation provides capital investment, in exchange for control over an oilfield, and access to a large share of the revenues from it.
- Lasting usually 25-40 years—and sometimes even indefinitely.
- A change of language, describing the state as “owner” and the foreign company as ‘contractor’, but in practice mostly equivalent to the old-style concession agreements.
- Precise terms depend on negotiation between state and company.
- Often contains ‘stabilisation clause’, which restricts future governments’ ability to change tax rates or pass any new law which affects the company's profits.

2 \(\text{Sakhalin: A Production ‘non-sharing’ Agreement} \) is a monograph about how considerable and questionable reimbursements in Shell’s Russian PSA Sakhalin natural gas project are running up costs that are untenable. It is widely and economically understood that under the original terms of the PSA, it would take many years to pay off the reimbursements before any funds would accrue to public coffers in Siberia.

3 Sanctions mean that costs will not be reimbursed unless they deliver training that locals can actually use.
Employment outcomes or decision making in succession planning to key positions, a core tenet of Human Resource Development, (Rothwell, 1992) is never truly realized by local people, and a ‘glass ceiling’ ensues. The investing entity under the PSA is only required to provide training, similar to providing a part, asset, or tangible good. The quality, objectivity, outcome, and ultimate market value of that training are undefined, as there is no accountability if the training or education fails to deliver any market skills. There is a built-in obsolescence to this training that ensures that all critical resource extraction methods, ‘know-how’, tech transfer, legal knowledge, proprietary information, and returns on investment are held by the foreign investor in perpetuity (or in project terms, 20 years). Foreign expatriates staff core knowledge and key decision-making posts, while local citizens are left to mundane tasks, such as maintenance and blue-collar tasking. There is little meaningful local worker engagement.

Background and review regarding localization and oil ownership.

According to 1990 economics Nobel laureate, Douglas North (1993), neither theories of economics that take politics as exogenous nor theories of politics that take economics as exogenous are capable of explaining the process of modern social development. The key to understanding modern social development is in understanding that the state in a limited access order society is a coalition of powerful individuals and groups. This type of political economy arrangement is called a ‘natural state’. It is characterized by personal (face-to-face) transactions, not impersonal (competitive-based) ones. Because ‘natural states’ have internal forces built on exclusion, privilege, and rent creation, they foster stable orders and are therefore extremely difficult to transform. This leads to a proposition: the origin of property rights and legal systems is then the definition of elite rights. To change this requires a transformation in society from a limited-access to an open-access basis. Empowerment is then realized in ownership and societal support via competitive and impersonal transactions. Posits a. and b. are put forward to demonstrate these transactions further:

a) The subsurface asset is owned by all the citizenry via the state. This is enshrined in law, but not always regarded by the oil companies or the host governments. Much has been written about ‘ownership’ of natural resources regarding the ‘letter of the law’ (Machmud, 1999; Taverne, 1996). The spirit of these laws is much different. It has been persuasively shown that corruption tends to be associated with opportunities for rent creation correlated with natural resource extraction (Ades and Di Tella). This gets to the core of the ‘resource curse’: How to develop the citizen’s human capital by utilization of those resources in situ. Political competition, then, has the potential to act as a check on corruption. Under the PSA, the resources are recognized as owned by the state. ‘State’ does not always equal ‘citizens’ (Luo, 2006). The PSA provides ‘training’, but is it to the benefit of the citizen’s improvement? Or, is it to the benefit of elites and investors who can ration knowledge transfer?

b) Employment then is in the necessary component of ownership via work skills with attendant opportunities (i.e. job ‘empowerment’). As Gary Becker’s (1993) puts it, ‘Education and training are the most important investments in human capital. ‘...[S]udies have shown that ... for many years from over a hundred countries with different cultures and economic systems. The earnings of

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4 Actual PSA Agreement with oil-rich Timor-Leste (East Timor) regarding oil and gas extraction. Out of a 30-page contract, very little is given in terms of developing nationals or empowering them except on a token level, as: Goods, Services, Training and Employment. Each Contractor shall comply with the proposals which accompanied its application under Article 13 of the Act for this Agreement in respect of training, employment and the acquisition of goods and services.

5 ‘Specific’ human capital refers to skills or knowledge that is useful only to a single employer or industry, whereas general human capital (such as literacy) is useful to all employers (Becker, 1993).
more educated people are almost always well above average, although the gains are generally larger [emphasis researcher’s] in less developed countries.’ Becker’s theory does not address empowerment (Menon, 2001); it only addresses skills building, assuming the opportunities will await. It does not consider racial, ethnic, cultural, or religious bias. While many of the extraction companies meet the criterion of ‘letter’, there are little or no empowerment or ensured opportunity aspects of these programs. Ironically, most PSAs, while professing to develop a host nation’s citizenry via employment preference, are written by lawyers, accountants and engineers who have little, if no, experience in human resource development (Jennings, D., et al, 2000). An engineering culture and mindset thus can ensue in the organization (Udwadia, 1986).

Methods

Yin (2003) has endorsed holistic case study. Additionally, Stake (1995: 17) states, ‘[I]ssues... are not simple and clean, but intricately wired to political, social, historical, and especially personal contexts. All these meanings are important in studying cases’. A training study was evaluated in Company A in Asia in 2006 over a period of six months and focused on the production operations department in an upstream oil company. Based on management interview in Company A, the LBE (Lead Board Engineer) position was identified and has an NPV (net present value) of $388,000 USD, for a projected 5-year value of approximately $500,000 to the company. ⁶ This was a valued developmental position for local people.

Productions operations also had its own training department (initially unknown to the researcher), with three rotating departmental trainers (this was completely separate of the centralized NTB training department, also known as the Workforce Development Group (WDG)). However—and this is important—due to the unique nature of Asian oil (deep wells, high pressure of reservoir, crude oil that is laden with H₂SO₄ [sulfuric acid], etc.), LBEs needed to receive additional training under a special projects budget that was considered core proprietary information of Company A. In other words, the real costs of training cannot be ascertained and were only extrapolated from three input variables: NTB (X₁), Operations (X₂), and Capital Expenditures or CAPEX (X₃) budgets.

In short, there was lack of a robust numerator (or outcome value, Y) in the model equations to derive a return benefit for the LBE, except for approximations by the incumbent operations managers. It is noted that the LBE is developed as a result of direct company training in country, unlike other oil positions in RMG and drilling that are produced by training the incumbent internationally. See Fig. 1.

![Diagram](Image)

Figure 1. Three separate training budgets model defined as successive X input variables to determine the singular competency output (Y) of a functional Lead Board Engineer (LBE). All three factors are reimbursable under the PSA. (Source: author)

Analysis

⁶ Interviews with production managers of Company A Asia subsidiary between January and June 2006. The company, while a genuine foreign invested oil production entity, is not named for proprietary and non-disclosure reasons.
Figure 2. LBE position creation in Co. A: benchmark SE US operations v. Co. A Asia operations. (Source: author)

We can see from Figure 2 that our control group of structured training, \( X_i \) directly leads to full creation of a solo operator LBE \( Y_i \) in the plant. This is what happens at Company A’s ‘best in class’ operations in the US. This is supported by a well-planned ‘structured mentoring program’. However, this is not the case in Company A’s Asian subsidiary that uses unstructured on-the-job training (OJT). As was originally stated in the indemnity, Company A’s subsidiary operations LBE output in Asia per international benchmarks are only considered near 65-70%. It is also noted that the first input variables \( X_1 \) in Company A’s Asia operations are not supported with a structured training, but rather an unstructured one. The question in all this is how much more training needs to be placed into the unstructured variables, \( X_1 + X_2 + X_3 \) to get to the criterion (benefit) output variable of an internationally accepted solo operator/LBE at 100% output? Namely, the unstructured OJT inputs of \( X_1 + X_2 + X_3 \) create considerable uncertainty while adding costs (fully reimbursed) into this developmental regression.

Conclusions

Terminal outputs such as the LBE define best the development goals Company A was trying to arrive at, and then a value can be placed on that output. The PSA agreement tends to work against these goal ideals, however, as reimbursement is ensured whether the outcomes are substandard, unstructured, or the development costs are overpriced. Yet, structured training and mentoring tends to reduce overall costs and promote efficiency. Development costs need to include indirect costs (employee salaries) and, likewise, hidden costs (lost retention). Anything that can be used to reduce costs will create a smaller denominator and will likewise increase overall ROI (benefit). Yet, the PSA encourages large denominators due to its reimbursement schema (Machmud). The most valued localized output created in Company A’s US operations is a solo operator/LBE via established technical training plans girded by structured mentoring. Yet, this was not the case in Company A’s Asia operations, where a significant lack of training structure existed. Again, the PSA does not audit any training outcomes. Furthermore, these trainings are not polycentric (adapted to Asia) but rather ethnocentric (adapted to the US), which creates learning transfer problems and will not work without identification of: 1. Learner, 2. Environment, 3. Job (Rothwell, 1992). It appears that much of the training given is used to complement current compensation schemes that are manipulated by the government to keep oil salaries low nationwide. If that is the case, it sends a compromised message regarding compensation, whereby it minimizes overall HRD effectiveness by tying offsite training to compensation perks. Training should be formalized in HR development policy and not used to complement a weak compensation scheme. Company A’s talent retention shortfalls and lack of human resource planning highlighted the compensation issue.

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7 Econometric or statistical model specification processes are available to identify underlying functional form and can estimate the coefficients of the variables in these equations (Judge, Hill, Griffiths, Lutkepohl, and Lee, 1988).
Finally, we want to note that in the lack of transparency and default to ‘proprietary information’ clauses, it appears the training reimbursable under the PSA is abused as a conduit for padding expenses and payoffs. This happens as the PSA ensures that training reimbursements remain unaudited for learning transfer. Effectively then this works inversely to human capital investments as the mechanism itself is anathema to HRD objectives. What can be effectively noted is that the PSA appears steeped in colonial ideas that, as written, do little or nothing for the local population’s development, but rather to protect investors. Nonetheless, their effect on human capital development is profound and can be co-opted. It has already been demonstrated in much literature that leadership in oil-rich countries can easily overlook constituents (Mikesell, ) and the ‘natural state’ or bargains struck by elites can exclude most citizens.

Implications for practice

As a pretext to human capital development, the author puts forward that the system of PSA does little to promote contemporary HRD. In fact, the PSA works directly against human capital development, as it encourages overspend, redundancy, and conflict of interests, since these costs are fully reimbursed and there is no learning audit or skills transfer oversight. Any human capital discussion in a resource rich developing country, without acknowledging the ‘hole in the bucket’ of the PSA agreement and development initiatives, is useless in the current system to derive and promote change, as it will not (and simply cannot) further any significant development or employment outcomes.

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