
Humphrey Onyeukwu

Available at: https://works.bepress.com/humphrey_onyeukwu/2/

ABSTRACT:

Within the Oil and Gas value chain, transportation plays an important role in fusing the link between the producer and consumer nations. The supply of oil and gas are principally through pipelines routes which typically transcend across several borders and therefore requires the negotiation of transit terms with transit nations. This situation has therefore subjected resource supply, a very important factor input in the matrix of energy consumption to the vagaries of obsolescing bargain and its ancillary effect of potential disruptions to the consumer nation. This paper shall seek to examine the issues of obsolescing bargain in transit pipelines as it affects the security of supply in the context of disputes that have arisen between countries in typical transit agreements. The paper concludes by examining the options available to the exporter country in ensuring security of supply.
LIST OF ABBREVIATIONS

ARAMCO  Arabian American Oil Company
ECT     Energy Charter Treaty
IOC     International Oil Company
TABLE OF CONTENTS

1. INTRODUCTION

1.1 PIPELINE TRANSPORT IN THE OIL AND GAS VALUE CHAIN

2. THE ECONOMICS AND POLITICS OF TRANSIT PIPELINES

2.1 THE ECONOMICS OF TRANSIT PIPELINES

2.2 THE POLITICS OF TRANSIT PIPELINES

3. OBSOLESCENCE BARGAIN AND IMPACT ON THE SUPPLY VALUE CHAIN

3.1 THEORY OF OBSOLESCENCE BARGAINING

3.2 OBSOLESCENCE BARGAINING IN TRANSIT PIPELINE

3.2.1 The Russian-Ukraine Pipeline Disputes

3.2.2 The Trans-Arabian Pipeline (Tapline)

3.2.3 Iraqi Export Routes

4. OPTIONS FOR SECURITY OF SUPPLY

4.1 THE ENERGY CHARTER OPTION

4.2 THE ‘ALTERNATIVE ROUTE’ OPTION

5. CONCLUSIONS
1. **INTRODUCTION**

Transit pipelines are typically oil or gas bearing pipelines which cross another territory to deliver their resources to markets in a third country. They are an important factor in the matrix of resource supply because most oil and gas reserves which are ordinarily close to traditional markets are depleted therefore driving the need for the discovery of remote sources of oil and gas in places which are mostly of landlocked areas (ESMAP, 2003). The oil reserve discoveries in these landlocked regions and its strategic importance to global supply have influenced growth of transit pipelines in cross-border trade in oil and gas and imperatively heightened the relevance of transit countries to pipeline agreements given their predilection to shape security of supply. The integrated nature of the oil and gas value chain makes it fundamental that transit countries ‘shall’ be willing parties to ensure a continuous supply to consumer nations.

The significance of these resource deposits in landlocked areas and with it the attendant increase and dependence on transit pipelines brings to bear pressure on issues of resource supply. Security of supply cannot be downplayed as demand for energy is on a persistent rise. World primary energy consumption increased by 2.4% in 2006, representing a global oil consumption growth percentage rate of 0.7% and a growth percentage rate of 3% for natural gas (BP Statistical Review of World Energy, 2007).

Resource supply through the transit pipelines to the consumer nations is fundamental to its energy needs and security. It must be protected to meet with the increasing worldwide demand for energy. However, transit agreements are faced with the shortcomings of the involvement of different parties, each with different interests and there is no overarching legal regime that can be used to police and regulate the activities and contracts (ESMAP, 2003). The dynamics of transit
pipelines agreement negotiations and operations have in effect made
the concept of obsolescing bargain an important factor to be
considered when addressing issues of transit pipelines because of its
reverberating impact on security of supply concerns for consumer
countries.

Obsolescing bargain, a concept initially coined by Ray Vernon
(Vernon, 1971), in the oil and gas context demonstrates the risks
inherent in transit pipelines arrangements. It shows the shift in
bargaining powers to the transit country once the pipeline is built and
in operation. There is a seemingly shift in the balance of bargaining
powers between the transit country and exporting country which
creates risk of supply disruptions to the consumer nation. This
situation has therefore subjected resource supply, a very important
factor input in the matrix of energy consumption to the vagaries of
obsolescing bargain and its ancillary effect of potential disruptions to
the consumer nation.

This paper shall seek to examine the issues of obsolescing bargain in
transit pipelines as it affects the security of supply in the context of
disputes that have arisen between countries in transit agreements.
Transit pipeline arrangements are prevalent with disputes on transit
terms and the Russian-Ukraine pipeline impasse over gas transport
routes, Iraqi export routes amongst other instances highlight this
dilemma.

The paper will undertake a cursory study of the economics and
politics of transit pipelines using these transit pipelines disputes as its
background. It will view the impact on the supply value chain and
proffer available options that will ensure security of supply for the
consumer nation.
1.1 PIPELINE TRANSPORT IN THE OIL AND GAS VALUE CHAIN
The oil and natural gas value chain starts with the seismic exploration, which seeks to locate hydrocarbons on land or under the seabed. Once located, the company undertakes to retrieve the resources and they are then transported, either by ship or pipeline, to processing facilities where impurities are removed and converted to refined products and petrochemicals that are used in our everyday lives.

Transportation in the value chain structure applies immediately after the oil is produced at the wellhead. It relates to the physical activity of moving the oil to the processing facility and these are achieved through the major modes of transportation, tankers and pipelines.

Pipelines are a major mode of transportation in the oil and gas value chain. As at 1980, the percentage of total crude transported by pipeline was 91% and between 1985 and 1990, the proportion stands at 94% (Seck, 1998). According to the Association of Oil Pipelines, it reports that crude and petroleum products carried in domestic transportation by the various modes of transportation in 2004 totalled 902.5 billion ton-miles, of which 66.44 percent was transported by pipelines. The comparative figure for 2003 was 883.3 billion ton-miles, of which 66.82 percent was carried by pipelines (Association of Oil Pipelines, 2006). This buttresses the importance of pipelines as a dominant means for transport within the value chain.

2. THE ECONOMICS AND POLITICS OF TRANSIT PIPELINES

2.1 THE ECONOMICS OF TRANSIT PIPELINES
The economics of pipelines is all about size, which in the tradition of Beckerman’s supposition, ‘big is extremely beautiful and small is stupid’ (Beckerman, 1995). Pipeline economics are characterized by the economics of scale, state involvements, the pipeline’s place within
a longer value chain and the pipelines susceptibility to market failure (ESMAP, 2003).

The dominant issue in economics of transit pipelines is in its geometry. The carrying capacity of a pipeline is equal to the square of its radius and an exponential relationship exists between the capital cost and the carrying capacity. The consequence is that all pipelines are subject to very large technical economics of scale and the existence of huge economics of scale means that the use of pipelines is an extremely capital intensive activity. As a result, the cost structure of pipelines is characterised by very high fixed costs and negligible variable costs (Stevens, 1998).

The fallout from its geometry of size is that full-capacity operation is essential for profitability (Stevens, 1998). This presupposes that where capacity throughput falls, the average cost of throughput rises exponentially and consequently does severe damage to any profitability inherent in the line. Therefore, security of supply with respect to throughput is essential for profitable operation (Stevens, 1998).

The full capacity operation of the pipeline is reinforced by the ‘bygones rule’. The operator is faced with a position of continually making full-capacity throughput operation as the fixed cost is exponentially higher with a lower throughput and it adversely affect the pipeline’s profitability and the consumer nation’s resource supply.

2.2 THE POLITICS OF TRANSIT PIPELINES

Transit pipelines have always been a major issue for energy markets. The political volatility in transit states and total absence of a reliable legal framework threatens the enormous investments typical of energy ventures and constitutes a high political risk for the investor (Liesen, 1998).
According to Rainer Liesen in his article, *Transit under the 1994 Energy Charter* (Rainer, 1998), safe and reliable transportation from the producing regions to consumer nations is vital for the economies of many countries. Since the oil crisis in the early seventies, Western Europe in particular has been seeking more security in energy supplies. The reserves in the Netherlands, Norway and the North Sea are not sufficient to meet Europe’s oil and gas demand. As far as oil is concerned, Europe is highly dependent on oil imports from Russia, Africa, Saudi Arabia and other Gulf states.

The politics of transit pipelines which by its network-bound transcends through territories to deliver oil and gas to markets in a third country makes it imperative that energy security for the consumer nation is safeguarded through the creation of a privileged relationship of investment and trade with the transit country.

3. OBsolescence Bargain and Impact on the Supply Value Chain

3.1 Theory of Obsolescence Bargaining

The theory of obsolescing bargain plays an important role in the determination of transit agreements and impacts on the supply value chain. This is because it affects how the balance of power shifts along the pipeline supply chain and inordinately bears on resource supply security for the consumer nation.

Essentially, the concept runs on the principle that time brings a change in perspective to bargaining relations between governments and foreign corporations (Jenkins, 1986). The host government has valuable resources it is unable to exploit because of apparent lack of financial, technological or marketing power and requires the technologically advanced MNCs to explore its resources. At this point, it is in a poor bargaining position relative to the MNCs to undertake
the risk of exploiting its natural resources and uses the lure of generous concession agreements to secure the participation of the MNC. However, once the investment has proven a successful venture, the perceived level of risk exposure to the MNC drops and the host country no longer views the high return to the company as appropriate. At the same time, the national priorities may have changed for the host government, with new political leaders entering power and realignments in perceptions of economic development. But the MNC has already invested tremendous capital into a profitable project that it certainly wants to continue running (Malesky, 2006). The increased pressure on the host government to raise demands on the investor and the inability of the MNC creates a situation where the attractive agreement first reached with the MNC will inevitably ‘obsolesce’ (Vernon, 1980).

The advantage shifts from the investment supplier to the investment recipient once the investment is in place. Vernon succinctly describes it as, “almost from the moment that signatures have dried on the document, powerful forces go to work that renders the agreements obsolete in the eyes of the government” (Vernon, 1980). The bargaining advantage is in the favour of the host country and the obsolescence usually takes the form of renegotiated contracts, higher taxes, expropriation or seizure of the income stream of the firm (Malesky, 2006).

3.2 OBSOLESCENCE BARGAINING IN TRANSIT PIPELINES

Obsolescing bargain has a fundamental role which it plays in transit pipelines and resource supply security for the consumer nation. These have been seen in the threats of pipeline disruptions and the ever-changing transit terms made by the transit nations after the agreements have been reached between the parties. The pipeline is a tight structures in which disruptions affects the operation of the
entire value chain. These situations remain an overhanging risk which represents a sour point for the consumer nations in creating an assured system for securing their security of supply. The focus of this chapter is to examine instances of transit pipeline disputes that have arisen as a result of obsolescence in the interest of the exporting country.

Obsolescence bargain applies through the prism of pre-pipeline and operating stage. The first is the pre-pipeline stage in which the possible outcome is an agreement on the terms of the contract before the pipeline is built and the second is the operating stage, in which the consequences of disruptions as a result of breakdown in renegotiations are more severe (Omonbude, 2007).

3.2.1 The Russian-Ukraine Pipeline disputes
Ukraine serves as a transit country for the export of Russian gas to Europe. It receives compensation in the region of about 17 billion cubic meters of gas out of a total gas consumption of 80 billion cubic meters of natural gas for the transit of Russian gas. The terms of the transit agreement between the Ukrainian and Russian governments provides that 15% of gas piped through the Ukrainian network of pipelines would be transit fees.

In 2005, Gazprom, the Russian state-owned gas monopoly company informed Ukraine that the gas prices were to be raised to market rates. The Ukrainian government accepting, on one hand, the need for to pay at the going rate and the other hand objected to the short notice of such an increase in the gas price. The Ukrainian however took step to change radically the method of compensation for the transition of Gazprom, requiring a change from barter to actual money at increased gas transit fees.

The parties entered into negotiations on the differing terms and were unable to reach an agreement to resolve the dispute. Gazprom cut gas
exports to Ukraine and the Ukrainians reiterated with disruptions to Russian gas supply to its Western European customers. As the dispute transpired, gas supplies were affected with all customers reporting varying degrees of reduction in gas flow. Gazprom accused Ukraine of taking gas which Naftogaz, Ukraine's state-owned energy firm admitted withholding some Russian gas intended for other European countries. After a circus of diplomatic interventions and political discussions in the two countries, the EU and US, a compromise contract was reached where gas prices were roughly doubled but Ukraine transit fees also increased. At this point, the supply was restored soon after the agreement was settled between Russia and Ukraine (Stern, 2006).

3.2.2 The Trans-Arabian Pipeline (Tapline)
The Trans-Arabian Pipeline (Tapline) ran from Quaisuimah, Saudi Arabia through Jordan and Syria to Zahrani in Lebanon. It was at a point an important factor in the global trade of petroleum being a potential export route for Persian Gulf oil exports to Europe and the United States.

The Tapline has a total length of 2,653 miles (4,280 kilometres) with a daily capacity of 500,000 barrels per day (b/d). Upon its construction, it was the world’s largest oil pipeline system and offered a cheaper alternative transportation cost of moving oil to Europe at a rate of 40% less than shipping by tanker through the Suez Canal. At the peak of its operations, the Tapline transported up to 30% of ARAMCO’s production of Saudi Arabian crude.

The Tapline suffered several interruptions, some of which largely flowed from issues of obsolescing bargain. An apparent fallout of the use of shifting bargaining positions to renegotiate transit terms by transit countries was seen in the Tapline closure between May 1970 and January 1971.
In May 1970, Tapline was ruptured near Deraa by a bulldozer working on telephone cables. Syria refused to allow repairs without a new transit agreement. The Syrian government used the closure as a bargaining lever to renegotiate their transit fees, giving double transit fees and to aggravate the acceptance of the IOCs in Libya to accede to the Libyan Government demands at a time when the Libyan government had constrained production. The closure came at an opportune time for Libya, which was negotiating for higher posted prices. It aggravatated crude shortages in the Mediterranean, improving Libya’s bargaining position. While there is no evidence of collusion, in 1971 Libya made a substantial aid donation to Syria (ESMAP, 2003).

3.2.3 Iraqi Export Routes

The Iraqi Kirkuk fields had its export routes progressed through its pipelines laid across Lebanon and Syria with exits at Tripoli, Lebanon and Banias in Syria. The pipelines history has been besotted by disputes with the Syrians and Lebanon over transit fees, although Lebanon tended to wait for Syria to obtain improved terms and then demand parity.

The original transit agreement with Syria in 1931 was to last for 70 years. However, during the period of 1947-50, there were inordinate demands on the Iraqi Petroleum Company (IPC), concession holder for the Kirkuk fields which made additional payments and a transit agreement was signed. The agreement provided for a transit fee and the provision of crude oil to Syria at "world prices" for domestic use. In 1952, Iraqi government revenue increased as the result of the introduction of a fifty-fifty profit sharing system with IPC and both Syria and Lebanon demanded some share of the spoils. Eventually IPC agreed to new terms in a 1955 agreement with Syria and a 1959 agreement with Lebanon. These agreements which virtually quadrupled the revenues were modelled on a fifty-fifty profit split.
In mid 1966, the new government in Syria, on the grounds of seeking to control "foreign companies", demanded an increase in fees. The basis of the argument was that since the capacity of the line had increased, average costs must have fallen implying lower costs and therefore a higher profit base from which to calculate Syria's fifty percent share. When the IPC came close to agreement, the Syrian government sensing weakness demanded a retroactive settlement which IPC refused. In November 1966, negotiations ceased and Syria unilaterally imposed an increase in fees. Pumping stopped in mid-December. In March 1967, the Syrians rescinded the decision and negotiations were reopened. Agreement was quickly reached but without retroaction.

Iraq was not totally without bargaining leverage since Syria was to some extent dependent upon the foreign exchange earnings from the transit fees. In July 1971, another revised term was agreed with IPC and it was announced that Iraq had decided to build a 48 inch line from North Rumaila via Syria with a capacity of 50 million tons per year. An actual agreement with Syria to this effect had been signed in June 1970 and preliminary work completed by Snamprogetti acting as contractor. However, before full work could begin Iraq nationalized the IPC. Syria then nationalized IPC property in Syria (ie the pipeline) which meant a new transit agreement was required.

Negotiations began but it was clear that Syria was determined to drive a very hard bargain. In January 1973, Syria threatened unilateral action. Iraq, in an extremely weak bargaining situation, was forced to accept Syria's demands which produced an agreement which lasted until December 1975. The agreement gave a transit fee of 41 cents to Syria and 11 cents to Lebanon but these included costs to be borne by the two governments. This was later increased to allow for the devaluation of the dollar as per the agreement resulting in a payment to Syria of 45.44 cents. In addition, both governments were allowed to
lift crude at special prices - $2.45 in 1973 escalating to $2.75 by the end of 1975. Lebanon was allowed to lift a maximum of 1.5 million tons per year while Syria could lift "crude oil requirements for domestic consumption". The crude price was also raised by 11.1 percent to cover the dollar's devaluation (ESMAP, 2003).

4. OPTIONS FOR SECURITY OF SUPPLY

4.1 THE ENERGY CHARTER OPTION

The Energy Charter Treaty is a multilateral agreement between many countries, which governs the terms of energy investment between the countries. It is directed at integrating the energy sectors under a common legal regime and is signed by about 49 countries, mostly the European countries and has about 20 countries acting as observers.

The Preamble of the Treaty puts its overreaching focus as to "catalyse economic growth by means of measures to liberalize investment and trade in energy". Article 2 of the Treaty prescribes its purpose being to establish "a legal framework in order to promote long-term cooperation in the energy field" between its signatories.

The Treaty mentions transit in Article 7 by which it requires that all Treaty Parties undertake to facilitate transit. The core provisions of the Treaty for conditions of transit are by introducing non-discriminatory and reasonable treatment of existing flows of energy materials and products in transit. The non-discriminatory aspects of the Treaty is further developed in paragraphs (2), (3) and (4) of the Article 7 which made some important supplemental obligations in the treatment of transit issues.

• A positive encouragement to modernising of transit facilities; development of facilities serving more than one state; avoidance of interruptions and development of interconnections; (Energy Charter, Article 7(2))
• There is an obligation to treat oil and gas in transit in no less favourably than domestic oil and gas; (Energy Charter, Article 7(3))

• There is no discouragement of obstacles to the creation of extra capacity to make commercially feasible a marginal pipeline; (Energy Charter, Article 7(4))

Article 7(5) places extra burden on the transit nation by requiring that a Contracting Party through whose area energy materials and products may transit shall not be obliged to (a) permit the construction or modification of energy transport facilities; or (b) permit new or additional transit through existing energy transport facilities, which it demonstrates to the other Contracting Parties concerned, would endanger the security or efficiency of its energy systems, including the security of supply.

With the lofty provisions of the Energy Charter, the transit provisions will always be confronted in the future with the same problems which all multinational agreements have to face. Their success depends on the willingness of the signatories to act in accordance with their rights and duties laid down in the Treaty. There is no guarantee that transit issues will not be determined by political considerations rather than legal obligations (Rainer, 1998).

4.2 THE ‘ALTERNATIVE ROUTE’ OPTION

The constraints of transit pipelines have also thrown up the alternative of the ‘alternative route’ option. Transit pipelines which when they are single lines upon which exporters are dependent are extremely vulnerable to economic squeezes (Stephens, 1998). Professor Stephens have argued that irrespective of agreements or good political relations existing between the contracting parties, the
lure of capturing greater revenue from the operation of a pipeline in its territory is an irresistible one. Thus, except in special circumstances, single export pipelines are likely to experience disruption as part of the bargaining process between the transit government and the pipeline company (Stephens, 1998).

Therefore, the option of an alternative export route serves to enhance that the bargaining power switches to the exporter who is then in a position to dictate terms. However the seemingly downside of this option only serves to present itself where the alternatives collude and the cost implications of developing alternative transports.

5. **CONCLUSIONS**

Transit pipelines have remained a thorny issue with regards to ensuring security of supply for both the consumer nation who suffers disruptions and for the exporter nation who suffers loss of revenue. It is clear from this paper that these various options have shortcomings which largely does not confer a solution that is secured and assured in resource supply. Therefore, in addressing the question of what options exist for securing resource supply in view of the obsolescing bargain, it remains that such an option has not yet crystallized in the course of this research.
BIBLIOGRAPHY

1. Primary Source

2. Secondary sources

2.1 Books


2.2 Articles

IN A BOOK


### 2.3 OTHER

**Internet**

BP Statistical Review of World Energy 2007


Jenkins, B., *Re-examining the Obsolescing Bargain: A Study of Canada’s National Energy Program*,

http://www.jstor.org/view/00208183/dm980253/98p0102r/0 (Last visited on 28 December 2007)

Joint UNDP/World Bank Energy Sector Management Assistance Programme (ESMAP), *Cross-Border Oil and Gas pipelines: Problems and Prospects*


