# Identifying and Quantifying Political Risk Factors for Petroleum Investments

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Abstract

One of the types of risk encountered in petroleum investments is political risk. Political risk is the probability of changes in the business environment due to political changes. There exists a need to treat analysis of this risk in a more systematic and quantitative manner. In this paper Latin America is used as a study area for a method of classification and analysis. From the research a number of qualitative conclusions are made as to the political risk trends and to approaches to studying the problem.

The oil industry is one of the most capital intensive and one of the most risky enterprises which exists. Last year the success ratio for wildcat wells (those wells drilled in unproven areas) was about one in eight.[1] There are a number of texts that have been written about handling this risk and uncertainty in petroleum exploration.[2] These texts while cognizant of the many different kinds ofrisk are primarily concerned with natural risks. These are risks such as insufficient reserves to make the discovery commercial.

The purpose of this research project was to identify and quantify a different type of risk -- political risk. While the industry recognizes the existence of this type of risk, there has not been a systematic approach to studying the problem. This is probably due to unfamiliarity with the concepts of the problem. For the purposes of this paper, political risk is the probability of a change in the business climate due to political events. It is implicit that the changes in business climate would affect the profitability of an investment. If it did not affect profitability the change should not be of particular interest. Another consideration is the rate of political change. The business climate for any investment is not static. The rate of change must be great enough so as to be an aberration which a business could not adapt to in the normal course of operations.

Early in the project, a major decision was made to consider petroleum investments in Latin America. This decision was made in two stages: the first was to consider the alternative of domestic or foreign political risks, and the second was the choice of Latin America rather than the choice of another area.

The first decision was to study political risk in foreign countries. This decision was made for three reasons:

1. The United States has a stable political system relative to other systems around the world. This results in the political changes and risks being more subtle and complex. One of the major causes of changes in business climate can be due to the overthrow of the government. This potential exists in many foreign countries, but not in the United States.

2. The state in many foreign economic and legal structures is more important than the United States government in affecting the business climate. In Latin America the inherited Spanishlaw leads to state ownership of subsurface mineral rights. This state ownership leads to more government input in decision making. A domestic example of this is that leasing of federal lands is more complex than leasing of private lands.

3. The most important reason for increased political risk in foreign investments is that they involve a sovereign nation and a foreign multinational company. An American company working in the United States has

a natural constituency in its stockholders and employees. In the foreign situation, the company may be perceived to pose a threat to the culture, social order and political system. There is much more a natural adversary relationship than when the interaction is between an American company and the United States government.

Latin America was choosen as the area of consideration for a number of reasons:

1. A principal reason is the long history of nationalism in Latin America. The countries in Latin America have existed as nations since the 1820's. These feelings of nationalism were nurtured by the poor relationship which existed between the United States and Latin America. This long-term situation leaves a longer historical record for study than does the situation of third world countries who have gained their independence since World War II.

2. The long history of oil exploration and nationalistic expropriation provides a wealth of material for study. Foreign exploration for oil in Latin America dates from the late 1880's.[3] Latin American countries, in particular Venezuela, have been the leaders in nationalization and renogiation of terms. An example of the cyclical nature of governmental policy can be found in the Bolivian experience. In 1927 an American

company made the first discovery, but this operation (and all others) was nationalized in 1938. In 1955 a system of concessions was established. The policy was again changed in October 1969 and all concessions were nationalized. In 1973 companies were invited back on a production sharing basis.[4] From this example the frequent shifts in policy can be seen. Much information is provided for analysis.

3.A benefit which derives from the lengthy history and attention given the Latin American situation is the existence of a number of scholarly works on the question of system instability.

4.The current situation in Latin America is one which makes for an interesting study. A number of nations need and want multinational involvement in developing their petroleum resources. For their part the companies are interested in investing if the terms look promising. This situation is a fluid one where an equilibrium has not been found.

5. There is an underlying common cultural heritage for the South American continent. This allows for much easier cross-national comparisons of the reasons for political risks.

In identifying types of political risk found in foreign investments, a preliminary step is to make a deliniation into two categories. The two categories as developed in this paper are macro-political risk and micro-policy risk. These categories are similar to ones developed by Robeck.[5]

Macro-political risk involves questions affecting the basic stability of the political system and the business climate as a whole. The most obvious example would be government overthrow and broad based nationalization. There has been some research done in this area because this category is related to system stability. Such researchers as Bwy[6] and Gurr[7] have studied the casual links between sociological factors and system stability. A classic example of macro-political risk would be Fidel Castro coming to power in Cuba.

Micro-policy risk involves changes in government policy which affects a particular segment of the business community. Included in this idea is that the country is using a somewhat rational policy making mode. Because it involves more of a policy question, economic considerations would have a more important role in micro-policy analysis than in macro-political risk.

In the course of this research it was necessary to decide what category of risk should be studied. The approach to analyzing each type would be different. The decision was made to study micro-policy risk . One reason was that less work has been done on this subject. As alluded to earlier, there exists research in the area of system stability and macro-political risk. A second reason is that micro-policy risk is of particular importance to the petroleum industry. As defined, micro-policy risk is concerned with policy directed toward particular segments of the business community. The petroleum industry is a particularly vulnerable industry because it is an extractive industry with significant economic impact on a country's economy. Historically, extractive industries have been vulnerable to nationalistic feelings. The third and possibly most important reason is that micro-policy factors are becoming more important as an explanation for a changing business climate.

Although Weekly[8] does not use the macro-micro terminology used in this paper, his description of this trend is excellent. He writes:

> Since the early 1960's, the rationale and basic thrust of expropriation actions appear to have undergone a fundamental change. Although politics and ideologies continue to play a part, expropriations have become increasingly interwined with the economic aspirations and tribulations of the developing countries. Thus, the earlier era in which expropriations tended to be inspired largely by ideological or nationalistic emotions has given way to a situation in which the governments of host countries base their takeover decisions upon calculations of the economic costs and benefits of assuming ownership and control of business enterprises, relative to the costs and benefits of

assuming ownership and control of business enterprises, relative to the costs and benefits of leaving those enterprises in foreign hands.

From the examination of the available literature[9] the components of political risk can be identified.The eleven identified for the petroleum industry are:

1. Ownership control - The type of investment ownership terms which are in the contract. These could include concessions, production sharing, or service contracts.

2. Freedom of exploration competition - Is the multinational corporation competing on equal footing with domestic companies in leasing of prospective tracts?

3. Repatriation of profits - Are companies allowed to repatriate profits to their home countries or are they required to reinvest them in the country?

4. Effective government take - What is the host country taking in the form of taxes and royalties?

5. Product Pricing - Is the price of produced petroleum controlled by the government? The most common situation thiswould apply to would be if the company's oil or gas production is committed to the domestic market at a subsidized price.

6. Expropriation - What is the government policy on nationalization of petroleum investments?

7. Personnel Use - Are the comapnies required to use domestic personnel in the field and in management? This component is probably becoming less important as the movements toward service contracts continues.

8. Participation as Integrated Company - Is the company allowed to simultaneously be in the exploration, production, refining and marketing phases? To some companies this is important because it allows them to take their profit at whichever is the most convenient level.

9. Product Control - Does the company have the freedom of decision making on exporting of product? A number of contracts include clauses that require that domestic market needs be supplied before there can be any exports.

10. Civil Disorder Losses - Damage to property due to civil unrest. This would be a ramification of system instability. This particular category is concerned with actual damage due to riots and revolutions.

11. External War Losses - Losses due to wars between countries.

For the purpose of studying micro-policy risks, the first nine components were used. It should be noted that some of these components could apply to macro-political risk in certain contexts. An example would be the expropriation component if it were part of a broad program of nationalization. The last two components clearly belong in the analysis of macro-political risk.

To study the types of micro-policy risk, content analysis was selected as the best method. Content analysis is a type of political analysis which is concerned with the content of messages communicated through the media. The method used in this paper is to use current business and industry periodicals to analyze the governments' positions in those nine categories of political risk previously discussed. When done in a systematic method, this approach should represent the most thorough data set available. According to Dr. Charles Doran of Rice University,[10] information from these periodicals represents the best available and is the information most companies use on broad cross-national comparisons of investment climates.

There are a number of different techniques that can be used. One of the most popular is the Delphi method. A sophisticated version of this method is used by Shell Oil and has been discussed in the literature.[11] Simply stated, the Delphi method consists of a panel of experts predicting the probability of future events. Without a panel of experts readily available, use of the Delphi method would have been very difficult for this project.

To provide quantitative data, an index was created for each of the nine components. These indexes varied from 1-3 to 1-5. This variation depended on how much differentiation could be made in each category. These indexes are contained in appendix A.

Current periodicals used for this analysis are Oil and Gas Journal, World Oil, Petroleum Economist, and New York Times. For the first three periodicals most of the references were found in the Business Periodicals Index. These were the best sources which were available. Due to the time restraints for this paper, attention was only given to the time frame of 1977 to the present.

A number of problems exist with the quality of information from these sources. The first problem is that the nations and companies do not make public the written text of the agreements. More likely, the information is very vague because of the existence of continuing negotiations. The second fact here is the positive tone which will be expressed to the media. Very few countries announce a new group of exploration blocks by describing their terms as "unfair." The terminology used is that the terms are "attractive." Another problem which eliminated some of the collected data was the mixing of policy and event analysis. From a social science analysis point of view it would be possible to use content analysis for either policy or events, but there is a problem in using both. In this paper policy analysis was the goal; thus references to specific events (such as the actual nationalization of a company's holdings) would not be included.

The ultimate goal of a project such as this one would be to quantify the various factors and trends involved. Such a quantified approach fits into the basic economic evaluation mode used by multinational companies. During the fall it became apparent that this would be beyond the scope of the time restraints imposed by the project.

A more realistic goal was to accumulate enough data to do a time-sequence ranking of the countries for the different components of political risk. This kind of project would involve reducing the categories by regression analysis to several which share common characteristics. These categories might be operations controls, profitability, and product controls. These rankings would be made at two points in time such as 1976 and 1978. It would then be possible to compare changes in policy and trends during this time sequence.

After the data was collected from the available sources, the conclusion was reached that there was a lack of enough definitive information to construct these rankings. A principal problem was that the sixty five collected references were too few.The second problem was that the information was not detailed enough for quantitative analysis. The need exists for both greatly increased quantity and quality of information. The ideal solution would be an annual survey which examined each country's petroleum policy and the resultant political risk.

With the collected data it is possible to draw a number of qualitative conclusions. They are:

1. Micro-policy factors are in fact becoming more important. Earlier in the paper, it was argued that micro-policy risk is becoming more important. The data

collected supports this conclusion. For the components of ownership control, freedom of competition,and government take , there were twenty one references in seven countries. For the expropriation component there were eight references in two countries. In neither of these two countries was the policy change due to a change in government.

2. Over the past two years, there are definite shifts in policies toward attracting more foreign investments in the following countries: Argentina, Brazil, Chile, Ecuador, and Peru. There are two interacting factors for this. One is the emergence of micro-policy components as more important than macro-political factors. As mentioned earlier this means more attention is given to economics. The second factor is the world situation of supply shortages and higher prices. This situation affects the South American countries who are incurring large balence of trade deficits because of the high priced oil imports,or who would like to become a net exporter and reap the benefits of the higher prices. These two factors have led to increased consideration of using foreign companies to develop petroleum resources.

3. From the viewpoint of the multinational petroleum companies the petroleum potential of South America is marginal enough that they do not feel it a necessity to invest. Instead they examine each set of terms and

make a decision. An example is Peru where there was a revision of terms in 1977 because no companies had responded to an earlier offer. The conclusion that can be reached is that the Latin American petroleum investment situation will continue to be a fluid, continuing situation for the near future.

## Appendix A

### Indices for Political Risk Components

1. Ownership Control
    1. Company decision making
    2. Majority partnership
    3. Joint management
    4. Minority partnership
    5. Service contracts
2. Freedom of Competition
    1. Same opportunities as state companies
    2. Some limitations exist
    3. State companies given preferred arrangements
3. Repatriation of Profits
    1. Free to repatriation
    2. Limitations on amount
    3. Must be reinvested
    4. Specified Reinvestments
4. Effective Government Take ( royalty/tax rate)
    1. Attractive
    2. World status quo
    3. Too rigid
    4. Confiscatory

5. Product Pricing

    1. World pricing
    2. Limited negotiated price
    3. Subsidized price for domestic market

6. Expropriation as Tool of Policy

    1. Publically rejected
    2. Increased ownership by state
    3. Nationalization with adequate compensation
    4. Nationalization with inadequate compensation

7. Personnel Use

    1. Free to use any personnel
    2. Training and integrating domestics into operations
    3. Development of domestic managers
    4. Work Force must be domestic

8. Participation on Integrated Scale

    1. Can participate on all evels
    2. Limited to several phases
    3. Limited to one phase of buiness

9. Control of Crude/Export Controls

    1. Company controls use and destination
    2. Export limitations
    3. Product can't be exported

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