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POLITICAL RISK AND OFFSHORE OIL AND GAS

Rice University

M.A. 1982

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POLITICAL RISK AND OFFSHORE OIL AND GAS

by

Alexandre Louis Allard

A Thesis Submitted
In Partial Fulfillment of the
Requirements for the Degree
Master of Arts

APPROVED, THESIS COMMITTEE

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ABSTRACT

When a multinational corporation wants to invest overseas, financial ratios (taking into account expected profit, cost, market size... are usually not sufficient to assess the problem. The missing factors come mainly from possible interference of the host country and the international environment. Political risk analysis is the study of such interfering events as expropriation, war or regulations in so far as they affect a corporation's goals.

The literature of that field, reviewed extensively in the first chapter, is recent and fairly weak. A few attempts have been made toward better information on the political risk phenomenon and toward a better understanding of the factors, the process, and the consequences. The final goal is to allow most companies to deal successfully with most situations involving foreign political factors.

In order to reach that goal, an approach was designated which should allow, from a broad model, adaptation and translation to a specific problem. The specific problem chosen for this thesis is offshore oil and gas exploration and production. The general framework, relating political risks to their source and their consequence for business goals, was thus translated and adapted to oil companies first and then to specific offshore problems.
This approach was then applied to the North Sea case, which, because of its completed development, is considered as a model. A typology of political risks relevant to offshore operations assessment is composed of two sets: an international set and a national (host country) set. A historical analysis of each of the risks involved proved useful for an understanding of the pattern of development in the North Sea as well as in the South China Sea and in the Middle Mediterranean Sea.

The major reasons for the development differences appeared to involve four aspects. First the presence or absence of a destabilizing power appeared important for the solution of boundary disputes: it is probably related in part to the poor development of the Law of the Sea. Thirdly, national governments may have a long experience of political and economic relationship or at the opposite be young or irrational or unexperienced and thus do not reach the optimal level of taxation. Finally OPEC price decisions affect short term and long term development of more costly offshore investments.

While taxation and profit are an important factor for any project (onshore or offshore), offshore oil development depends on international political variables from the start. It is only when international political problems
have been solved that host country factors reach their fullest impact.

The multinational oil companies have therefore to assess the impact of numerous political risks. But they also developed powerful techniques to manage these political risks, at least up to 1975.
ACKNOWLEDGEMENTS

What merit exists in the work which follows proceeds directly from the support and encouragement I have received from many persons.

First, I consider myself to have been fortunate to study at Rice University. I have appreciated the flexibility; and attention demonstrated by the University Administration and the Political Science Department, as well as the support provided by the librarian team of the Fondren Library.

Several scholars have influenced the development of this thesis. While I was awakened to International Relations by Dr. Richard J. Stoll, Drs. Biance Mascarchnas and Fred Von der Mehden taught me the basics of politics — business interaction in a course named "Political Risk Analysis". I am especially grateful to Dr. Von der Mehden for the encouragement which helped me go through some difficult periods.

Finally, I am most indebted to my wife Brigitte who typed the first drafts of the thesis and corrected most of my mistakes. Any shortcomings and errors still present are strictly my own.
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INTRODUCTION

Since the beginning of the century, multinational corporations have been considered as political actors. MNCs affect the countries in which they invest in more ways than a purely economic one. While their actions are only sometimes considered as political, actions taken by other actors such as host and home countries are political in nature. In one case, consequences of profitability criteria may affect the allocation of goods and values in a society; in the other case actions exist in order to affect the allocation.

Business executives would probably prefer to be left free of political interference and to take purely economic and financial decisions. At home and even more so in foreign countries, the business world and the political world interact.

This problem has usually been neglected because it lies, for scholars, in a grey area between Business and Administration on one hand, and Political Science on the other hand. Few scholars attempted to bridge the gap in a significant way.

One of the best examples in the 70's, of political decisions with great consequences, was the first oil crisis
in 1974. A commodity price decision is not supposed to be political, it should, according to economists, depend on supply and demand variables.

As it has been obvious in recent years oil prices are less and less the result of an economic decision based on the market situation.

The relationship between oil companies and politics has been the subject of an important literature. It covers such subjects as the domination by the Seven Sisters, the symbiotic relationship between oil companies and Middle Eastern countries, and the effect and involvement of oil companies into domestic politics and policy-making.

Few have considered the internal decision-making processes leading to oil investments in foreign countries. Even fewer scholars have associated the state of under exploration of the Third World with political problems.

Since it is difficult to test directly such an association, I took offshore oil and gas as a special case study. Since offshore exploration is much more expensive, corporation will usually be more careful and look at more factors. Secondly, offshore waters are very often international waters labeled economic zones (nonterritorial waters controlled for economic purposes) unilaterally or regionally. International as well as national political factors could affect offshore development. In order to
analyze the problem, a logical line, from general to specific, will be followed.

Chapter I will review the political risk literature in order to give to the business scholar, as well as to the political scientist, an understanding of that part of the grey area between the two fields. For each section of the review, (descriptive, focused, and comprehensive studies) I will try to show the evolution and the negative/positive aspects of the literature.

Chapter II will be an attempt to create an adaptable approach to political risk. The goal is to allow a company to translate the framework and to adapt it to its own needs. This process of adaptation will be shown in Chapter III and IV, for oil companies first and then for offshore problems.

Finally I will analyze three cases of offshore regions to determine whether political factors are important and in what manner they operate.
CHAPTER I

A REVIEW OF THE POLITICAL RISK LITERATURE

Political Risk analysis is a recent field which could be placed between business and politics. Its development occurred mainly during the 1970's. In order to understand what political risk is, I will review in this first chapter the literature related to it in an extensive manner.

A political risk is the probability of occurrence that a political event will affect positively or negatively a company's goals: it is an expectation of political interference.

Since the interaction of politics and business is a complex and difficult problem, the degree of sophistication and comprehensiveness of a study will be an important consideration in ordering the review. But we should not forget the degree of contribution to, and improvement of, data basis. I will divide the review into descriptive, focused, and theoretical studies.

Descriptive studies will show the chronology or characteristics of an expropriation, will observe the behavior of MNC and Host Governments. The goal of such studies should be to provide information about the phenomenon.
With enough of these building blocks, the political risk analyst should be able to find relationships or laws improving the understanding of political risk.

Focused studies are, in a sense, middle range theories. By focusing on a specific aspect, factor or consequence, they get the information needed and try to find explanatory relationships. Their goal is to provide analysis for parts of the general political risk problem.

Finally theoretical approaches try to organize and analyze the data in a comprehensive way, and will bring normative statements on what the relationships and laws, the consequences and solutions, should or should not be.

The review and the bibliography found at the end of the chapter are as extensive as possible as of 1981. The research for papers and books dealing with political risk has been done with the Library of Congress indexes, with computerized data bases and bibliographical indexes. The authors listed in the review are good, bad or unique examples chosen for each part. In the first part of this chapter, the descriptive studies, most authors are to be taken as representative of their field and not as unique. The degree of uniqueness increases markedly along the review (while this is no indication of the quality of the studies).
A. Descriptive Studies

The review begins by studies of expropriations, because this political event is the main reason behind the birth of the political risk field. More generally, political events that affect overseas investments could be seen through the investment behavior of the MNC and through the relationships MNCs have with host governments and the international community. Investment behavior is interesting because it may or may not be influenced by political factors as a macro-economic level. The relationships with nation-states are significant as indicators of the intensity and types of risk to expect.

1. Description of expropriation and nationalization

One typical political risk is the expropriation of foreign investment. The literature on that subject has been prolific, because expropriation is the greatest loss possible. Moreover, the number of expropriations by itself has made it possible to study trends and factors, by industry or region.

For example, Truitt looked in 1970 at the post-war experience of English and American corporations, rejected the hypothesized likely disappearance of expropriations, and showed what was the distribution of expropriations by type of industry or service. Four years later, P. Nehemkis was able to say that expropriation had a "silver
lining" by looking at the new relationships and the new possibilities of insurance and negotiation; this was probably overly optimistic. A new survey in 1976 by Hawkins, Mintz and Provissiero showed that the Truitt projections were confirmed. This survey showed the distribution of expropriations by type of industry, region, form of take over, selectivity of takeover and political-economic circumstances.

The trend, confirmed by Weekly in 1977 is that expropriations are becoming more selective (affecting specific companies) and that interference by regulation or contract renegotiation is much more frequent than in the past. The masterpiece of the literature describing expropriations is probably the recent book of Akinsanya, *The Expropriation of Multinational Property in the Third World*.

These descriptions related to one very important political risk are only one step in the direction of a better understanding of the problem of political interference.

2. Investment behavior of the multinational corporations

At a more general level, a few authors described the investment behavior of the multinational corporations. According to a classical economic approach, a corporation would invest where the return is higher.
This assumption became gradually under attack after a survey study of Basi in 1963, but mainly with "The Foreign Investment Decision Process" of Aharoni Yair in 1966. His examples may be dated, but the examination of the process of overseas investment is still valid. In his book, the political aspect was a very important factor of the investment decision process: in the beliefs of the executive prior to any investment proposal and in the incentive given by foreign governments. While not primary, the political risks were a significant part of the factors of investments he gave (8 out of 32) (Yair, pp. 76-78). Among the political types of risks cited, were war, expropriation, revolution and general political instability, and government intervention. He stated that our perception of the risk should change through investigation, which is done by analyzing general indicators and by going to the country. For Yair, political risk analysis should be integrated in the decision-making investment process.

The fact that the overseas investments do not follow the normal pattern of financial choice proved for domestic investments was puzzling. The main reason for the distortion is the political risk factor. In 1975, Torndeden, surveying disinvestment cases, found that 6 out of 16 disinvestment cases involved host-government pressures.

How does the MNC executive behave in relation with political factors of overseas investment? The first and
major scholar to deal with this problem was Franklin D. Root in 1968. He will probably be considered as the father of the political risk field. After an extensive survey of multinational corporations, he published several articles showing the underlying belief systems of executives and a lack of systematic evaluation of political risks (Root, 1968, a and b). He stressed especially the role of uncertainty in political risk assessment and the importance of the relationship between executive attitude and actual investment. According to (Root; 1968a, p. 73) "The identification of political risks in a specific country, the explicit or implicit assignment of probability weights to those risks, and the formulation of company policies that are intended to avoid, minimize, or transfer, the perceived risks are, therefore, essential elements of the foreign investment decision process".

This is the starting definition for any political risk analyst. The strategies that Root recognized are avoidance, adaptation and risk transfer and are determined by the stand chosen between political risk and market opportunity criteria.

Another way to look at investment behavior exists at a macro level; such an approach takes the flow of investment as a dependent variable and the political factor as an independent variable. For that reason, the study of Lois H. Thunell deserves an extensive analysis.
His approach is to state intuitive hypotheses to be tested empirically.

To test his "intuitive" hypothesis, he used different time lags in regression analysis. With the results he made some normative statement on how executives should behave for overseas investments.

The variables analyzed and related in this study are level, flow and trend of investment as affected by characteristics of the company (large scale, labor intensive...) of the product and of the political system. For example U.S. and European based companies reacted very often in opposite ways to mass violence.

A typical reasoning was (Thunell, p. 97):
"Looking at differences between countries it was found that mass political instability has a direct negative impact on companies. These companies tend to increase their investments during stable periods. Therefore, mass political stability is what managers should keep their eyes on in the European countries". (emphasis added).

There are several problems with this approach. First, since evaluation of political risk is far from systematic for business executive, to look at the flow of investment is as likely to show what you should as to show what you should not do! Very few analyzed risks systematically. Thus, the behavior was random or close to it; i.e. to observe the behavior is not likely to be useful.
Secondly, an intensive use of time lags may confirm or disconfirm artificially some of the relationships, especially when the time period studied is short. Thirdly, he is committing an ecological fallacy by interfering from the flow of investment since the flow may be the result of different opposite phenomena affecting overseas investment.

Fourthly, he clearly stated the three models of Allison he is using to generate organizational hypothesis, but forgot the consequences: a good percentage of the decisions made have nothing to do with the environment, but are a result of internal company politics, while all models respond to external stimuli (Allison, p. 256). These decisions may not be for the best interest of the firm, but only of a section or an individual; finally, standard operating procedures will affect the investment process within a firm and thus, impair the causality hypothesized between political instability and flow of investment.

In brief, the validity to his assumptions and results could be doubted. Moreover he should not apply his type of reasoning for a phenomenon where the decision-making process is greatly imperfect. What remains from his study is more a description of flow of investment than a successful approach to synthesize political and economic aspects of the foreign investment decision process.
3. Investment Politics

If an investment is usually seen as contributing to the wealth of a country, drawbacks also appear. A foreign investment is often seen as bringing economic advantages and political drawbacks. This is the source of most misunderstandings between the MNC and the host-government. Negotiations, accommodations and interactions are an inevitable aspect of any investment life. Supranatural code of conduct or control are still not as important as they could probably be in the future.

a. Relationship MNC - Host-government

Relationships between MNC and host-governments are a form of political behavior relatively easy to observe. It is the surface of the political risk phenomenon. A good summary of the problems brought by foreign investment from the host country point of view was given by Mason in 1974. According to him, some common complaints are that international firms:

- restrict or allocate market,
- extract excessive profits,
- take over existing firms rather than erect new ones,
- source locally for a 100% ownership of equity,
- restrict access to modern technology,
- restrict the "learning by doing" process, do not train enough,
are confronting national planning or customs,
- contribute to inflation,
- dominate key sectors, and
- answer to a foreign government.

The number and intensity of the complaints stated by a host government is related very often to the techniques of political risk management. For example, to source locally is a good protection against expropriation but is perceived by the host government as a drain on limited resources. These complaints are a good indicator of the type of political risk likely to occur. Most problems come from a discrepancy in goals and objectives as seen by both parties.

The most profound aspirations of a government are usually tied to nationalism. Boddewyn and Cracco in 1972 offered an interesting classification of nationalist issues (Boddewyn, pp. 68, 69, 52).

"National interest as an element of nationalism reflects all governmental intervention when it aims at the accomplishment of the social, cultural, political and economic objectives of the nation... The desire to be master in one's house is the basic motivation underlying national sovereignty. The ability of nations to control their own development becomes the single most important objective... National identity means an empathy for a
participation in a national struggle in order to protect one's way of life, national pride or independence... In the long run, countries follow policies as nationalistic as they can afford." These feelings and motivations are a basic component and source of political actions affecting foreign investors.

b. Negotiations

According to Sachdev, the host government policies could be placed on a continuum from open door to expropriatory policies (Sachdev, p. 6):

Expropriatory policies
Regulatory policies
Receptive policies
Promotional policies
Open door policies

The negotiation can be a very different problem according to the type of policy. For example Cateora in 1971 stated a planned domestication of investment initiated by the company was a possibility of positive negotiation to avoid forced domestication or expropriation, actions which are both damaging. This insight was based on problems of the late 1960's. The main point to be kept in mind is that while economic wealth is wanted, economic and political influence is feared.
For Kapoor, negotiation is also an important aspect of the relationship with host-governments. He described some of its important characteristics: career background of negotiators, precedent orientation of decisions, short-term versus long-term goals, commitment, publicity and secrecy, importance of governmental and interest groups roles (Kapoor, 1972). For Vernon, while negotiations is important, the type of management of ownership the parties are willing to allow is the prime concern: wholly owned subsidiaries, joint ventures, co-production agreements and technical assistance do not entail the same degree of commitment, input and profit (Vernon 1968, p. 361) and therefore not the same degree of risk. While their interest of developed countries and developing countries are quite different, their common policy is to "squeeze the goose" as much as possible (Vernon, 1976), i.e. going as far as possible in putting pressure on the MNCs.

c. Conduct and Control of MNC

At a more general level, the conduct of the multinational is much more questioned today and many authors have seen the possibility of supranational control.

In the last decade, several bribery affairs have involved well known MNC and officials. Corruption in many developing countries is a normal fact of life. In
a study made by Time, a table shows averages of markup on contracts as well as the style involved to do it according to custom (Time, 1981, March 16th, p. 58-59). For example, Mexico involves a 15% to 20% markup. Many other practices such as transfer pricing or tax havens, increased the interest in controlling the multinational corporations.

At a more political level, the existence of private corporate foreign policy is a problem for all nation-states, as described by Nye for ITT (Nye, 1976). At a macro-economic level, the flow of investment could also lead to a political dominance interpretations, a view which led Model to ask for MNC restraint in investing abroad, a rather unrealistic stand, impairing a free allocation of economic resources (Model, 1967).

Behrman sees, as do many others, the MNC as a necessary problem. The way to solve the problem would be a supranational control of investment which would compliment and unify existing national legislation (Behrman, 1976). But controls and codes of conduct could only exist if no competition for investment was profitable. Bergsten, in writing about "Investment Wars" emphasizes the fact that many poor countries are ready to offer many incentives to attract foreign investments (Bergsten, 1975) while this does not always compensate the potential political risks. Tough policies are easier to implement in already well off
countries. Inequalities among nations will make it difficult (even through the UN) to reach an agreement on control of investment.

B. **Focused Studies**

So far I have studied descriptive and general approaches related to the political risk field. Beginning in the early 1970's many studies, usually articles or papers were written on more specific aspects of the political risk area. These were presented at conventions by corporate executives or published in business school journals.

Several foci seem to have emerged from the literature: studies focused on political risk in a specific industry, or service, in a specific region or country, focused on a specific type of political risk or a specific technique or on a specific strategy or tactic used to deal with political interference.

1. Industry-type related political risk

The types of political risk can be very different for various industries or services. For example, we should not expect to have the same problems in an extractive industry as in a manufacturing industry. An exporter, a banker and an insurer may not have the same interests. We will not analyze oil companies problems in this review,
since we will be studying this aspect extensively in 
subsequent chapters.

Specialized literature is developing about insurance 
problems, specific product manufacturing and service 
companies. Different companies in different sectors/ 
products will experience different degrees and types of 
political problems. United Fruit, Alcoa and ITT did not 
have the same problems. Case studies about their experi-
ences would probably help the political risk field to 
generate hypothesis or disconfirm some (See Gladwyn 
and Walter's "Multinationals Under Fire").

2. Focus on a geographical level

A study is often done at the country level, because 
the relevant political actor is more often than not the 
nation-state: for example, the study of Peru by Zink. 
But the geographic level can be different, for example a 
sea (North Sea business opportunities as opposed to South 
China Sea), or a political region (EEC, COMECON, Andean Pact, 
ASEAN) or a continent (Africa, Asia). An impressive study 
of Asia was made in 1980 by Business International, giving 
a detailed picture of the particularities of Asian 
countries and offering an approach to the study of Asian 
politics. Nehrt in 1970 tried in the same way to study 
North African countries. Finally, consultants are very 
often country specialists.
3. Types of political risk

The most well known risk i.e. expropriation, has been described at the very beginning of this review to give an immediate feeling to the reader of what the political risk literature is about. But many other types of sources of risk exist.

While the host-government is usually the main source of risk, it may not be restricted to it: terrorism, described in 1979 by Kuhne and Schmitt, is an internal source of risk; boycotts, on the other hand are an external source of risk, which can be difficult to deal with for an American MNC. In spite of antiboycott laws issued by Congress more than 90% of US companies complied with the Arab boycott of Israel, stated Kaikati in 1978. Of course, war and riots are political risks too but they represent a very small minority of the losses (example the French-Iraqi nuclear plant in 1981).

Usually the main source of difficulty will be the host-government. The administration can be a problem because of corruption, red tape or politicization or the way it implements regulations and laws (called by Pretschker administrative risk). Political risks can be technologically oriented (pollution, training, transfer of technology, resources) as well as financial, economic, ethnic...
Many actions of host-governments, seen as hostile by MNC, are often considered as sovereign rights of the nation to be master on their soil (Sornarajah, 1979). The political vulnerability of an investment is linked to the likelihood of intervention. This political vulnerability is what theories will try to analyze because of its predictive potential. For example, Vernon considers one of the main conditions for government intervention as being the obsolescing bargaining position of the MNC (Vernon, 1981). Once the commitment is made and the plant technology gets older, the company has less and less arguments to defend its profits.

Finally one of the most interesting form of political risk is political instability: it seems that R. T. Green has made himself the specialist of investment related to political instability with at least four articles about this subject. Political instability is an important part of the comparative field in political science: Feierabend, Chalmers, Johnson, Almond, Russet, Banks and Textor (Green, 1976, Fall). For example he would give this continuum of regimes ranked by increasing political risk based on Almond and Powell classification (Green, 1976, Spring).
Instrumental - adaptative
Instrumental - non adaptative
Quasi instrumental
Modernizing autocracies
Military dictatorship
Mobilization systems
Newly independent state

Increasing risk of political change

The problem is that political change could be a good (ex: more rational government) as well as a bad (ex: political change leading to political instability) factor for foreign investment. Thus, this approach is too simplistic to be very useful. In 1975 in a study of the determinants of U.S. foreign investment, the correlation between political instability and investment in manufacturing was shown to be of only -.10 (Green, 1975, p. 116). This would demonstrate that political instability is not a major and immediate component of political risk, but his study, based on unchecked aggregate data, is too fragmented and should not be relied on. Data coming from the Third World should probably be aggregated more carefully; that is Green could have warned his readers that he didn't check the quality of the data.

In conclusion, many types of political risk are not analyzed deeply enough. Adaptation of general approaches to specific industries or situations will come from these focused studies. For example, a complete quantitative
treatment of expropriation-nationalization cases should allow insurance companies to adjust rates for political insurance in a more sophisticated manner.

4. Techniques and Tactics

A distinction has to be made between assessment and management techniques. The former is used mainly before the investment is made, the latter afterwards. Of course, a periodic assessment is necessary during the life of the investment but management is then much more important. Finally for both, the executive or the consultant must find sources of information and organizational structures to help him.

a. Assessment techniques

In the decision making process followed for an overseas investment, political factors together with financial, economic and technological factors must be assessed in order to reduce profit uncertainty. From the gut feeling to the geopolitical model, "techniques" cover a wide range of sophistication and systematization as well as usefulness. Basically three trends exist: First purely quantitative, such as indexes, time series analyses, and regression analysis. It can be applied to
political instability or violence (Smith, 1971) or to political intelligence (Heuers, 1978). The necessity of having a lot of data usually limits the time-horizon of the forecast as well as the potential translation and adaptation to a specific investment problem. In the same way, some technological forecasting techniques have been adapted to political analysis: delphi-techniques, scenario making, smoothing, s-curves, relevance trees... Finally a third approach is based on the utility of consultants for specific situations or countries (international lawyer, area specialist) and generally of expert generated data. Root for example, recognized quickly the need of expert generated probability judgements (Root, 1973).

b. Management techniques

The real problem happens usually to the overseas executive who has to cope with political interference. For Root, the preparation and awareness are two important factors: you should build early warning systems, maintain bargaining leverage, have contingency plans and manage your exposure (Root, 1981). You should be prepared to give a specific response to a specific problem by knowing what you are willing to give up. Since economic, political or legal pressures are likely to e unsuccessful (Hoskins,
1970), you should build a good image (Business International, 1975) and be close to the goals of the host-government.

c. Decision Making Process Studies

First decision makers could rely on outside information. One important source of advice is the consultants in political risk. From the country specialist to Business International or Frost and Sullivan, many sources are available. There are also numerous public sources such as newspapers, business associations, American Chambers of Commerce, and American Embassies. The last source, widely used, is composed of internal written or oral reports. An overseas executive may be biased, but not more so than many other sources (Behrman, 1977). We have seen with Root and Yarr that decision makers were not analyzing political risks systematically. Some authors analyzed indepth this problem by interviewing MNC executives. An example of that kind of study is the description made by Mascarenhas of decision making problems with political risk analysis.

Mascarenhas developed several points of political risk theory by doing indepth studies of a small number of firms. This is probably the best way to avoid the contradiction brought by mail surveys: Perceptions of political risk
factors and actual assessment do not seem to correspond. The reason for "the executives" disaffection "with their assessment process emerged [as]

(1) delay in preparing the report,
(2) the assessment process is reactive, not proactive,
(3) data problems,
(4) distortion of information as it moves through the organization,
(5) irrelevance of information,
(6) lack of skills required for effective assessment,
(7) no apparent top management support for the political assessment function" (Mascarenhas, 1980).

Some remedies used by companies are possible, in order to alleviate these above-mentioned problems (see Table I.1). Moreover, Mascarenhas used in 1981 the same technique of indepth studies to find out strategies actually used by companies to deal with political risk. He classified such methods as prediction, insurance, avoidance, control and flexibility. He analyzed more particularly strategies for exerting control on an investment specific risks and strategies for increasing flexibility vis a vis the political risks:
TABLE I.1

Summary of Problems in Assessing Political Risk and Possible Remedies

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Remedies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Delay in preparing the report</td>
<td>Buy ready-made assessments. Hire a consultant.</td>
</tr>
<tr>
<td>2. Process is reactive, not proactive</td>
<td>Conduct initial, independent assessments before investment proposals are received.</td>
</tr>
<tr>
<td>3. Data problems</td>
<td>Use several sources of data. Cross-check information from different sources. Use less sophisticated techniques.</td>
</tr>
<tr>
<td>4. Distortion of information</td>
<td>Use several information sources and of media transmission. Reduce differences in orientation of organization members. Use a mediator to bridge the gap between organization members with different orientations.</td>
</tr>
<tr>
<td>5. Irrelevance of information</td>
<td>Tentatively define initial strategy to focus scanning effort. Train managers and staff to have overlapping skills. Contact similar companies already operating in country of interest.</td>
</tr>
<tr>
<td>6. Lack of skills</td>
<td>Train managers and staff to have overlapping skills. Use less sophisticated analytical techniques.</td>
</tr>
<tr>
<td>7. No apparent top management support for the assessment units.</td>
<td>Inform staff in assessment unit why they were overruled.</td>
</tr>
</tbody>
</table>

(Source: Mascarenhas, 1981, p. 14)
<table>
<thead>
<tr>
<th><strong>CONTROL</strong></th>
<th><strong>FLEXIBILITY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vertical integration</td>
<td>1. General purpose equipment</td>
</tr>
<tr>
<td>2. Lobbying</td>
<td>2. Multiple markets</td>
</tr>
<tr>
<td>3. Questionable payments</td>
<td>3. Increase exporting, leasing, licensing, franchising and subcontracting</td>
</tr>
<tr>
<td>4. Advertising</td>
<td>4. Decentralized decision-making</td>
</tr>
<tr>
<td>5. Contracts</td>
<td>5. Short notice termination clauses</td>
</tr>
<tr>
<td></td>
<td>7. Intelligence system</td>
</tr>
</tbody>
</table>

This kind of research is very useful and should be developed in the future.

C. **Approaches and Theories**

In the last two parts we analyzed the literature by classifying it into descriptive and focused (analytical) studies. A theoretical approach is different from the last two typed of studies in a major way: the goal is to give useful advice for an important number of different situations and products or both; these approached will present qualitative or quantitative laws applying to political risk. They are divided into three groups: Adapted, Integrated, or Adaptable approaches. An approach is adapted when a lot of factors
are fixed and when the remaining ones are analyzed. It can be done by analyzing the problems specific to an industry or a country (industry adapted or country adapted) while trying to generate useful general statements or propositions. An integrated approach is based on the division of the investment problem into many sub-factors or dimensions which will be analyzed separately. An adaptable approach, finally, has for its core a general formulation of political risk aspects (assessment, management, techniques, tactics,...) and should give the means to adapt the primary laws or relationships different environments or problems.

1. Adapted approaches

The two main possibilities of adaptation are a country or a business focus. By taking a country as object of analysis, some writers (Zink, Hutzel, Rummel/Heenan) were able to avoid cross national differentiation. By focusing on a specific industry or service, other writers were able to eliminate non-useful factors or problems. These approaches could be considered as middle-range theories. The degree of sophistication is usually low, but their usefulness could be high because of their fit with the reality.

a. Approaches adapted to a country

A country could be chosen as an example or case study or as a part of the analysis. It is directly useful for
the investor willing to invest in that country, but also to anyone interested in knowing how to analyze potential investment locations. Rummel and Heenan in 1978 exposed different techniques of assessment to judge a country's potential political risk. These are "Grand Tours", "Old Hands", delphi techniques and quantitative methods (Rummel, p. 72). In other words, a corporation could utilize internal or external specialists, a panel of specialists or a body of data at different levels of sophistication.

The solution to the incompleteness of these methods is to have an integrated approach; such an approach would divide the analysis of a country into four major dimensions: domestic instability, foreign conflict, political climate, and economic climate. One dimension would then be broken into several components and the best indicators for each component would be identified. What Rummel/Heenan called an integrated approach is in fact incomplete, because it does not allow a company to translate the result for its own operations (for example what type of company would be most affected by domestic instability). Secondly, a bias toward negative aspects of political environment is obvious in their choice of components "elements are negative communications, warnings and defensive acts, intensity of violence, negative sanctions and antiforeign demonstration"
(Rummel, p. 71); events with positive consequence should be included. Thirdly, they see all sub-components as independent, which could be doubted for the elements given above, and also for the four basic dimensions (because of cross-impact effects). Finally, even it was not needed, their forecast for Indonesia proved to be completely wrong (they did not intend to post-test their approach and forecast, something which could have been interesting to try). But the conclusion could be that one or more of the dimensions are misleading.

A second example of such an approach is The Political Risks for Multinational Enterprise in Developing Countries (with a Case Study of Peru) by Zink. While one half of the book is theoretical, the other half is a case study of Peru. The study begins with a macro-economic analysis of political development and foreign direct investment theory. The political risks could be summarized as systemic, macro, or micro risks. His analysis was based on a survey of MNCs and showed the lack of systematization of political risk assessment. The source of such assessment is a political intelligence system, which should provide the basis for pre-investment and post-investment decision. Then, Zink examined different entry categories based on contracts, risk transfers (insurance), capital structure, joint venture and different operating strategies. These
alternative styles of management could be protective, adaptative, or participative (Zink, pp. 30-70).

He rightly stated that in the long run, the survival of the foreign-owned enterprise within many LDCs will relate directly to the extent to which the enterprise is able to win acceptance as a legitimate entity within the host-society. Problems began with the case study, not because it was not well done, but because it was not related to the theoretical part. It would have been possible to publish separately the two parts, without hurting the value of the writing. The main idea of the Peruvian study was a group analysis (principal actors interactions and relationships) of the political system. Zink has linked a general approach of political risk to a study of a country without implementing effectively the linkage. However, this case study provided interesting information in a useful form.

Finally Hutzell, in a 400 page-impressive study of the Middle-East, tried in 1973 to mix directly country study techniques with actual analysis. The result is that he does not bring a theory, but only an aggregate of specific approaches to the Middle East. The problem with a country adapted approach stems from the impossibility to generalize at a high level of abstraction from a case study. On the other hand, when the study is detailed enough it provides useful data for further research and aggregation.
b. Approaches adapted to an industry or service

Extractive industries have been probable the first to develop political analysis systems, probable under pressure of a changing operating climate. Today, a greater diversity can be found in the types of industries or services where overseas investment occurs. Among these, the banking industry has a specific place, because of the very large sums involved and because of the complexity of the problem. Money can be lent to corporations operating in a foreign country or directly to a foreign government agency. Money is a product having some particularities and thus bankers developed specific techniques to forecast, for example, the non-payment or rescheduling of loans.

We will thus focus on the banking industry, which has now a very important international activity. It is not only foreign exchange management (Donaldson, 1979) or international lending risks (David, 1977): more generally banks have to assess "country risk". This risk is due to both economic and political factors. A good review of the sources of information for economic factors was given by the economic review of the Federal Reserve Bank of Atlanta (June, 1981). But political factors are much more difficult to analyze: Robinson defines country risk as involving liability of the host-country as well as
currency or private company profitability problems. In the weighting systems he gives to assess country risk, political aspects are given a 25% factor. He is especially doubtful of the validity of statistical assessment technique, when applied to applied political behavior (Robinson, 1976).

In the last decade, bankers adapted various approaches. For example, Nagy described in 1978 the system used at the Bank of Montreal, which stems from a sophisticated quantitative approach. Euromoney, in an article of July 1980, surveyed different banks analysing political risks, concluding it was becoming more systematic, sophisticated and independent from economic analysis. Irving Friedman, the self declared father of this political approach to country risk, developed it at Citibank and Chase Manhattan Bank. There is now a general understanding, according to Brainard that economic ratios and gut feelings are not enough to assess country risk (Brainard, 1981).

A recent book edited by S. H. Goodman, Financing and Risk in Developing Countries gathered several studies relevant to bank political anlysis. Irving S. Friedman stated "that private banks will continue to be an important source of financing for many developing countries" (Goodman, p.19) and thus will have to take risks. The common
denominator of the studies is an interest in evolving a bank-adapted analysis of political risk. The Eximbank surveyed 37 US Commercial Banks and found three categories of techniques (Goodman, pp. 65-67): fully qualitative, structured qualitative and checklist system. One interesting remark was made by Blask: only one bank of thirty seven tested its system against actual performance (Goodman, p. 68). In developing a checklist, economic variables are the most important, but political factors cannot be put aside. The type of product makes it worthwhile to have early warning indicators during the loan period. The bank organization should be highly adaptable. So far, there is not a real consensus on the best way to analyze and monitor credit risk, but it may be due to goal descrepancies among banks. Morgan Guaranty, the Eximbank and the World Bank do not have the same interest and attitudes. Moreover, economists have problems dealing with political factors whose importance they try to dismiss.

A good example of a bank system was given in 1981 by L. J. Brainard of Bankers Trust. A written country review would include statements about the domestic and foreign economy, the policy environment, the political social environment. It is mainly qualitative in nature, since no
processing of the data is done. The result of the review meeting would affect the limit of exposure of the bank or generate further study. Bankers Trust recognized a gap of sophistication between political and economic assessments. The political process separates information gathering and assessment functions. Moreover, for each function, staff and line officers share an adversarial relationship. For Brainard, the key political factors are the chief of State and top management, the Government institutions, the social coalitions and the dynamics of the political system. The system is based on scenario forecasting and not on quantitative modeling. While this system does not take into account many aspects of political risk, it is probably adapted to the needs of this corporation. But, at the opposite of what Brainard thinks, it is certainly not adaptable, as it is, to others.

What will remain useful is their effort toward better data gathering processing. Bankers are now very often advising their customers about political risks.

It is likely that different systems will be developed for different types of industries or services: aluminium or textile companies, oil extraction or advertising companies, money or insurance brokers.
2. Integrated Approaches and Theories

Since the political world is complicated, a theory should reflect this complexity. One way to deal with complexity is to break an object of analysis into small components. By stabilizing the problem within a time frame and dividing it into smaller units, the range of techniques available for analysis is greatly increased. Each sub-unit is easier to analyze and the technique can be adapted to its specific characteristics. This is the core of two schools here represented by Haner and Haendel, which attempt to provide MNC with tools of political analysis.

a. Quantitative - Mechanistic Approach

An assessment of the investment climate may begin by looking at political and economic indicators. Juhl in 1978 reviewed the most recent surveys of business climate indicators. They may study violence (Russet, Feirabend), political stability (Russet, Banks and Textor), economic losses due to expropriation (Williams, Agarwal) or finally combine all of these (Haner).

The last category is of special interest because Haner is the founder of the Business Environment Risk Index, or BERI (Haner, 1975). The system is an index of weighted criteria which result in a single number representing the
country. Its sub-indexes will give different aspects of the investment climate: political, operations and financial sub-indexes. Each input is scored from 1 (unacceptable) to 4 (superior conditions):

<table>
<thead>
<tr>
<th></th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Political stability</td>
</tr>
<tr>
<td>(2)</td>
<td>Economic growth</td>
</tr>
<tr>
<td>(3)</td>
<td>Currency convertibility</td>
</tr>
<tr>
<td>(4)</td>
<td>Labor cost/Productivity</td>
</tr>
<tr>
<td>(5)</td>
<td>Long-term loans/Venture capital</td>
</tr>
<tr>
<td>(6)</td>
<td>Short-term credit</td>
</tr>
<tr>
<td>(7)</td>
<td>Attitude toward the foreign investor &amp; profits</td>
</tr>
<tr>
<td>(8)</td>
<td>Nationalization</td>
</tr>
<tr>
<td>(9)</td>
<td>Monetary inflation</td>
</tr>
<tr>
<td>(10)</td>
<td>Balance of payments</td>
</tr>
<tr>
<td>(11)</td>
<td>Enforceability of contracts</td>
</tr>
<tr>
<td>(12)</td>
<td>Bureaucratic delays</td>
</tr>
<tr>
<td>(13)</td>
<td>Communications-telex, telephone, mail, air, local</td>
</tr>
<tr>
<td>(14)</td>
<td>Local management &amp; partners</td>
</tr>
<tr>
<td>(15)</td>
<td>Professional Services &amp; Contractors</td>
</tr>
<tr>
<td>Total of weightings</td>
<td>25</td>
</tr>
</tbody>
</table>
100-86
Unusually stable and superior business environment for the foreign investor; none exist.

85-71
Typical environment of an industrialized economy; any tendency toward nationalism is offset in varying degrees by the country's efficiency, economic needs, market opportunities, etc.

70-56
Moderate-risk countries with complications to be expected in day-to-day operations; usually the structure of the political environment is sufficiently stable to permit change without seriously altering the business environment.

55-41
High risk for foreign-owned businesses; requires special situations for investment consideration such as needed resources.

Below 41
Unacceptable business conditions.

Then in Global Business Strategy for the 1980's, Haner tries to go beyond this simplistic approach. By taking a macro-economic stand, he tried to find a global systemic explanation of foreign investment. He probably
neglected the fact that the object of political risk analysis is primarily to help the MNC to invest. Therefore, his country potential or profit opportunity ratings are only indirectly useful (Haner, 1980). Haner recognizes without further analysis the interest of consequences tied to characteristics of the company, product, location... (Haner, 1980, pp. 87-107). He also recognizes the different bargaining positions due to the life cycle of the foreign investment. Among the management techniques he suggested, three are of particular interest: foreign exchange techniques to improve the remittance of profit, intelligence techniques to gather better data and finally contingency planning to improve the recovery of assets and the protection of personnel in case of a major problem (Haner, 1979). In analyzing the political system of a country, the analyst, according to Haner, should look at internal and external causes. He should also look at symptoms such as societal conflict and illegal political actions.

b. Haendel's Integrated Approach

Another integrated approach has been suggested by Haendel and a few other scholars. In 1975 Haendel, West and Meadow criticized the BERI and BI (Business International) indexes on various grounds. First,
political stability was not defined enough to be meaning-
ful. These indexes cannot be used for long-term purposes.
In fact, it would be more useful for management of
political risk than for investment decision-making (which
requires long term assessments). Finally the causality
between indicators and business operations was not clearly
defined (Haendel, 1975a).

In a conference report edited by Haendel, Meadow and
West, several scholars were asked to discuss various
aspects of political risk. Van Agtmael stressed that MNCs
go overseas more because they have to, rather than because
they want to: location of resources, tariff barriers or
pollution regulations (Haendel, 1975b, p. 21). He,
moreover, emphasizes the fact that MNCs "do not really
deal with political risk because of a lack of sophisti-
cation in methods, a poor identification of the different
risks, because the trade-off risk-return is not stated
explicitly and because MNC do not monitor, or adapt to,
political risk" (Haendel, 1975b, p. 22). Van Agtmael wants
MNCs to have their own "foreign policy" (Haendel, 1975b, p.
33). Meadow offers definitions of macro- and micro-politi-
cal analysis and discusses the techniques useful for
political risk analysis, within each framework. However,
he seems unaware of the fact that making opinion surveys
in Third World Countries could be especially difficult and hazardous (Haendel, 1975b, p. 56).

Root perceptively differentiates among corporation according to their prime interest, i.e. raw material seeker, low cost production seeker, market seekers (Haendel, 1975b, pp. 99-110), to stress the various sensitivities to the political risk involved (Haendel, 1975b, pp. 100-103). He also gives us an almost complete process for investment evaluation: sourcing of investment approval, preliminary evaluation, viability analysis, in-depth analysis and approval, including political analysis in the latter stages (Haendel, 1975b, pp. 104-105). Covey Oliver describes a typology of strategies such as image improvement, negotiated readjustment, accommodation, walk-out counter-attack and tactics such as public relations, private diplomacy, embassy, renewal of investment, joint venture, capital structure change, arbitration, private pressure, and public threat (Haendel, 1975b, pp. 93-94), which could be combined to provide political risk management techniques. The report edited by Haendel, Meadow and West is characteristic of their approach: each expert provides parts of the giant puzzle of political risk analysis. These studies do not lead us toward a model or even a guide to political risk. West is probably the closest among these scholars to a theoretical
formulation. According to him, a component approach is "based on the assumption that political risk, while a product of a very complex set of causal factors, can be broken down into measurable components. Once identified and measured, these components can be reaggregated into a form suitable to meet the particular needs of the political risk analyst". Moreover, he rightfully states that no measure of political risk has been yet submitted to ex-post testing, a necessary step toward a more universal theory. Finally he believes that political risk should be analyzed at different levels, both quantitatively and qualitatively (Haendel, 1975b, p. 64-67).

More interesting is the system designated by Haendel and West to measure political factors (Haendel, 1975a). The "Political System Stability Index" is an empirical measure model based on the 1961-66 period in 65 LDC's. The difference with other indexes is significant. It uses hard (i.e. numbers), instead of soft (i.e. panel of experts), data, and times series instead of punctual data. The index is composed of three equally important sub-indexes: the socio-economic index, the governmental process index and the societal conflict index (see Table 1.2). Countries are then scored relatively to each other and a confidence score is attached to the
<table>
<thead>
<tr>
<th>Indicator Level</th>
<th>Indicators</th>
<th>Source: Haendel, 1975a, p. 64.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socioeconomic Characteristics Index</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Unrest</td>
<td>Societal Conflict Index</td>
<td></td>
</tr>
<tr>
<td>Internal Violence Index</td>
<td>Coercion Potential Index</td>
<td></td>
</tr>
<tr>
<td>Ethnolinguistic Fractionalization</td>
<td>Riots</td>
<td></td>
</tr>
<tr>
<td>GNP Growth per Capita</td>
<td>Demonstrations</td>
<td></td>
</tr>
<tr>
<td>Energy Consumption per Capita</td>
<td>Government Crises</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Guerilla Warfare</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Internal Security Forces per 1,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Political Competition Index</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Legislative Effectiveness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Constitutional Changes per year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Irregular Chief Executive Changes</td>
<td></td>
</tr>
</tbody>
</table>
score (see Table 1.3). It is easy to see that the
distribution is about normal and that the confidence score
is independent from the stability score. However, it only
shows that it is possible to have a quantitative tool which
is comprehensive and relevant to most businesses. It does
not help a corporation predicting since no testing of the
index usefulness has been done yet. Moreover, a score is
not enough to assess the investment climate, which is
composed of elements having different consequences for
different companies and products.

Later, Haendel criticized the PSSI in a book reviewing
extensively the political risk literature. But his own
model is difficult to find: he does not seem to have one.
However, some of his remarks are still valid, as will be
shown below.

The problem of definition is important because it is
the basis of any theory: "The political risk faced by
foreign investors is defined as the risk of probability
of occurrence of some political events, that will change
the prospects for the profitability of a given investment"
(Haendel, 1979, p. 5). Furthermore risk is objective and
measurable while uncertainty is subjective. Haendel states
the necessity of differentiating assessment, monitoring and
management of political risks. Assessment should be
quantitative and qualitative. Political risk has a
<table>
<thead>
<tr>
<th>COUNTY</th>
<th>SCORE</th>
<th>CONFIDENCE</th>
<th>COUNTRY</th>
<th>SCORE</th>
<th>CONFIDENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Israel</td>
<td>+ 4.56</td>
<td>2.3 +</td>
<td>Afghanistan</td>
<td>- .11</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Trinidad</td>
<td>+ 3.70</td>
<td>4.3 -</td>
<td>Central African Republic</td>
<td>- .22</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Venezuela</td>
<td>+ 2.84</td>
<td>2.3 +</td>
<td>Nepal</td>
<td>- .24</td>
<td>3.0 -</td>
</tr>
<tr>
<td>Malagasy Republic</td>
<td>+ 2.51</td>
<td>3.3 -</td>
<td>Rwanda</td>
<td>- .29</td>
<td>4.7 -</td>
</tr>
<tr>
<td>Romania</td>
<td>+ 2.53</td>
<td>2.3 -</td>
<td>Honduras</td>
<td>- .32</td>
<td>3.0 -</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>+ 2.44</td>
<td>2.3 +</td>
<td>Kenya</td>
<td>- .49</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Philippines</td>
<td>+ 2.42</td>
<td>3.0 -</td>
<td>Upper Volta</td>
<td>- .55</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>+ 2.27</td>
<td>3.0 -</td>
<td>Malta</td>
<td>- .57</td>
<td>2.7 +</td>
</tr>
<tr>
<td>Greece</td>
<td>+ 1.99</td>
<td>2.7</td>
<td>Iran</td>
<td>- .61</td>
<td>2.7 +</td>
</tr>
<tr>
<td>Panama</td>
<td>+ 1.72</td>
<td>2.7 -</td>
<td>India</td>
<td>- .77</td>
<td>3.3 +</td>
</tr>
<tr>
<td>Yugoslavia</td>
<td>+ 1.53</td>
<td>2.3 -</td>
<td>Cameroon</td>
<td>- .80</td>
<td>3.7 -</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>+ 1.52</td>
<td>3.7 -</td>
<td>Ethiopia</td>
<td>- .82</td>
<td>3.0 -</td>
</tr>
<tr>
<td>Jamaica</td>
<td>+ 1.46</td>
<td>3.3 -</td>
<td>Gabon</td>
<td>- .95</td>
<td>3.0 -</td>
</tr>
<tr>
<td>Jordan</td>
<td>+ 1.42</td>
<td>2.7</td>
<td>Morocco</td>
<td>- .97</td>
<td>3.0 -</td>
</tr>
<tr>
<td>Turkey</td>
<td>+ 1.29</td>
<td>2.3 +</td>
<td>Guyana</td>
<td>- 1.06</td>
<td>3.7 -</td>
</tr>
<tr>
<td>Mauritania</td>
<td>+ 1.26</td>
<td>4.0 -</td>
<td>Paraguay</td>
<td>- 1.07</td>
<td>3.0 +</td>
</tr>
<tr>
<td>Tunisia</td>
<td>+ 1.19</td>
<td>2.7</td>
<td>Egypt</td>
<td>- 1.10</td>
<td>3.0 -</td>
</tr>
<tr>
<td>Columbia</td>
<td>+ 1.05</td>
<td>2.3 -</td>
<td>Nigeria</td>
<td>- 1.14</td>
<td>3.0 +</td>
</tr>
<tr>
<td>Guinea</td>
<td>+ 1.03</td>
<td>3.3 -</td>
<td>Sudan</td>
<td>- 1.27</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Malaysia</td>
<td>+ .98</td>
<td>2.7 -</td>
<td>Malawi</td>
<td>- 1.34</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Ivory Coast</td>
<td>+ .92</td>
<td>3.7 -</td>
<td>Zambia</td>
<td>- 1.37</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Thailand</td>
<td>+ .88</td>
<td>3.0</td>
<td>Bolivia</td>
<td>- 1.51</td>
<td>2.7 -</td>
</tr>
<tr>
<td>Brazil</td>
<td>+ .72</td>
<td>2.3</td>
<td>Haiti</td>
<td>- 1.73</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Mali</td>
<td>+ .70</td>
<td>3.0 -</td>
<td>Dahomey</td>
<td>- 1.81</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Niger</td>
<td>+ .65</td>
<td>3.7 -</td>
<td>Liberia</td>
<td>- 1.84</td>
<td>3.0 -</td>
</tr>
<tr>
<td>Chad</td>
<td>+ .41</td>
<td>3.7 -</td>
<td>Ecuador</td>
<td>- 1.86</td>
<td>2.7</td>
</tr>
<tr>
<td>Pakistan</td>
<td>+ .41</td>
<td>3.3 -</td>
<td>Indonesia</td>
<td>- 1.92</td>
<td>3.7 -</td>
</tr>
<tr>
<td>Burundi</td>
<td>+ .37</td>
<td>3.7 -</td>
<td>Guatemala</td>
<td>- 2.12</td>
<td>3.0 -</td>
</tr>
<tr>
<td>Tanzania</td>
<td>+ .31</td>
<td>3.3 -</td>
<td>Ghana</td>
<td>- 3.48</td>
<td>3.3 -</td>
</tr>
<tr>
<td>Togo</td>
<td>+ .24</td>
<td>3.7 -</td>
<td>Yemen</td>
<td>- 5.20</td>
<td>4.3 -</td>
</tr>
<tr>
<td>Senegal</td>
<td>+ .16</td>
<td>3.3 -</td>
<td>Zaire</td>
<td>- 5.98</td>
<td>2.3</td>
</tr>
<tr>
<td>Korea</td>
<td>+ .15</td>
<td>3.0 +</td>
<td>Dominican Republic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>+ .11</td>
<td>3.3 -</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Haendel, 1975a, p. 70-71
financial consequence measured by cash flow amounts and finally management should be flexible and adapted to different types of political risks. Still all this does not constitute a theory; at best, it gives the premises of what a theory should be (Haendel, 1979, pp. 125-130).

c. Sophisticated and Comprehensive Approaches

Finally a few scholars have tried to build theories of political risk. They describe, analyze and explain the political risk phenomenon. The order, within which these authors are dealt, reflects the usefulness of their ideas to the business executives as well as to political scientists and business scholars. Stephen J. Kobrin deserves here a comprehensive review for his understanding of the difficulties and contradictions of political risk analysis.

1. A comprehensive approach

Robock has probably been the first to bridge successfully the gap between political science and business management. His definition of political risk is expressed clearly: "Political risk can result in gain as well as losses... exists

(1) when discontinuities occur in the business environment,
<table>
<thead>
<tr>
<th>Sources of Political Risk</th>
<th>Groups Through Which Political Risk Can Be Generated</th>
<th>Effects Political Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing political philosophies (nationalism, socialism, communism)</td>
<td>Government in power &amp; its operating agencies</td>
<td>Confiscation (loss of assets without compensation)</td>
</tr>
<tr>
<td>Social unrest &amp; disorder</td>
<td>Parliamentary opposition groups</td>
<td>Expropriation with compensation (loss of freedom to operate)</td>
</tr>
<tr>
<td>Vested interests of local business groups</td>
<td>Nonparliamentary opposition groups (guerrilla movements)</td>
<td>Operational restrictions (market shares, product characteristics, employment politics, etc.)</td>
</tr>
<tr>
<td>Recent &amp; impending political independence</td>
<td>Nonorganized common interest groups (students, workers, peasants, minorities, etc.)</td>
<td>Loss of transfer freedom (financial, goods, personnel or ownership rights)</td>
</tr>
<tr>
<td>Armed conflicts &amp; internal rebellions for political power</td>
<td>Foreign governments or intergovernmental agencies such as the EEC</td>
<td>Breaches of or unilateral revisions in contracts &amp; agreements</td>
</tr>
<tr>
<td>New international alliances</td>
<td>Foreign governments willing to enter into armed conflict or to support internal rebellion</td>
<td>Discrimination (taxes, compulsory subcontracting, etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damage to property or personnel from riots, insurrections, revolutions &amp; wars</td>
</tr>
</tbody>
</table>

(2) when they are difficult to anticipate and
(3) when they result from political changes.

To constitute a risk these changes must have a potential for significantly affecting the profit or other goals of a particular enterprises" (Robock, 1971, pp. 6-20).

While the second aspect has been criticized as unnecessary, the definition remains valid today. Secondly, Robock exposed a conceptual framework, which could be utilized for most firms. He separated sources of political risk, political group and political risk effects (See Table 1.4). He further divided political risk into macro and micro-risks according to the selectivity of the political action, whether it is directed at all foreign companies, or a few specific products or industry characteristics. Different industries will be differently vulnerable at different periods and locations. Political instability will not be generally useful for a specific company's political risk assessment. Political forecasting implies four steps: political system analysis, company specificity analysis, determination of the source of political risk and projection of time bound probabilities. Finally, the company could use different strategies to deal with political risk: the use of investment guarantees, timing and entry strategy, altering the
subsidiary's activity, production network strategy, controlling the location of intangible assets, local purchasing strategy, sourcing and movement of funds, direct lobbying, . . .

Taking this early approach as a basis, Lloyd enriched and developed it. He placed political risk within a more general framework of an internationalization pattern (Lloyd, 1976): A company would first export overseas, set a selling subsidiary, license, set an assembly plant, establish a full scale manufacturing operation and finally multinationalize management and ownership. Different stages imply different risks. He then defined political instability aspects such as control mechanisms and foreign exchange risks. To assess political risk, he relies on Stobaugh's typology to analyze the company methods: go/not go decision, premium for risk, range of estimates and comprehensive risk analysis (Stobaugh, 1969). Lloyd developed Roboc's proposed strategies, adding communication technique and image improvement to the primary set. Finally, Lloyd insists on the fact that political risk could be considered as coming also from the home country, while it is rarely so for American MNE.

Mitchell criticized Robock's definition of political risk for two reasons: first, a political risk does not have to be difficult to anticipate to be a political risk;
secondly, political instability is not different from political risk: it is a type of political risk. Still, Mitchell's approach has also one drawback: for him, a political risk has only negative effects (Mitchell, 1980, p. 5). He identified five monitoring/forecasting techniques: "intuition, country visits by executives, use of consultants, use of government (information), and quantitative analyses" (Mitchell, 1980, p. 10). For the last technique cited, he found several drawbacks to indexes such as BERI or BI: their short-term horizon, the absence of industry variable, the number of real different political risk (< 1,000) as compared to a single score given by the index, the bias of the panels and finally the absence of standardization. Mitchell adds that an information retrieval and analysis system is necessary. The sources of information could be data bases such as Dialog, the Information Bank, Orbit, newspapers and primary sources such as country visits, consultants, field officers, an internal team of experts. Finally qualitative and quantitative techniques should facilitate warning.

3. One adaptable approach

    Most approaches we have seen so far have a major flaw. They expect the company to do most of the work of adapting
the theory to its specific needs. An adaptable approach should give the means to the business executive to design a tailored company system for assessment, monitoring and management of political risk. Stephen J. Kobrin is, so far, the only one to offer an approach adaptable to most companies. This approach is not summarized in one book, so we will try to synthesize his papers and articles.

Unlike most other scholars, Kobrin studies are based on empirical data at two levels: (1) the macro-behavior of the political system composed of MNCs and nations-states, concerning foreign investments, (2) the micro-behavior of individual executives toward the political risk phenomenon.

This use of macro- and micro-behavior concepts corresponds to those commonly used in the social sciences.

When Kobrin states in 1976 the usual "contradiction between executives' perception of factors influencing the decision and the variables that actually explain the distribution of foreign investment", he focused on methodological and theoretical explanations of this contradiction. Later in 1980, he verified by himself the reality of the contradiction by conducting a study among 1,500 expropriated firms (Kobrin, 1980a), and secondly by surveying the political risk function in MNCs (Kobrin,
The macro/micro distinction holds also to define political risk: "Although managers tend to equate the two, political instability is clearly a property of the environment, while risk is a property of the firm". The most important risk of instability is to create specific constraints on operations, not instability as such (Kobrin, 1978, p. 116).

One part of the contradiction depends on the political risk perception of MNCs decision-makers. Since the study is very recent, only a preliminary report has been published with Basek, Blank and LaPalombara (Kobrin, 1980b). Since surveys of decision-makers are consistent overtime, Kobrin was able to summarize their findings:

(1) Politics is considered to be at least a major factor in the foreign direct investment decision;
(2) Assessment and evaluation of non market environments are relatively unsophisticated and unstructured;
(3) Information comes from general sources, usually interpersonal networks;
(4) The resulting evaluations tend to be subjective and often ethnocentric;

(5) The process tends to be reactive, rather than proactive (Kobrin, 1980b, pp. 33-36).

Kobrin used Conference Board data involving nearly two hundred executives of multinational corporations. "Over half of the respondents reported a group within corporate headquarters that reviews overseas political and social factors when new investments are proposed, (and that) monitors existing operations" (Kobrin 1980b, p. 35). The main use of environmental analysis is for initial investment (80%), strategic planning (71%) and reinvestment (67%). The information sources for the political analysis function is mainly internal, and mainly coming from line, versus headquarters, personnel. Banks and consultants are the most important external sources. One original aspect of this survey is a question concerning potential improvement of the function. The result is that it would be useful to integrate analysis with planning and investment decisions to relate analysis to operational problems and establish better guidelines for provision of relevant information (Kobrin, 1980b, p. 42). The conclusion of the study is that "assessment and evaluation of non market environments is clearly emerging as a management function in U.S. international firms" (Kobrin, 1980b, pp. 63-66).
On the other side of the mentioned contradiction stands the supposed macro-behavior of firms. Kobrin analyzed this aspect in 1978 with data from 1,500 firms, the largest study on the subject ever made. His unit of analysis is the act of expropriation, which may or may not involve more than one firm. This is a political unit of analysis, not a business one. The choice of the unit as well as the scope of the study are probably the main factors of its value.

Secondary sources provided 511 "acts" for the 1960-1976 period. Kobrin divides expropriations in four types: formal expropriation, intervention, forced sale and contract renegotiation (Kobrin, 1980, p. 4). The variables used were the host country, year of taking, sector, number of firms per act, mode of taking, reason for taking, ownership structure, disposition after taking and the nationality of the investor. Not surprisingly the biggest percentage of missing data was for the reason of taking (Kobrin, 1980a, p. 7). A few relationships were formed:

(1) There is an acceleration of the pace of expropriation and an increase of the number of countries involved;

(2) Manufacturing and petroleum sectors have opposite patterns, if countries are classified by number
of takings (see below adapted table).

<table>
<thead>
<tr>
<th>TAKINGS</th>
<th>1-5</th>
<th>6-10</th>
<th>11-20</th>
<th>21+</th>
<th>nr</th>
</tr>
</thead>
<tbody>
<tr>
<td>All countries</td>
<td>44</td>
<td>16</td>
<td>11</td>
<td>5</td>
<td>%</td>
</tr>
<tr>
<td>Petroleum</td>
<td>36</td>
<td>17</td>
<td>16</td>
<td>9</td>
<td>%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>11</td>
<td>22</td>
<td>24</td>
<td>48</td>
<td>%</td>
</tr>
</tbody>
</table>

(3) Almost one half of the manufacturing takings were not selective;

(4) The sectoral distribution of acts does not change significantly over time;

(5) When Stock of Foreign Direct Investment and acts are correlated, specific vulnerabilities appear:

a) by sector in 1967
   - petroleum and trade were less vulnerable,
   - manufacturing was average,
   - banks, agriculture and mining were more vulnerable;

It has certainly changed since then, especially for the petroleum sector;

b) by product for manufacturing
   - more vulnerable: food, beverages, tobacco, leather and footwear, cement stone and clay,
   - less vulnerable: drugs, chemicals and plastics;
The reasons advanced for the differences are technology and integration;

(6) 100% ownership and joint ventures with the government are much more vulnerable than joint ventures with local partners;

(7) The distribution of modes of taking show a prevalence of formal expropriations (50%) and forced sales (32%);

(8) Investors are less vulnerable in their home country's excolonies;

(9) An expropriated company goes usually to public hands (Kobrin, 1980a, pp. 8-30).

All these relationships are very useful for the investor, because it allows to place assessment and monitoring within a framework adapted to the company. It allows the staff analyst to place a project in a continuum of potential risk: in reference to past cross national experience, he could logically improve the prospects by avoiding or proposing specific steps to be taken. He could also adapt quantitative indexes by adding product or sector coefficient or weighting.

Moreover, insurance rates for expropriation could be adjusted to take into account the relationships found by Kobrin.
Finally in 1979, Kobrin proposed, after reviewing the political risk literature, a point of departure for a theory. For KOBRIN political change should be considered continuously in both its positive and negative consequences, and related to perception by executives (objective and subjective uncertainty) and to the goals of the corporation (for example, expected value of cash flows and their distribution). The problem is complex: the analysis has to be sophisticated. In order to do that, "(the political risk field) needs better definition of the phenomena, a conceptual structure relating politics to the firm and a great deal of information about the impact of the political environment" (Kobrin, 1979, p. 77). The next chapter will be an attempt to apply this advice in building a political risk model for analysis.

Future research could be focused, according to KOBRIN on data research and analyses, in-depth studies and interdisciplinary research (Kobrin, 1979, pp. 77-78). The subsequent chapter will be an attempt to analyze political risk for oil companies doing offshore exploration.

Conclusion

The development of the political risk field is recent and accelerating. The logical line followed for this review was one of increasing sophistication, while useful
studies can be found at each level. There are no simple answers, such as country indexes, to a complex and unstable environment. Descriptive studies had in the last decade one major flaw: they usually did not describe enough to enable the scholars to associate variables or to serve as basis for data-base building. Focused studies usually lacked and thus had many problems generating hypotheses or tentative middle-range relationships. Finally, Kobrin comes close to a theory. In part this is due to the scope of the data and the quality of the quantitative techniques used. But it comes also from a better definition of the concepts and a real effort toward theory building. At the opposite of what Ebel stated, political risk analysis is more than "a new game in town, . . . (and) a best-seller on many corporate charts", or "the measurement of economic opportunity against political odds" "evaluation of social and political factors" (ESP) is not "extrasensory perception" (Ebel, 1981, pp. 287-301).
CHAPTER II

A MODEL FOR POLITICAL RISK ANALYSIS

Introduction

Several steps are involved in trying to improve actual approaches to political risk. First, a better definition of most terms used by the field is in order. Once the meta-language is properly defined, a move toward a complete theory of political risk can be attempted: as stated in the last Chapter, a theory, to be useful, has to be adaptable. In other words, a theory should enable us to generate specific approaches for different countries, products, companies or political situations. It should suggest what techniques could be used and when.

A. Definitions

A definition is improved in two ways: first by increasing the usefulness of the concept, secondly by allowing an easy and realistic usage. We will try to follow these two guidelines in the subsequent paragraphs.

1) Political Risk

Political risk has been used in very different ways in the literature. First the concept of risk is tied to
uncertainty: many writers used political risk and political uncertainty indifferently. In fact risk is measured by a probability. The variance around that probability is the uncertainty. For example, if you get expert's opinions to estimate the risk of overthrow of a regime by leftist groups, you may obtain these two distributions:

In Case II uncertainty or the variance is much higher than in Case I but the estimated risk is the same, i.e. 0.4. Risk and uncertainty are thus distinct but related to each other.

Moreover, risk implies a consequence for the firm involved, usually a loss in profits or assets, but it could be any change, positive or negative affecting the goals of this firm (market, image, quality of product, . . .)
Finally, the term "political" implies a relationship with a system of allocation of values (politics) and its (political) actors.

The complete definition would read: a political risk is the probability of occurrence that a political event will affect positively or negatively a company's goals. Political uncertainty is the degree of attitude you have about the probability (or a set of probabilities).

2) Types of Political Risks

Now that political risk as a concept is defined, we can separate into types of political risks. These types are too numerous to be described here, but a few definitions will help to understand differences. A type of political risk will here be defined as an event caused by a specific factor or source and having a specific consequence on one goal of the company. The source of political risk could be internal (government, administration, political groups, people) or external (other countries, international organizations, other multinational companies). Internal types range from policies to civil war. External types range from diplomatic relations and economic agreements to actual war.

One type of policy has been the object of intense interest: expropriation. Many conflicting definitions
have been offered. For the sake of simplicity, expropriation will here be the generic type representing a policy leading to loss of control of the subsidiary or operation. Expropriation could be further divided into intervention by non-governmental groups, forced sale, confiscation, and formal expropriation. Nationalization, according to the usual definition is an expropriation of a complete sector of the economy (for example, the banks, the steel industry, ... ) with transfer to public hands. The word is very often used for expropriation of a specific corporation having a quasi-monopoly in a sector.

Indigenisation, localization, and domestication are usually a plan to reserve some activities to nationals of the host-country and are only occasionally linked with expropriation.

3) Business goals

Goals are specific performances whose fulfillment is implicitly or explicitly expected. A potential political event becomes a risk as soon as one goal could be affected by it. Assets are usually expected to remain in the possession of the corporation. Profits and cash flow give the expected rate of return on the investment or the payback period.

Market loss or gain can be of importance for the rentability of world wide operations. The image of a
corporation can be stained or improved following its reaction to political risks (i.e. the image of ITT after Chile). Its relationships with all other actors can be affected. The most important goal of all is survival (for example, if Lybia were to expropriate Occidental Petroleum). A goal can of course ultimately be transformed into money units, but the translation needs not be done everytime.

A goal could be explicitly stated in a corporate plan, but it needs not be so. It could be part of general expectations of shareholders, employers, owners, suppliers, customers, ..

4) Assessment, Monitoring and Management

Factors affecting the profitability of an investment are analyzed before the decision is actually taken: this is a pre-investment assessment. But, assessment during the whole life of the investment. Assessment will then be periodical for example every year.

Monitoring is an information function. The variables found as important for assessment are observed continuously in the foreign environment. For example a bank will monitor a country's balance of payment if this is a necessary variable in the yearly assessment of the country's lending exposure.
Management is, in the context of political risk analysis, the reaction of the foreign corporate executives to political interference (for example calling in a team of lawyers).

These definitions given above are hopefully broad enough to eliminate ambiguities and detailed enough to be meaningful. It is assumed that multinational corporations are political actors because their actions affect the system of allocation of values. A broad enough definition is also necessary to take into account data requirements and theory adaptability.

B. An Attempt Toward an Adaptable Approach

A theory should provide laws and general relationships, but also rules of transformation to provide for specific applications. So far the literature has not provided such a theory nor the bases necessary for it. I will therefore present only a systematic approach to political risk. Such an approach provides a classification of the risks: by dividing the phenomenon into many logical units, causal explanations of all the factors involved will be more easily developed. It also provides a system of analysis of these units along different corporate dimensions (goals, time, cost). Finally it tries to provide the means to use the analysis for better management of foreign operations.
The rules of transformation are used to adapt the theory to a specific problem or project: focusing on likely problems or problems where solutions could be obtained, and taking into account a ratio of expected analysis cost on expected political risk cost. In this chapter, the approach will try to follow these theoretical guidelines.

1) A typology of political risks

According to the definition given in Part A., political risk implies that the goals of the firm are affected. These goals vary for different functions of the firm. On the other hand, the political events and actors which lead to risks exist at different levels (international, local, internal). A political risk is thus defined by its source (actor, level of action) and its potential effect on one function of the corporation. For example, the political risk called war destruction results from the action of an other nation and affects the assets of the company.

The sources of risk are divided into six categories, according to the level and the type of actor:

INTERNATIONAL LEVEL

INTERNATIONAL SYSTEM: This category is composed by all relevant participants actors of the world political system, outside the region of the host
country: international organizations, nation-states, alliances, common markets, cartels, transnational unions, the world bank.

REGIONAL SYSTEM: Here are included political actors geographically close to the host country. These actors are regional organizations, neighboring nation-states, rebel groups present both in and outside the host country.

HOME COUNTRY VS. HOST COUNTRY: Policies of the home country will sometimes affect, directly or indirectly, the host country (where the investment is located). The category could where special bilateral relationships (positive or negative) exist (see Kobrin in Chapter I about ex colonials attitude toward ex colonial powers).

NATIONAL LEVEL (HOST COUNTRY)

GOVERNMENT/ADMINISTRATION: All government actors are grouped in that category of source. Actors could be Presidents or Ministers. Agencies or state owned corporations or... spiritual leaders.

POPULATION: The people, or groups within it, are political actors in so far as they interfere directly with a companies operations: rioting crowds, associations and unions are examples of such actors.
COMPANY LEVEL

INTERNAL POLITICS within the company may be important in some cases: shareholders, home country unions (for example U.S. unions for an American MNC), staffline executives, lending bankers, customers, suppliers are some of the political actors.

The type of source will determine what kind of techniques of assessment and management would be used. Some sources may be much more important for some companies than for others, for some types of investments than for others. Different functions of the company may be more affected than others.

In order to separate different consequences of political risks, the goals of a corporation are here represented by specific functions of the MNC, each function has its own high priority goals:

FINANCE FUNCTION

ASSET: Losing its assets (i.e. walls, equipment, capital invested) is the worst outcome possible. For some companies survival will be at stake.
PROFIT: A foreign investment would not be approved if the prospects for profit were inferior than those for domestic investments. Profit can be affected by many political events, directly (for example taxation) or indirectly (for example
political violence impairing normal operations).

BORROWING: Unless the MNC uses its own resources, a loan will be necessary to finance the investment. This possibility may be regulated by countries or restricted by bankers for example.

ECONOMIC FUNCTION

FLOW: An economic system supposes transportation and circulation of the goods produced. For example a land locked country with hostile neighbors may represent difficulties for an export oriented investment.

MARKET: The economic allocation of goods to their respective markets may be restricted for political reasons. The price for some commodity may in fact be a political price (OPEC).

CONTROL: The issue is here to know who is in control of the foreign investment and what the consequences of the ownership pattern will be.

LEGAL FUNCTION

CONTRACT: A company has an interest in seeing its contracts respected by partners or governments, but legalism may be just another value for different environments.

CONFLICT: Legal conflicts are a type of structured politics the solution or presence of legal conflicts may be important for specific situations.
TECHNOLOGICAL FUNCTION

INPUT: A plant abroad needs important parts, energy, labor...these factors (inputs) of production may be affected by political actions. For example a tariff barrier or an energy policy.

PROCESS: The production may have some of its aspects regulated or be affected by direct demands (pollution protest).

OUTPUT: The result of the production, the product (or services) may encounter export difficulty or be inadequate to host country needs, this triggering political reactions.

PERSONNEL

STAFFING: Employment and firms may respond to custom or regulations.

SECURITY: The security of the expatriated personnel has to be maintained.

These goals and the sources of political problems interact to generate the political risks described in Table II.1. The first step is the identification of all the potential political risks. The typology objective is to help the analyst focus on all relevant problems (the risks given in the boxes are only illustrative). A corporate analyst would translate and adapt the general
typology of political risks to his own needs. In order to do that he would write down for each box the political risks likely to affect his company. An example of the result is given in the next chapter where the approach is applied to oil companies. What is obtained is a specific Typology. The process can be pursued a little but further by analyzing a specific country for example:

<table>
<thead>
<tr>
<th>General Typology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Specific Typology</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Country Typology</td>
</tr>
</tbody>
</table>

When a typology sufficient for the needs of analysis is obtained the number of political risks translated and relevant to a specific planning a specific project in a specific country should be manageable.

To identify risks is not enough, techniques are now needed to assess the probability and cost of these risks.

2) Assessment Techniques

The goal of any assessment of political risk is to arrive at an expected cost of political factors (less
often an expected bonus). An expected cost is the multiplication of the probability of occurrence of a political act by its cost (bonus) for the firm or project.

Ex. \[ \text{Cost} = p \times c \]

(The multiplication is not here a perfect sign as thresholds and perceptions may affect it).

This expected cost could be applied to a rate of return or discounted cash flow analysis. The calculus of the cost is purely a financial affair and can usually be processed with accuracy. The main problem is the forecasting step implied in the work "expected".

Since each political risk is defined by its source, the data required will also come from there. Usual types of data are:

- general data concerning the country

  the world political system

  the sector/product of the corporation

- specific data dealing with the company record.

In a more detailed fashion, we should be interested in economic, social and political indicators; rate of risk related to country, sector, product, company, ownership structure, nationality of the firm, . . . , expert generated data, political instability and violence studies, legal development studies, comparative public policy, . . .
While the data that could be used are very varied, a specific problem will usually require a limited set of data, for example, the case of pollution regulations in the Ivory Coast. Some problems could be more costly to deal with than others, for example, war forecasting may be difficult to achieve for a political risk unit.

Before assessing a political risk completely, a first step could be useful: eliminating low expected costs. This could happen if the probability is very low (nuclear war) or if the cost is very low (change of rate of value added tax). The purpose of such a step is to have a preliminary evaluation of all the risks relevant to the assessment process in order to focus on the most important expected costs. For example, if there are 10 risks to study, the analyst may cover 90% of the costs with only 7 out of 10 studied (a preliminary limited assessment is necessary in that case).

The few risks remaining, worthy of interest and relevant to the project, will be analyzed with the help of forecasting techniques. In the case of assessment forecasting, techniques have to be oriented toward a long-term horizon. Not all techniques are therefore useful. According to Sullivan/Claycombe and Makridakis/Wheelright, forecasting techniques are divided into three types: qualitative, time series analysis and projection, and causal models. The table below shows
the forecasting techniques useful for the long-range.

<table>
<thead>
<tr>
<th>Qualitative Methods</th>
<th>Time Series Methods</th>
<th>Causal Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delphi</td>
<td>Trend projection</td>
<td>Cross impact</td>
</tr>
<tr>
<td>Historical analogy</td>
<td>Linear extrapolation</td>
<td>Morphological research</td>
</tr>
<tr>
<td>Catastrophe theory</td>
<td>Exponential extrapolation</td>
<td>Life cycle analysis</td>
</tr>
<tr>
<td>Decision analysis</td>
<td>Leading indicators</td>
<td>Economic models</td>
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<tr>
<td>S. curves</td>
<td>Indexes</td>
<td>Relevance trees</td>
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<td></td>
<td></td>
<td>Systems dynamics</td>
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<td></td>
<td></td>
<td>Input-output model</td>
</tr>
</tbody>
</table>

The costs involved by these methods could be very different from one another. The cost of unaccuracy has to be balanced by the cost of forecasting as shown by this graph (Sullivan, p. 32).

So far no methods have a definite edge in political risk analysis. The main reason could be the multiplicity
of events to be forecast. A method useful for war forecasting may not be relevant to predict expropriation. Not enough studies have so far been made to propose a set of criteria for technique choice. Moreover, specific constraints of time will be influential in the choice of a technique.

The three types of forecasting methods may not be used interchangeably.

When data is scarce and relationships between variables unclear qualitative methods are used. When data is given and relationships proven time series may be used for the short term and causal models for the long term. It seems that political risks factors fall into the first category. Data is usually difficult to get or of poor quality. Relationships are unclear since we are not even sure of what are the variables to look at.

Still the problem is different depending on the type of risk. Internal politics (company level) are usually predictable without too many difficulties.

Political violence coming from the population could be analyzed with causal models, as well as wars or terrorism.

Time series methods could be applied to economic-related problems and to well-known and frequent risks such as expropriations (See Kobrin, Chapter I). Most of
the remaining risks have to be studied qualitatively. Sometimes, the main reason is the scarcity of data but more often than not the complexity of political systems will be the cause. A combination of several methods is also possible.

Once the decision is made, assessment is replaced by monitoring and management during the life of the investment. A different set of techniques applies here.

3) Monitoring and management techniques

Monitoring is a result of the intelligence function in the corporation. Conditions affecting an investment will change time. The developments in the general environment will be warning signals for the foreign executive. The usual result will be to influence the management of the project overseas. The monitoring need not be as sophisticated as the assessment, but usually requires quick reactions.

Three positions could be taken as investment decisions, avoidance, postponing or approval (with or without restructuring) of the project.

Monitoring could be important in the first two cases in order to rectify a negative conclusion for an interesting market. Monitoring should in fact provide an incremental reevaluation of the primary assessment.
Before the decision is made to approve the investment, different strategies could be followed to protect the goals set for the project (including survival). A tactic could be used for different strategies.

<table>
<thead>
<tr>
<th>STRATEGIES</th>
<th>TACTICS</th>
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<tbody>
<tr>
<td>Avoidance</td>
<td>Advanced payment, insurance</td>
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<tr>
<td>Ownership</td>
<td>Management contract, licensing, joint venture with locals, joint venture-governmental, 100% ownership</td>
</tr>
<tr>
<td>Location</td>
<td>Export only, offshore, countryside, capital</td>
</tr>
<tr>
<td>Control</td>
<td>Integration, contracts, lobbying, R&amp;D input</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Communication, multipurpose equipment, diversification, decentralization</td>
</tr>
</tbody>
</table>

A typical strategy will combine several aspects with different emphasis. The attitude of the foreign executive will usually be essential for day to day management of political risks. Finally when the investment is near its end, several paths could be followed depending on the situation at hand.

- Management contract or distribution contract
- Collection of insurance (OPIC for example)
- Disinvestment plan
- Diplomatic intervention.
According to Gladwin and Walter the functional behavior during a MNC-Host country conflict is likely to be "the product of the interaction of four parameters outcome stakes, relative power, interest interdependence and relationship quality (Gladwin, 1980, p. 79). Five basic behavior patterns are possible: Avoidance, Accommodation, Compromise, Competition and Collaboration. Mixed strategies are used if the global problem is divided into smaller issues. The recognition of the increased likelihood of conflict is important for the foreign executive, as he may be able to work to change some of the parameters early in the investment life.

In any case, communication is an essential aspect of a successful termination of the foreign investment. For example, the possible obsolescing power position of the MNC may have to be recognized. (The power of a MNC is higher before investment and decreases during the life of the investment.)

Information gathering systems should aim at providing the data necessary. A computerized data base using the classification of the typology would help accelerating the retrieval - analysis process.

An inclusion of political analysis into strategic planning seems logical, but it is rarely seen in practice (Naylor, p. 260). The main reason could be that more often than for other kinds of environments, the
political environment is complex and unstable. This could be the main reason to integrate political risk analysis in strategic planning; it is probably also the main difficulty. For integration into strategic planning to be perceived as a need, two events have to occur.

First the company has to be international than domestic. Secondly, the corporation should have its major losses or defeats due to political factors. In other words it has become sensitive to political risks. Actually, not many companies are in that position and if they are, they try to get out of it. However, the trend is toward more internationalization and an increasing importance of political factors.

This framework of analysis will now be applied to oil companies problems in order to show how the adaptation works.
CHAPTER III

AN APPLICATION OF THE APPROACH TO OIL COMPANIES

As many observers of political risk have shown in the last decade, oil and extractive companies are a favorite target for expropriation and other political risks; another aspect of the problem is the unexplored potential for oil discoveries in the Third World which, while accounting for 50% of the potential, receives only 5% of the development effort (Odell, 1981, p. 12). The actual state of oil development location is due to an economic and political pattern which does not lead to an allocation of economic factors. This pattern has been altered recently in reason of the impact of the first oil crisis.

In order to assess more precisely the political risks and to manage them, oil companies have developed specialized units. The techniques and methods may be informal, relying on consultants, or highly sophisticated. We will review in a first part the scarce published literature dealing with the oil company political risks. In a second part, we will try to apply the approach described in the preceding chapter to the oil companies problems.
A. Review

Planning practices are common in the oil industry, but political factors are rarely a part of the factor set analyzed and taken into account (see Holloway, Bell and Taylor). On the other hand, exploration economics have favored risk analysis as a tool relevant to oil companies. But they usually do not take into account political factors (see Megill and Newendorp). The published literature analyzing how to take into account political factors is scarce, probably because studies remain for internal use (see Cozzolino, p. VII-20).

Shell is the apparent exception to this scarcity with several articles or papers, either published or released. The development of a formal system has been fairly recent.

In 1977, a system called SPAIR (Subjective Probabilities Assigned to Investment Risks) was initiated. The analysis unit had to decide which method among these three to choose:

1. Developing a causal model involving intensive collection and processing of economic-political data;
2. Using consultant systems adaptable to oil companies;
3. Devising a multidisciplinary panel to assess political factors consequences (Gebelein, p. 725-726).
This last approach was eventually chosen. Since political risk is a complex problem, it was divided into 9 specific risks whose probabilities are to be scored by the panel.

**POLITICAL RISK TO FOREIGN VENTURE**

<table>
<thead>
<tr>
<th>Civil disorder</th>
<th>Sudden Expropriation</th>
<th>Fiscal charges</th>
<th>Production restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>External war losses</td>
<td>losses</td>
<td>Creeping Expro.</td>
<td>Domestic price controls</td>
</tr>
</tbody>
</table>

The loss to the company due to a specific risk is measured in terms of return on investment. The processing of the results of the panel are not oriented toward a consensus like it would be with a Delphi technique. The assessment of probabilities is made within a scenario, with optimistic/pessimistic projections but experts are not asked to review their judgements in views of the first round of results (Delphi).

It seems that this technique could be combined with other methods to design a comprehensive system. As such the SPAIR system is both costly and unsufficient, the monitoring and management problems are somewhat forgotten. Moreover, it would take time to organize one assessment following that technique. An analysis unit should be able to provide more than a few assessments a year; such assessments, even if very useful in theory, need a budget by themselves. The management has to be led
to buy them. It is an investment by itself. These units, when they exist are usually small and would not always be able to justify such techniques as a permanent basis. I would suggest that such assessment be followed for the first entry into a country combined with other methods, and serve as a basis for monitoring.

In 1980 a new method (Barkas et al) emphasized communication between the social scientist and the business executive. The basis of the method is a kind of "chemical" equation:

\[ \text{FACTORS} \rightarrow \text{FORCES} \rightarrow \text{ACTORS} = \text{FUTURES} \]

Factors are the fundamental condition existing in a country (resources, infrastructure, ...). Forces are dynamic relationships that are social, political, and economic, existing at different levels (international, national, population). Actors are all the possible group or individuals affecting the country and are drawn from the population. On this basis, the authors propose that different techniques be used.

One such technique could the one given in 1981 and called CIFA (Cross Impact Future Analysis). "It is a systematic method for dealing with the effects of interactions among specific factors" (Barkas, p. 3). For a specific risk all factors and trend packages are interrelated to approach as precisely as possible the nature
of risk. The mathematical model used is fairly complicated and seems disproportionate to the potential result. One interest of the cross impact method is to generate scenarios or trend packages. Another interesting feature is a method called sensitivity analysis allowing the corporation to discover and focus on factors having greatest consequences on other events. The methods consist in testing each factor for its effects on other factors when a marginal variation occurs.

This development at Shell seems to be in a dead end: more sophistication may not be what is really needed to reach what Shell Chairman of the Board called the helicopter quality of the corporate planner (Pocock, p. 31): to stay close to the ground (reality) while being able to take off a little bit to see the perspective (future).

In the same manner Bunn and Mustofaoglu used cross impact and Bayesian analysis for political risk forecasting. They, also, found the panel method attractive and divided the political problem into different types coming from a set of factors.

RISKS:  1. Sudden expropriation  
2. Creeping expropriation  
3. Adverse tax changes  
4. Civil disorder  
5. War  
6. Production restriction  
7. Repatriation limitations  
8. Domestic price controls  
9. Devaluation risk  
10. Export restrictions
While not formally testing the relationships, they list the critical factors for each risk. For example to understand and predict civil disorder, one should look at 11 factors. We give below a summary table for each risk of the list.

<table>
<thead>
<tr>
<th>RISKS</th>
<th>FACTORS</th>
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<tbody>
<tr>
<td>Sudden expropriation</td>
<td>Ideological change, visibility of foreigners in economy, colonial</td>
</tr>
<tr>
<td></td>
<td>identification of the firm, demonstration effect, marketing ability,</td>
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<td></td>
<td>bureaucratic development, availability of managerial and scientific</td>
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<td></td>
<td>technology, relations with firms, parent company, reciprocal dependence,</td>
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<tr>
<td></td>
<td>performance of economy</td>
</tr>
<tr>
<td>Creeping expropria-</td>
<td>same</td>
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<tr>
<td>tion</td>
<td></td>
</tr>
<tr>
<td>Adverse tax changes</td>
<td>Ideological shift, non industry tax revenues, defense expenditures,</td>
</tr>
<tr>
<td></td>
<td>demonstration effect</td>
</tr>
<tr>
<td>Civil disorder</td>
<td>Strength of economy, aspiration levels, continuity of leadership,</td>
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<td></td>
<td>socio-economic suppression, political suppression, national coherence,</td>
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<td></td>
<td>regime legitimacy, government corruption, external support of</td>
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<tr>
<td></td>
<td>resistance or liberation movement, hostility toward our country,</td>
</tr>
<tr>
<td></td>
<td>visibility of foreigners</td>
</tr>
<tr>
<td>War</td>
<td>Ideological shift, threat negation, arms race, negative sanctions</td>
</tr>
<tr>
<td>RISKS</td>
<td>FACTORS</td>
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<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Productions</td>
<td>Large income effects, investment absorption capacity, conservation, pro-</td>
</tr>
<tr>
<td>restrictions</td>
<td>duction regulation</td>
</tr>
<tr>
<td>Repatriation</td>
<td>Balance of payments, economic development</td>
</tr>
<tr>
<td>limitations</td>
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<tr>
<td>Domestic price</td>
<td>Domestic inflation, political support</td>
</tr>
<tr>
<td>controls</td>
<td></td>
</tr>
<tr>
<td>Devaluation</td>
<td>Balance of payments, decline in reserve position, internal inflation,</td>
</tr>
<tr>
<td>risks</td>
<td>government policies which treat symptoms rather than causes, economic-</td>
</tr>
<tr>
<td></td>
<td>political policies, economic ties</td>
</tr>
<tr>
<td>Export restrictions</td>
<td>Internal consumption, participation in an embargo</td>
</tr>
</tbody>
</table>

One aspect overlooked by Bunn and Mustafaoglu is that their panel technique may not be necessary for most of the factors analyzed and even not useful. The uncertainty over some of the issues may come from a lack of information only; in other words a panel may be a way to avoid primary data gathering, which is essential for monitoring to ask experts a probability of occurrence of a political event will not give you the means to follow underlying developments. "Soft" components of political risk need not be assessed with the same techniques as "hard" components. Finally, for a comparative evaluation of investment
projects and countries, a complete reliance on panel
techniques would be damaging, since a standardized compari-
son of countries will be difficult to achieve (situations
and experts will be different) without increasing
drastically the costs.

So far, the oil political risk analyst has not tried
to post-test its models. A step which is probably
necessary for a possible improvement.

I will now apply the approach described in the
preceding chapter in an attempt to provide a framework
for oil companies political risk analysis.

B. Application

In Chapter II we described a general typology of
political risks which was to serve as a basis for further
application. After a specific problem has been defined,
we will be able to establish an assessment typology. It
is only when such a restricted typology is obtained that
data gathering processing and analyzing can begin. I
present below what could be an example of the approach:

GENERAL TYPOLOGY (all firms/operations/countries)
OIL COMPANIES TYPOLOGY (all countries)
LIBYA TYPOLOGY (one country)
PROJECT TYPOLOGY (a specific project in Libya)
At the third level, it need not always be a country. It could be a sea, a region, a basin (across boundaries), a group of countries having something in common (OAPEC).

In the case chosen for this thesis offshore oil and gas is the aggregating concept for the third level typology. As a project we will take the offshore regions where multilateral disputes exist or have existed. By multilateral we mean more than two countries involved (5 for the North Sea, 4 in the Middle Mediterranean Sea, 5 for the South China Sea). The complete application will thus follow the process below:

1st level    GENERAL TYPOLOGY
2nd level    OIL COMPANIES TYPOLOGY
3rd level    OFFSHORE OIL AND GAS TYPOLOGY
4th level    NORTH SEA, MIDDLE MEDITERRANEAN SEA, SOUTH CHINA SEA

The third and fourth levels will be analyzed in Chapters IV and V.

1. Successive typologies

The first procedure is one of translation: some political risks are highly specific to oil companies, some are of little interest or relevance. Table III gives the translated general typology called here "oil companies typology". The major changes concern the
<table>
<thead>
<tr>
<th>PERSONNEL</th>
<th>TECHNICAL</th>
<th>LEGAL</th>
<th>ECONOMIC</th>
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<tbody>
<tr>
<td>Security</td>
<td>Procurement</td>
<td>Copyright</td>
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<tr>
<td>Staffing</td>
<td>Process</td>
<td>Conflict</td>
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<tr>
<td>Training</td>
<td>Export</td>
<td>Contract</td>
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<tr>
<td>Equipment</td>
<td>Export</td>
<td>Control</td>
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</table>

**International System**
- Nuclear proliferation
- Technology transfer
- Military assistance

**Regional System**
- Nuclear proliferation
- Technology transfer
- Military assistance

**Domestic System**
- Nuclear proliferation
- Technology transfer
- Military assistance

**Economic System**
- Economy
- Economic policy
- Economic regulation
<table>
<thead>
<tr>
<th>NATIONAL LEVEL</th>
<th>COMPANIES TYPOLogy</th>
<th>NATIONAL LEVEL</th>
<th>COMPANIES TYPOLogy</th>
<th>NATIONAL LEVEL</th>
<th>COMPANIES TYPOLogy</th>
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</thead>
<tbody>
<tr>
<td>1 Regional System</td>
<td>2 Host Country/Region</td>
<td>3 Government/Regulation</td>
<td>4 Population/Social Group</td>
<td>5 Internal Politics</td>
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<td>- Tariff</td>
<td>- Bilateral conflict</td>
<td>- Expropriation</td>
<td>- Resolution</td>
<td>- Shareholders perceptions and positions</td>
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<td>- Tariff</td>
<td>- UN policy</td>
<td>- Nationalization</td>
<td>- Headquarters raised</td>
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<td>- Tariff</td>
<td>- Domestic policy</td>
<td>- Political conflict</td>
<td>- Management conflict</td>
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<td>- Bilateral agreements</td>
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</tbody>
</table>
economic and technological functions, introducing words such as OPEC, tankers, drilling technologies, pollution, 
... The typology gives the political risks likely to be interesting to analyze or about which to gather information. It would be interesting to relate these risks with those chosen by the literature (Bunn or Gebelein).

<table>
<thead>
<tr>
<th>RISK</th>
<th>BOX IN THE TYPOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sudden expropriation</td>
<td>A 4</td>
</tr>
<tr>
<td>2. Creeping expropriation</td>
<td>A 4, B 4, E 4, J 4, K 4</td>
</tr>
<tr>
<td>3. Adverse tax changes</td>
<td>B 4</td>
</tr>
<tr>
<td>4. Civil disorder</td>
<td>A 5, C 5, D 5</td>
</tr>
<tr>
<td>5. War</td>
<td>A 2, B 2</td>
</tr>
<tr>
<td>6. Production restrictions</td>
<td>J 4</td>
</tr>
<tr>
<td>7. Repatriation limitations</td>
<td>B 4</td>
</tr>
<tr>
<td>8. Domestic price controls</td>
<td>E 4</td>
</tr>
<tr>
<td>9. Devaluation risk</td>
<td>B 4</td>
</tr>
<tr>
<td>10. Export restrictions</td>
<td>K 4</td>
</tr>
</tbody>
</table>

While the same political risks appear in the above table, the typology shows more diversity especially at the international level. For example, the law of the sea is of prime importance for offshore drilling, and OPEC is likely to be an influential political source. Terrorism, in all its forms, seems to have been forgotten too.

To the set given by Shell and Bum have to be added pollution regulations, local terrorism, and state/federal government conflicts.

For international sources, they asked only war as a likely political risk. A few others should probably be added.
- OPEC policy
- Law of the Sea developments
- International terrorism
- Regional and multinational agreements
- OPIC, World Bank, Eximbank policies.
- Major power foreign policies

In the next chapter we will develop in detail specific risks affecting offshore exploration and production.

I will here review a part of the literature dealing with specific oil political risks and their remedies, showing some forgotten aspects. One aspect relate to the policy of organizations like the World Bank or the Overseas Private Insurance Corporation (OPIC). Since 1978 the World Bank has a new policy of participating in deals for Third World Oil Exploration (Business Week, 1978). Similarly, OPIC offers coverage for some of the risks cited above at the exploration and development stages. The table below gives the annual premiums for each type of risk. These premiums are supposed to be related to the probabilities and costs of the political events:
### Oil and Gas Projects Insurance Offered by OPIC

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Exploration %</th>
<th>Development/Production %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconvertibility</td>
<td>0.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Expropriation</td>
<td>0.4</td>
<td>1.5</td>
</tr>
<tr>
<td>War, Revolution, Insurrection</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Interference with Operations</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Primary standby</td>
<td>0.075</td>
<td>0.25</td>
</tr>
<tr>
<td>Secondary standby</td>
<td>0.0075</td>
<td>0.0075</td>
</tr>
</tbody>
</table>

From pollution (see Gladwin) to international trends (see Department of Energy), many political problems are relevant. The extensive literature about OPEC (as well as about the embargo) will not be discussed here, but it is worth noting that agreement on prices and production levels do affect the overall exploration and developments/curves; as noted earlier in this chapter, the Third World is comparatively underexplored and underdeveloped. The barriers are mainly political, but not only as (as shown by SAFER, p. 100-101) concession loss, surplus pressure, unavailability of capital are also important. The main reason could unfortunately be the desire for control of the market future by oil companies and OPEC together. In that sense, too high oil prices are dangerous, since they give an incentive for more exploration by more companies.
in new countries. Control of the market would disappear with OPEC and the biggest oil corporations failing to retain a major share of the market. The current stagnation of prices and production is a way to be reminded of the sensitivity of the oil market: the first oil crisis created 7 years later a situation of weakness for OPEC and some major oil companies (higher prices have proven effects: decreasing consumption per capita and increasing proven reserves with a time lag of at least 5 to 10 years for exploration and development of new fields). The consequence of the second crisis has not been felt yet.

It is not possible at this time to describe what should be done about each risk, but information gathering is the first necessary step. For most of political problems or events, simple trends could be established. The techniques of assessment and management have to be decided for each project or country. For that reason, we will now analyze how and to what degree offshore oil and gas is affected by political risks.
CHAPTER IV

OFFSHORE OIL AND GAS

"Offshore" oil and gas represents about 20% of total production (offshore and onshore). Offshore exploration was, at first, an extension of onshore fields. It is now undertaken as an independent activity with difficult characteristics. Following the adaptation procedure described in Chapter II. I will now apply the approach to offshore. I will also present technological, geological, legal, economic and financial characteristics of offshore activities.

A. Application of the Typollogy to Offshore Oil and Gas

In the preceding chapter, we have seen it was possible to adapt the general approach to oil companies specific problems. I chose offshore oil and gas as the next step of the application for three reasons: First, because of their characteristics (cost, scale), offshore investments should be more sensitive to political factors. Second, some factors at the international level could be expected to be more important than for onshore activities: we have seen that these factors tended to be under-estimated. Finally, I wanted to show that the next step
of the application need not be a country.

The actual procedure is:

```
        Multinational Corporations
          ↓
            Oil Companies
              ↓
                Offshore
                  ↓
                  North Sea  S. China Sea  N. Mediterranean Sea
```

<table>
<thead>
<tr>
<th>England</th>
<th>Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>Vietnam</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Malaysian</td>
</tr>
<tr>
<td>Germany</td>
<td>Philippines</td>
</tr>
<tr>
<td>Denmark</td>
<td>China</td>
</tr>
<tr>
<td></td>
<td>Libya</td>
</tr>
<tr>
<td></td>
<td>Tunisia</td>
</tr>
<tr>
<td></td>
<td>Malta</td>
</tr>
<tr>
<td></td>
<td>Italy</td>
</tr>
</tbody>
</table>

While the last step is usually a part of oil companies analyses, the problem is rarely understood in terms of regions or offshore/onshore division. I will not study in this thesis each particular country involved, but stop at the regional level. Another path could be to divide first into regions and countries and only then into offshore and onshore activities.

When the oil company typology is restricted to offshore oil and gas, a few adaptations are necessary:
<table>
<thead>
<tr>
<th>ITEM</th>
<th>INTERNATIONAL LEVEL</th>
<th>REGIONAL LEVEL</th>
<th>NATIONAL LEVEL</th>
<th>COMPANY LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gas Destruction</td>
<td>Regional conflicts</td>
<td>Bilateral conflicts</td>
<td>Appropriation</td>
<td>Shareholder perceptions and position</td>
</tr>
<tr>
<td>2. Gas Extraction</td>
<td>Regional access to gas</td>
<td>Bilateral agreements</td>
<td>Exchange rate</td>
<td></td>
</tr>
<tr>
<td>3. Gas Import</td>
<td>Regional gas pricing</td>
<td>Bilateral supply agreements</td>
<td>Perceptions of bank lenders</td>
<td></td>
</tr>
<tr>
<td>4. Gas Refinement</td>
<td>Regional tariff</td>
<td>Bilateral export agreements</td>
<td>Internal rate policy</td>
<td></td>
</tr>
<tr>
<td>5. Gas Transportation</td>
<td>Regional transport agreements</td>
<td>Bilateral supply agreements</td>
<td>Local to violence</td>
<td></td>
</tr>
<tr>
<td>6. Gas Distribution</td>
<td>Regional demand</td>
<td>Bilateral supply agreements</td>
<td>Local to violence</td>
<td></td>
</tr>
<tr>
<td>7. Gas Consumption</td>
<td>Regional consumption</td>
<td>Bilateral supply agreements</td>
<td>Local to violence</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The table lists various items related to gas and oil exploration and production, including regional and national levels, as well as company-level factors.
generic types of political risks because in the process specific political risk, whose interest is easier to understand. The most important aspects seemed to be the following (No ranking):

INTERNATIONAL SET:

1. International norms for profit sharing
2. OPEC policies (price, supply, embargo)
3. Law of the sea development
4. Terrorism
5. Drilling Technology transfer demands
6. War
7. Regional agreements on pollution, pipeline, liberty of circulation
8. Boundary disputes and delimitations
9. OPIC policy (World Bank, Eximbank, other Banks)
10. U.S. Foreign Policy

NATIONAL SET:

1. Expropriation
2. Repatriation policy (Tax, Profit, Devaluation...)
3. Sourcing policy
4. Domestic price controls/supply control
5. Contract renegotiation and allocation
6. National vs. Sub-national legal conflicts
7. Localization of equipment and supply
8. Pollution regulations
9. Safety regulations

10. Perception of bank lenders tied to internal violence

It seems that the National set is what Shell or Bunn were looking at (see Chapter III). Is it so obvious that the International set has nothing to concern oil companies? In order to get a better understanding of what is offshore oil and gas, I will now try to present its essential features.

B. Characteristics of Offshore Oil and Gas Exploration and Production

Each aspect will be studied in so far it may affect political factors. A complete offshore project will follow three stages: exploration, development and production. It may sometimes be necessary to have pipelines (gas) going onshore. Most of the aspects analyzed have impacts on each other.

1. Technological aspects

The drilling technology is complicated for offshore by the positioning problem: to stay at the same place when the sea obviously doesn't. Several factors are here important:
- The climate
- The waves and current
- The depth

While nothing can be done about the first two factors except by avoiding hostile waters, the depth limitations are constantly diminishing. Table IV.2 shows that technological possibilities do not show a possible future depth limit. The limitation comes from financial limitations and geological scarcity of prospects on the ocean bed below 10,000 feet (3,000 m); the financial limit, even with sub sea installations will probably be lower than that. Moreover being able to drill doesn't imply the ability to produce at the same depth levels. One consequence of depth records is important to remember: when it was believed that offshore production would be restricted to the near shore waters most countries didn't ask for wide maritime territorial limits. With increasing possibilities claims extended from 3 to 12 miles and even to the 200 meter deep economic zone. With ever increasing potential and the 1974 oil crisis, everybody is asking for 200 miles, hoping to reap the maximum benefits.

2. Geological Aspects

Briefly, sedimentary basins are the basis for oil and gas potential: geologists tend to focus on them for
TABLE IV.2
Increasing Depths for Exploratory Drilling

TABLE IV.3

Offshore Sedimentary Basins

CHAPTER IV.3

Sedimentary Basins

"Sedimentary Basins of the
World," 7610, USA: The AAPG
prospects. Sedimentary basins are especially linked to giant fields of broken underlying structure would allow only small fields. Since offshore have to be big to cover expenses, only very good prospects will be explored. Not all continental shelves and semi enclosed seas could be expected to contain interesting prospects. Table IV.3 is a world map showing which are the potential and existing oil locations in sedimentary basins for offshore areas. To say that most oil can be found between 20° and 60° latitude north is a mistake (Elery, p. 45). The continental drift has influenced the actual location of these fields. To understand locations, a global geological history is needed, for example, Venezuelan fields could be related to Ivory Coast Fields.

3. Legal Aspects

The most important factor is here the development of the Law of the Sea. It seems that the economic zone (allowing oil exploration by the nation-state) will be 200 nautical miles. There was a majority of support for it at the United Nations Conference on the Law of the Sea (UNCLOS III). The consequence is that almost 90% of oil and gas potential will be within national boundaries. The fact that the Reagan administration did not agree to the actual draft has consequences: actual exploitation
Table IV.4
Worldwide Offshore Crude Production


TABLE IV.5
Worldwide Offshore Drilling

Source: Offshore, June 20, 1980, p. 69.
of oil will not be affected but new exploitation depending on solution of boundary disputes will be delayed. Secondly, the transportation of petroleum by tankers may not be as assured as in the past. The freedom status of high seas is contested by nations which are not maritime powers (Lucchini, p. 32 and Irwin p. 105). Legal issues are also important for contract renegotiations and protection of offshore structures (Kessler, 1976).

4. Economic aspects

Offshore crude production represents about 20% (Offshore, June 20, 1980, p. 62) of total world production. As such it is an essential part of the developed countries supplies. But its high cost for companies makes it very sensitive to market conditions, as shown in Table IV.4 Price increases do not boost offshore production in the short term but they do increase the number of development prospects by lowering the rentability threshold. The size of the investment is another real problem: it is ten times more than onshore. Offshore is greatly affected by OPEC decisions on the price of the barrel.

At the country level offshore is interesting because it contributes especially to energy self sufficiency goals and a developed field is usually a big field (Pelley, p. 1).
5. Financial Aspect

One important factor of offshore oil profitability is the ratio comparing the cost of production by barrel to the market price of the barrel as set by OPEC. This is reflected in investment decisions for exploration which follow an irregular pattern (see Table IV.5) where the two oil crisis play an important role. On the other hand about half of offshore investment is made in politically safe countries. It is so far difficult to assess the relationship between the factors and offshore exploration development and production.

Three factors seem to be especially relevant:

1. Price of the barrel
2. Profit taxation and regulation
3. Political safeness of the countries involved

A pattern emerges more clearly for very expensive investments (Multiwell Platforms, 1979)

<table>
<thead>
<tr>
<th>Region</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>73%</td>
</tr>
<tr>
<td>North Sea</td>
<td>6.2%</td>
</tr>
<tr>
<td>S. E. Asia</td>
<td>5.3%</td>
</tr>
<tr>
<td>Med. Sea</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

There are other reasons for the phenomenon, but the political factor is probably a major one.

In order to analyze to what degree the political factors are important of offshore investment decisions
we will now analyze the three regions listed above. The choice of the cases depended on the availability of information as well as the multinational nature of the sea considered. The International set we have proposed in Section A will be the basis of our approach to the three maritime regions.
CHAPTER V
APPLICATION OF THE APPROACH TO THE NORTH SEA,
AND THE MIDDLE MEDITERRANEAN SEA

In the preceding chapter we followed a logical line from general to specific political risk analysis. The last chapter described the political risks for offshore oil and gas as grouped in two sets: a national and an international set. In order to test the validity of the method described so far, a few case studies with both national and international aspects were needed. Offshore regions with international problems can be divided into two types: adjacent countries having an offshore oil location in common and semi-enclosed seas where both adjacent and opposite countries exist. The first type will usually involve bilateral problems and the second multilateral problems. I chose the latter type because the political complexity is usually greater: It means that a wider range of political problems is likely. Among the 25 semi-enclosed seas described by Lewis M. Alexander in 1976 only a few are really multinational (involving four countries or blocs at least). These are the North Sea, the South China Sea, the Mediterranean Sea, the Carribean Sea, East-Yellow Seas, and The Sea of Japan.
The last three cases have been excluded because of format and data limitations, but they are nevertheless interesting for further research. The North Sea is the only case where a solution has been found for boundary delimitations. In a sense, a complete development cycle has been followed in the North Sea. The approach described in the preceding chapters starts with a systematic research of all types of political risks. After successive translations to oil companies and offshore problems a core of potential risk remains. The two sets (International/National) of political risks will be applied to the North Sea to test whether they were important and when they were so. The tentative model will then be tested on the Mediterranean Sea. The result should be an increased understanding of how political factors could be taken into account by multinational oil companies and or how they assess and manage political risks.

The time frame chosen for the cases is roughly from 1960 to 1980. This period covers geophysical survey, exploration (drilling), development and production up to now.

A. The North Sea Model and the political risk approach

The North Sea represents about 25% of world offshore oil and gas and is in consequence a major region to which to apply the approach described in the preceding chapters. I will begin this section with a chronology of the most important phases of the North Sea development.
1. A Chronology

The Continental Shelf Convention opened the way in 1958 for offshore exploration by giving rules for boundary delimitation.

Between 1960 and 1963 geophysical surveys were made to discover the general shape of the North Sea underground (first well discovery in 1961). In 1963 there was a consensus that the North Sea had important reserves (Keto, p. 22). Oil companies asked for a legal solution of boundaries. In 1965-67 several agreements to divide the North Sea were made. About 95% of the North Sea was then ready to be explored.

1967-1973 was an exploration period with an average of 100+ exploratory wells per year. During that period oil companies and OPEC countries worked together to increase slightly oil prices to offset decreasing profits and inflation. In 1974 prices were quadrupled and OPEC was in firm control.

In 1975 production began and increased quickly thereafter. Production would never have been profitable enough without the price increase. The production cost in the North Sea is at least double of other areas. At 3 dollars a barrel the North Sea wouldn't exist.
The pattern seems to the following:

Project Generation

All Boundaries delimited

Exploration

Price Hikes

Profitability of Prospects

Profits

Production Possible

OIL

COM

PA

NIES

PROFITS

STATES

To what degree did the situation go out of hand in 1976? One thing is obvious: at all stages multinational oil companies were in control. The price hikes were necessary. It could be argued that the development of new resources is good for the consumer in the long run. In the short run it looks like the major political actor
is the group of Major oil companies.

Another explanation would be that the succession of stages and events was purely accidental.

As it has been said by Ian Stuart in *The Political Implications of North Sea Oil and Gas*, "In the end, North Sea resource development is inductably a political process, simply because it depends upon the taking of political decisions for political reasons by political men, whether in government or in companies." (emphasis added)

2. Application of the Offshore Typology to the North Sea Case

I will first list systematically the risks of each set, with reference to what or could happen in the North Sea. In doing so I will try to indicate the relative importance of each risk and set as well as their relative importance across time.

In the international set, ten types of political risks were represented:

1. International norms for profit sharing.

There is an imitation effect among oil producing countries concerning taxation rate (now about 70-80% of income after cost). For example Norway conducted a survey of many countries before deciding on the type of policy it would follow.
International norms have an effect on how far a specific country policy could go. These norms are reflecting the lower and upper limit of host countries policy impact on oil companies profit. Finally, profit could be taken in foreign exchange or in kind according to the relative needs of the oil companies and of the host country. This political risk, while minor for short term assessment (a single project) is important for long term regional development.

2. OPEC Policy

OPEC policies now affect both the level of production and the price for the supply (with some variation depending on the unity of OPEC). The most important aspect here is that prices affect the profitability of oil companies and of potential prospects. The price increase of 1974 greatly improved the potential of the North Sea as a major offshore region. At the opposite, exploitation of the North Sea would not have been possible at 2 dollars/barrel. The profits of multinational oil companies have never been affected negatively by OPEC actions, even nacionalized companies retained substantial profits (Odell, 1977, p. 51).

Moreover it does seem that the majors and the OPEC countries were designing a common strategy at least until 1970 via the London Oil Policy Group (Mason, p. 86).
Political events in the Middle East can affect the oil market in many ways (Saeter, p. 155). A past remark is in order: taking into account inflation, oil prices were not increased by 400% but only doubled. Moreover oil companies profits were falling during the 1960's because of competition (Mason, p. 86).

OPEC policies are a major political risk for almost all aspects of oil companies operations.

3. Law of the Sea Development

Two events are here relevant to the problem:

a) The Truman Declaration of 1945.

They are the basis of the development of the North Sea basin because they provided legitimacy and rules of partition for offshore areas. They made possible the subsequent agreements between the North Sea countries.

4. Terrorism

It does not seem that this factor is considered as important. It should probably not even be taken into account for an assessment. While protection systems (Offshore, Dec. 1977, p. 85), and consultants (Ocean Industry, March 1981, p. 93) exist, it is, so far, an unlikely problem: "Terrorists and saboteurs would presumably prefer targets of easy access and
high visibility. Offshore installations satisfy neither criteria" (Holst, p. 139).
One potential group likely to use terrorism is the IRA.

5. Drilling Technology Transfer Demands: None, but state owned oil companies tried to acquire the necessary technology. It is actually a really minor political risk.

6. War
War risks could be divided into harassment and sub-regional and major wars (Holst, p. 132). Neither of these types is very likely in the first place and do not seem to have been taken into account in the use of the North Sea. Even if a war were to occur, offshore installations may not be a prime target (if the war is short). Finally to arm the offshore platforms would increase the likelihood of negative reactions from the Soviet Union and these platforms are already under the protection of air "area defense" to the NATO system (Holst, p. 141). War would be a major factor in case of a protracted war. War political risk was a major factor for the North Sea in the sense that the unlikelihood of the event contributed to the overall political stability needed for oil operations.
7. Environmental Regional Agreements

The North Sea is still considered to be "high seas" with the consequent liberty of circulation. The North Sea agreements were made for the purpose of economic use of the sea. The boundaries are only economic boundaries and do not have a territorial status. Policing in the North Sea is coordinated by the different countries; no problem should arise from that aspect.

A few agreements exist (mainly between England and Norway) on pollution liability and pipeline planning. This factor has not been, up to now, essential in the North Sea.

8. Boundary Disputes and Delimitation

The United Kingdom and Denmark ratified the 1958 Geneva Convention on the Continental Shelf in 1963-64. In 1965-1966 the United Kingdom, Norway, Denmark and the Netherlands set their boundaries by using the median line rule. Only Germany contested the agreement and obtained a partial gain in 1971 in agreement with Denmark and the Netherlands. One interesting aspect is that the United Kingdom by accepting the median line gave up an important part of its Continental Shelf up to the Norwegian through. As Mason said (page 26), "Friendly political
sentiments may have played a part; but not so large a part as the tenuousness of the arguments involved and ignorance of the resources at stake." There is some uncertainty about the last point concerning the oil companies: they had geophysically surveyed the North Sea and therefore knew where the structures were. They of course couldn't know where oil would be located but they had a pretty good idea on where to drill.

One point is here important to note: the multi-national oil companies put some pressure on these countries, asking them to solve the legal problems and to give them national legal frameworks to work with (Mason, p. 21; Turner, p. 94) in the 1960-1965 period.

9. OPIC/World Bank

Only recently have these organizations offered protection or funds for exploration and this mainly for developing countries. It didn't and doesn't affect the North Sea.

10. U.S. Foreign Policy

Five of the Majors are American-based; the oil lobby has always been very powerful in the U.S. It is difficult to discern to what extent different
administrations have helped the foreign interests of oil companies. For example Mason stated that in the late 60's the U.S. had an interest in higher oil prices, to stop the dwindling income taxes paid by oil companies, and to help its energy intensive manufacturers to compete with European counterparts (which were much more affected by the price hikes). U.S. domestic price policy for energy also affects the resources available for other parts of the world. Finally, helping militarily some Arabic states will help insure that the political climate, in which the Majors operate, is stable. I will come back to the U.S. foreign policy impacts in the case of Libya, where its role was much more important than for the North Sea.

In the National Set ten types of risk were represented:

1. Expropriation

One of the reasons for the oil companies to be interested in the North Sea as opposed to other locations was the very low probability of expropriation.

The type of liberal democracy present in the major North Sea States made it unlikely to suffer expropriations. This early view changed when the Labour Party came to power in the U.K. For that country it is now a major potential risk.
Lastly state intervention and participation has increased greatly but it is not always analyzed as a threat. At least up to 1975 it has certainly not been a negative factor in assessment of North Sea prospects.

2. Rapatriation Policy

This is the single most important political risk. While norms for profit sharing exist, there are wide differences of stability of financial conditions among producing countries. For example the accession to power of the Labour Party in England had for consequence increased taxations and a "ring fence" (fiscal isolation of NS activities) policy for costs of exploration: It was no longer possible to deduce costs from the Middle East of North Sea Income. Taxation, in itself may not be a problem but financial uncertainty is one. A decision of development taken under a given set of profitability characteristics may lead to a loss if taxation changes drastically. A minimal taxation could occur for two reasons; first if the expected rate of success of exploration is low, secondly if the country is eager to attract rapidly the oil companies, finally if there are negative aspects such as political uncertainty, war or difficult technological conditions.
A maximal taxation would occur with a long time oil producer, when production costs are well below the market average (Middle East) or when the crude is of a rare and high quality.

For the North Sea, the United Kingdom and Norway shifted quickly between 1976 and 1980 from the first position to the latter. It is probably now the most important political risk to consider.

3. Sourcing Policy: None

4. Domestic Price/Supply Controls

The control of the price of gas by the British administration is one reason for the early reluctance of oil companies to develop gas fields in the southern North Sea (Turner, p. 96; Odell, 1975, p. 51). At the opposite the Netherlands secured complete development by offering market price for gas.

For oil this factor has been fairly minor. Moreover supply is controlled by the rate of depletion of well regulations (Keto, p. 90).

5. Contract Renegotiation and Allocation

The discrimination possible, when licences are given by blocks, was increasing the political flexibility of North Sea countries. It influenced the spatial pattern of exploration and its timing. (The host countries tried to promote more difficult
areas by retaining the good ones.) Moreover the United Kingdom favored the Majors over other small companies when allocating concessions. It also allows the administration to change the conditions of contracts for new allocations.

6. National vs. Sub National Conflict
This occurred briefly in Germany and in an informal way between Scotland and England. It did not affect the oil companies. A local authority with some autonomy would for example preempt the government by allocating licences or regulating maritime operations and onshore development. It is here an insignificant political risk.

7. Localization of Equipment and Supply
Both the United Kingdom and Norway tried to persuade oil companies to use local supplies as much as possible. This however proved less important than decisions to process as much oil as possible on the countries' territory, which diminished the logistical flexibility of oil companies (Turner, p. 102).

8. Pollution Regulations
Pollution regulations may be costly if devices and new drilling procedures are required. The United Kingdom was much more flexible on the problem than
Norway. It may affect more the companies if a major accident occurs in the future.

9. Safety Regulations

Here again practice differs from low key English regulations to safety sensitive regulations in Norway. It is affecting only marginally the oil companies which are already sensitive to the cost of losing a platform.

10. Perception of Bank Lenders

Some oil companies had to borrow heavily for some projects. The bankers will estimate the financial liability of looking at some of the factors we have described above: mainly OPEC prices, taxation and participation (Brown, p. 120).

One goal of the application was to test the validity of the typology. Some of the political risks were not present in the North Sea context. Most of the risks presented, however, have affected and will affect oil companies in one way or another. The two sets could thus be used as a starting point for political risk analysis of offshore regions.

A technique like the one used by Shell of scenario generation, cross impact analysis and panel of experts would certainly be possible for a maritime region study.
TABLE V.1

Nationality of North Sea Resources

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S</td>
<td>43%</td>
</tr>
<tr>
<td>U.K</td>
<td>26%</td>
</tr>
<tr>
<td>Nor.</td>
<td>13%</td>
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This assessment would be necessary before exploration commitments are made and later before production begins (development stage).

A continuous monitoring could then be assured on the basis of the same two sets but probably not with the same basis for all political risks involved.

OPEC policy, and taxation-participation will remain prime political risks during the life of an investment in a maritime region but Law of the Sea developments and political tensions (or war) may also remain alive if no solution has been found in early stages.

I will now apply the same approach to the Middle Mediterranean Sea.

B. A Tentative Application of the North Sea model to the Middle Mediterranean Sea

The North Sea Model is composed of two essential elements: A historical pattern and a core set of political risks. The North Sea will serve as a referential to the Middle Mediterranean Sea. While some political factors are common for all semi-enclosed seas there are also marked differences.

In any case the same sets of political risks will be used for assessment and risks requiring more emphasis than others will be different from those of the
North Sea. The need for a broad set of different political risks is due to the political diversity and complexity of offshore regions. Moreover, the fact that management techniques are especially powerful in oil companies depends in major part on a precise assessment of political risks.

International set of political risks:

1. International Norms for profit sharing

Libya, at the beginning of the 1970s was the first country to break the rules but is now within the main stream for that aspect. There are therefore no major differences with the North Sea.

2. OPEC policy

Like in the North Sea, it is a major factor.

3. Law of the Sea development

A major breakthrough, that would come from UNCLOS III, is a process of binding arbitration for boundary disputes. This would affect greatly the actual state of non-delimitation in the Gulf of Gabes and eastward.

4. Terrorism

Quaddafi is notorious for its terrorist funding/sponsoring activities. It has so far not been associated with regional operations. But this political risk should nevertheless be considered as more than minor.
5. Drilling Technology Transfer Demands: None, therefore no difference with the North Sea.

6. War

In the regional system composed of Italy, Tunisia, Malta and Libya, political tension has reached relatively high levels. Here again Libya is the major destabilizing power, using such influence techniques as war threats, cheap oil contracts, economic aid, fusion proposals, military raids, direct intervention on offshore rig by a submarine... While in the North Sea, the absence of political tension was a key factor of development, here the presence of political tensions is a key factor of non-development of the offshore area.

7. Environmental Regional Agreements: None

8. Boundary disputes and delimitation

So far only Italy and Malta have agreed on their common boundary. As a result probably more than fifty per cent of the offshore region cannot be developed. Libya refuses arbitration and would like to secure as much shelf as possible without regard to the depth or Law of the Sea rules. This political risk (to be associated with war political risk) is one major difference with the North Sea.
9. OPIC/World Bank

Tunisia and Malta would probably be accepted as potential borrowers from the world Bank and for exploration sponsoring programs. OPIC insurance could be used to work near Libyan borders; this is however only a minor factor.

10. U.S. Foreign Policy

At the opposite of the North Sea, U.S. foreign policy is relevant for this offshore region. The recent shutdown by American forces of two Libyan planes had no consequence so far but it is indicative of the influence that the U.S. could have in that region.

National Set

1. Expropriation

This risk is serious mainly in Libya.

2. Repatriation - Taxation Policies

This region is characterized by mild terms for oil companies. While Libya was known for its harsh terms, most oil companies have still operations there. Overall terms for the region could be considered as milder than in the North Sea.

3. Sourcing policy: none

4. Domestic price/supply control

Some supply controls in Libya occasionally do exist. This risk is unsignificant for the region.
5. Contract renegotiation and allocation
   In that region the contract was rarely a political problem for allocation as well as for rupture.
7. Localization of equipment and supply: none
8. Pollution regulations: Standard oil companies procedure.
10. Perception of Bank Lenders
    The costs are less in that region because of easy operating conditions. The borrowing doesn't seem to have affected exploration and production so far.

    This application shows that the presence of a destabilizing power in the region has important negative effects on development. Since offshore exploration has usually been done outside of conflict areas (exceptions Texaco/Medina Bank and Total/Isis) national sets should be used specifically for each country. Generally the policies are less sophisticated than in the North Sea as well as offering better terms.

    This application also proves that the two sets of risks are relevant for different settings and situations. Once the relevant and major risks are determined it would be possible
to analyze them separately and jointly according to their expected costs. Usually the source of a risk will be the main way to find out what assessment technique is to be used.
CONCLUSION

A systematic approach to political risks associated to offshore oil and gas should emphasize national as well as international factors. From the comparison of the North Sea and the Middle Mediterranean Sea emerges three major political risks:

- OPEC policies
- War and Political tension
- Taxation

The first factor operates everywhere, the second at a regional level and the third at a national level. For each, a continuous monitoring should be necessary, as well as comprehensive and detailed assessments. By taking the South China Sea example I will show how these three political risks are related.

In the case of the South China Sea, the main issue is the Spraly's Islands. Troops of Taiwan, Vietnam and the Philippines are in place. China is claiming all South China Sea as historically Chinese.

Once again the North Sea pattern doesn't apply completely because of the impossibility to solve boundary disputes. The shape of the sea is fairly similar but
islands exist in the middle and the sea bed goes down to about 2000 m. Two destabilizing powers exist in this system: China and Vietnam. A solution depends mainly on the Soviet Union influence in Vietnam. The non dependence on Soviet Union aid would allow Vietnam to choose to enter ASEAN. Moreover China would not see its security as threatened in the South China Sea with a neutral-oriented organization on its south flank. Then a partition would be possible and a development of the North Sea type possible. The reserves of the South China Sea are thought to be equivalent to those of the North Sea and the climate is not as problematic. The OPEC price hikes increased greatly the potential of the region but the exploration will remain underdeveloped until the boundary is not solved.

One effect of taxation policies could be seen in 1975-1977 in Indonesia. Due to a financial crisis of Pertamina, the state owned oil company, contracts were changed toward much higher rates of taxation and lower crude allowances. Production and especially exploration experienced a substantial slow-down in 1977. The Indonesian government came back to more "normal" conditions and a quiet boom is since taking place.

The North Sea proved to be an interesting model of analysis, once integrated in an adequate framework.
The use by oil companies of the results of political assessment for planning purposes is outside the scope of this thesis. But it should be noted that the political power of the major oil companies proved to be more substantial than it is usually expected to be.
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