

FOREIGN INVESTMENT AND THE BARGAINING PROCESS:
CASE STUDY OF THE ALUMINUM INDUSTRY IN ICELAND

by

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Foreign Investment And The Bargaining Process: Case Study Of The Aluminum

Industry In Iceland

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ABSTRACT

The central research theme of this thesis is to explain the actual and planned investments in the aluminum industry in Iceland in terms of the bargaining process that took place between the Icelandic government and aluminum multinational corporations. The first of these negotiations were between the Icelandic government and Alusuisse between 1961-1966, which resulted in the establishment of the ISAL aluminum smelter, and the second with the ATLANTAL-group between 1987-1991. The latter negotiations formally ended in 1991 without the establishment of an aluminum smelter. However, informal negotiations have continued and a new aluminum smelter in Iceland is possible as soon as economic factors make the project justifiable. This thesis seeks to examine in detail both bargaining processes and compare them to assess how spin-offs from the first bargaining process affected the second.

The thesis explicitly interprets industrial location as a bargaining process. The underlying rationale is that location conditions are not provided by nature or universal economic laws but are socially constructed by powerful institutions, like governments and big corporations. In order to understand the nature of location decision-making, its implication for local development, and the creation of location conditions it is necessary to examine negotiations that commonly precede foreign investment.

The main information sources for the thesis are governmental documents, newspaper articles, and interviews with some key participants in the negotiations. It should be noted that some of the governmental documents regarding the first case were marked confidential but are now open to the public as they are more than 25 years old.

This research demonstrates the validity of interpreting investment in the Icelandic aluminum industry as a bargaining process. In both case studies, negotiations focused on a

few key issues, notably, location, taxation, power supply, and legal issues. While both parties had different priorities and an agreement was reached, viable alternatives were eschewed. Particular controversial matter involved negotiations over the location of the second smelter which is planned to be next to the existing smelter although the government preferred a different location. The government's bargaining position has strengthened during the last three decades through spin-offs and learning from negotiations with MNCs. However, the government's bargaining power has only increased a little, as the bargaining power is a result of competition between countries attracting the same or similar industries. This competition gives big MNCs advantages in some areas as they can exploit and compare one location to another.

Though the future of the aluminum industry, or power intensive industry, in Iceland is bright, MNCs should be attracted cautiously and the bargaining process should be used to maximize Iceland's benefits and eliminate undesirable factors such as pollution.

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CHAPTER I

INTRODUCTION

During the nineteenth and twentieth century global economics have changed dramatically. Technological changes, especially in communication and transportation, have made the globe relatively 'smaller' in the sense that movement and integration across space is faster and cheaper. Firms, especially big firms, now have wide ranging planning horizons and capital is far more mobile than it once was. Recently the formation of large economic units such as the European Union (EU) and the North American Free Trade Agreement (NAFTA), have reduced political, economic, and social barriers of entry facing investment and trade, thus further facilitating the mobility of firms.

Firms have used the increasing mobility of capital to expand operations and grow. The operations of multinational corporations (MNCs) are now common in many countries. The issue of foreign investment, however, is controversial from the point of view of national development. Some countries see foreign investment by MNCs as a means to economic prosperity, due to an, inflow of capital, job creation, expertise of one kind or another, and increasing economic diversity. As a result there is often competition among countries to attract potential foreign investors or MNCs. On the other hand, some countries fear that foreign investment undermines national control over the economy, truncates economic structures and in the long run results in large outflows of capital (profits).

In deciding where to locate, MNCs do not simply choose from an existing bundle of location characteristics, such as taxation, labour, and amenity, at different locations. Countries, and locations within countries, certainly, differ in terms of location conditions that are present. At the same time, location conditions can be developed and this development is often subject to negotiation between firms, governments, and other

organizations. These negotiations, involve bargaining processes among the various organizations, each of which seek advantages which to some extent are mutual and to some extent are in conflict. This thesis offers a case study of foreign investment as a bargaining process, involving the establishment of the aluminum industry in Iceland. In this case study, the principal organizations engaged in the bargaining process are the MNCs and the government of Iceland.

Location as Bargaining Process

Within industrial geography industrial location has only rarely been interpreted from the perspective of bargaining processes, with few exceptions, including Krumme's (1981) study of Volkswagen's entry into the U.S. Traditional 'descriptive' and theoretical approaches emphasize spatial variations in cost and revenue conditions or factors as the explanation for patterns of industrial location. Behavioural studies towards industrial location, as exemplified by Stafford (1974) and Townroe (1969), interpret location from the perspective of a decision-making process. However, this decision making process is seen entirely from the perspective of the firm and the interests of other actors are either ignored or relegated to minor consideration. Within the so-called 'geography of enterprise' literature, there is explicit recognition that corporate priorities and preferences may not be those of the region (Krumme, 1969; Hayter and Watts 1983). Even within this tradition, however, there have been few detailed investigations of location as a bargaining process between firms, governments, labour, and other institutions. Such a neglect is surprising since to some extent location conditions and factors, both tangible and non-tangible, are developed or 'constructed' by negotiations among different interest groups, that is most location conditions are not fixed and they change through interactions of at least two parties. It is difficult to assess why this subject has been neglected by economic

geographers since it seems a logical development to how Krumme (1969) defined the geography of enterprise almost three decades ago. Two reasons can maybe explain this neglect. First, in 'traditional' neoclassical approaches towards industrial location, which remain important, firms are seen as abstract entities passively responding to economic circumstances. Second, Marxist approaches, until recently, have interpreted 'capital' quite broadly and have not focused on detailed interactions between individual firms and other groups.

Two recent case studies within the geography of enterprise tradition which analyzed industrial location from the perspective of bargaining process and with respect to foreign investment are provided by Krumme (1981) and Soyez (1988). In addition, it might be noted that Clark (1981, 1989) has examined the implications of labour relations - the bargaining between management and labour - for industrial location. Interestingly, none of these studies adopted an explicit model of the bargaining process. In political science, however, models of bargaining processes have been developed and these models recognize that bargaining is a complex process. According to the bargaining theories developed in political science the outcome of a decision depends on which participant needs the other more and the bargaining ability of each actor (see, for example, Keohane and Nye 1989). In turn, the bargaining strength and ability of actors depends upon their motivations and experience with related projects in the past. These models emphasize the interactions among national governments and MNCs. Moreover, the literature recognizes that over time, once an agreement is in place, bargaining relations between participants may shift. Models of the bargaining process in political science also feature the location of investment, most notably those developed by Contreras and Gregersen (1975) and Goodman (1987). This thesis will seek to incorporate this literature within that of industrial geography, specifically with regards to the location decision

In complex bargaining processes, such as those between MNCs and governments over investment proposals, many issues are incorporated. In such cases it is generally argued that MNCs focus mostly on economic factors and ultimately the profitability of a project. The host country (HC), or in particular the host country government (HCG), in their decision-making must include political and social factors as well. In this context, it is necessary to make a distinction between the HC and HCG since the HCG need not represent all interest groups in a country, for example, as might be expressed by unions, environmental groups, opposition parties, and local governments. However, it is usually appropriate to examine the bargaining process primarily from the HCG perspective for three main reasons; the HCG is the most powerful organization in the country and has the legal mandate to govern; the negotiators are representatives of the government; and the HCG formally represents a nation in negotiations. In any case, it can be argued that the process is far more complex from the perspective of the HCG than for the MNC. In their studies of US investment in the forest industry in Latin America, for example Contreras and Gregersen (1975) and Goodman (1987) created similar frameworks for analyzing the bargaining process in which the HC was essentially represented by the HCG. In citing these two studies it is possible to identify another gap in the literature as both frameworks are constructed solely around interactions between MNCs and Third World countries.

As a multi-dimensional field of study, geography is well suitable for researching the bargaining process. The geography of enterprise is well known and widely accepted (Krumme, 1969; Hayter and Watts, 1983; Soye, 1988) and an in-depth case study of individual firms bargaining with a nation state can best suit the purpose of understanding why the bargaining process is so important for both actors. For the enterprise, the bargaining process affects location decision-making, the nature of location conditions, and eventually the profitability of a project. For the HC, the bargaining process does not only affect internal location conditions but also regional development and the future industrial

structure of the country. Such research should therefore contribute to the literature of the 'geography of enterprise'.

To explore these issues, this thesis will examine, in detail, the location choices of particular MNCs as bargaining processes, with particular respect to the aluminum industry in Iceland.

Iceland and the Aluminum Industry

The Icelandic aluminum industry provides an appropriate case study to examine the bargaining process between MNCs and small countries for several reasons. First, Iceland is a small country and the decisions of individual MNCs can have a big impact on its development. Second, Iceland is a democracy; in fact, it has the world's oldest parliament and is an example of a small country with long traditions of debate. Third, until recently, because of its isolation, population, and geographical location, MNCs showed little interest in locating there and while both Norwegian and Danish capital was involved in the fishing industry until the 1920s, foreign investment from elsewhere was an unknown phenomenon in the economic development of the country. However, in an effort to utilize its resources, in the 1960s Iceland began to seek to attract foreign investment and MNCs, especially in relation to power intensive industries. At this time, the aluminum industry was prosperous and MNCs which were involved in that industry were expanding rapidly, and were looking for suitable locations. As a result both the Icelandic government and MNCs were interested in establishing an aluminum smelter, in Iceland, during the 1960s.

Because of its structure and characteristics the aluminum industry needs very specific location conditions. Aluminum is produced in three different stages, mining, smelting, and refining, and each stage has its specific needs. At the smelting stage (stage 2), in which alumina is reduced to aluminum requiring vast amounts of energy,

transportation is much less of a cost constraint than is availability of power. Of most importance to primary aluminum producers is a location which has an energy surplus at a low price. Iceland fulfills this condition and therefore is a good locational 'candidate' for the aluminum industry. In addition, Iceland offers other important secondary factors, notably a stable political climate, labour (skilled and unskilled), good infrastructure and transportation system, and closeness to markets. Evans (1993) adds that MNCs that locate in Iceland and make agreements with the government can be certain that, though governments come and go, agreements will always be honoured.

On May 5, 1961, the Minister of Industry (Bjarni Benidiktsson) organized a committee, The Industrial Development Committee (TIDC). The task of TIDC was to seek ways as to how Iceland could best use its energy resources, and what kind of power intensive industry could be build in the country. TIDC invited specialists from two Norwegian companies, Norsk Hydro and Elektrokemisk A/S, to come to Iceland. In a report from these specialists they mentioned many possibilities for power intensive industry, including a fertilizer plant, heavy water, and phosphor production but their preferred option was for an aluminum smelter (Hafstein, 1965).

The first major foreign owned firm to enter Iceland was the Icelandic Aluminium Co. Ltd. (ISAL), an aluminum producer owned by a Swiss MNC, Alusuisse. It built an aluminum plant which started-up in 1969 (see chapter 4). In the late 1980s the Icelandic government focus was again on the aluminum industry and the government started negotiating with three major aluminum MNCs, Alumax from USA, Gränges from Sweden and Hoogovens from Holland, (the so-called ATLANTAL-group; originally the number of firms involved were four) about building another aluminum plant in Iceland. This proposed plant was supposed to be built in 1992, but construction was postponed until 1994. Recently the group decided to postpone that plan for at least another 3-5 years. One reason that has been mentioned to explain this delay is that Eastern European countries

have been selling relatively low priced aluminum, and as a result the ATLANTAL-group has not been able to provide the capital to finance the project. Though the plant will not be built in the near future, the negotiations between the government and the ATLANTAL-group were mostly finished in November 1991, the only thing left was to sign the agreement (see chapter 5).

Foreign investment has not only entered Iceland in relation to the aluminum industry. Shortly after signing the Master Agreement with Alusuisse, the government signed another Master Agreement (August 1966) with Manville Corporation International to erect a diatomite processing factory, using deposits found at the bottom of Lake Mývatn (Figure 1.1) (Iðnaðarráðneytið, 1986; 1988). In 1977, a third major MNC entered the country, Elkem A/S of Norway which built a Ferro silicon smelter at Grundartangi (Figure 1.1) (Iðnaðarráðneytið, 1986). Many other possibilities of power intensive industries have been examined by the government in cooperation with MNCs, including ferromangan production, titan sand production, and silicon metal, but none of them seem economically justifiable. It should be added that both the diatomite factory and the Ferro silicon smelter were jointly owned by the Icelandic government, which in both cases owned the larger part of the shares, and MNCs. Iceland's law prevents foreign capital from owning majority shares in Icelandic resource industries, especially those utilizing renewable resources, such as fish and water. These laws do not affect the aluminum industry because aluminum MNCs do not own or control any resources.

Today Iceland is going through the worst recession since the country gained independence in 1944. Though unemployment reached 2% during the late 1960s (due to the collapse of the herring stock) it has never gotten close to the 6% it has reached in 1994. During the late 1980s and beginning of the 1990s, in an attempt to fight back, the country has been putting more effort in attracting MNCs to investing in Iceland. Though

foreign investment has not played a major role in the country's economic development, it has been an important one.

Objectives

This thesis explicitly interprets industrial location as a bargaining process. In particular the central research theme of this thesis is to explain the actual and planned investments in the aluminum industry in Iceland in terms of the negotiations that occurred between the government of Iceland and MNCs operating in the aluminum industry. More specifically, this thesis seeks to: 1) examine the bargaining process between the Icelandic government and Alusuisse (1961-1966) that preceded the establishment of an aluminum smelter in 1969; 2) examine the bargaining process between the Icelandic government and Atlantic aluminum group (1987-1991) with respect to a planned aluminum smelter; and 3) compare the different bargaining processes to assess how spin-offs from the first bargaining process affected the second.

The underlying rationale is that location conditions are not provided by nature or universal economic laws but are socially constructed by powerful institutions, like governments and big corporations. In order to understand the nature of location decision-making, its implication for local development, and the creation of location conditions it is necessary to examine, in detail, the bargaining process that commonly precedes a foreign investment.

Research Design

This thesis focuses on two case studies, namely, the negotiations between the Icelandic government and Alusuisse between 1961-1966, and the more recent negotiations

between the Icelandic government and the ATLANTAL-group (1987-1991). This case study approach permits detailed investigation of complex processes which are vital to the economic development of Iceland. In more general terms, this case study contributes towards an understanding of the impacts of the behaviour of very large firms on small countries while providing insight into the dynamics of industrial location. It also gives a basis for comparison between the different cases.

The main information sources for the thesis are governmental documents and papers, newspaper articles, and in-depth interviews with government and industry agents. Due to a lapse of almost 30 years since the ending of the first bargaining process, it was difficult to interview the people that took part in the first bargaining process, especially Alusuisse managers. It was therefore necessary to depend more on newspaper articles and governmental documents. Fortunately, the library at the Central Bank of Iceland had gathered all documents, papers, letters and even notes, concerning the first case study, so it was possible to reconstruct the bargaining process. Many of these sources were marked 'confidential', but as they are more than 25 years old they are now open to the public. At the Alusuisse subsidiary, ISAL, people were more than willing to help. The same applies to governmental workers and agents. Three open ended interviews were taken; two with governmental agents, Jóhannes Nordal (Director of the Central Bank of Iceland (until 1993), Chairman of TIDC, and Chairman of the Board of the National Power Company from its establishment in 1964) that participated in both negotiations, and Jón Sigurðsson (Minister of Industry from September 1988 to July 1993); and one from ISAL, Ragnar S. Halldórsson (Director of ISAL from 1969 and now Chairman of the Board).

For the second case study it was easier to access people that took part in the actual bargaining process, and are still working towards reopening the negotiations and finish the process, so a new aluminum smelter can be erected in Iceland.

Iceland

Iceland is a large island, 103,000 km², located on the North Atlantic ridge in the middle of the North Atlantic Ocean between Norway and Greenland (see Figure 1.1). The population of the island is only 265,000 people. Reykjavík is the capital and 60% of the population lives in the Greater Reykjavík area. The other 40% are spread around the coastline mostly in small fishing villages, most of them with a population of 2,000 people or less. The largest city outside the Greater Reykjavík area, Akureyri, is located on the North coast, with almost 14,500 inhabitants. The harsh interior of the country has no inhabitants.

Iceland became 'fullvalda' (sovereign) in 1918 to the extent that the country controlled all domestic matters but the Danish Crown still governed foreign policies. In 1944 Iceland gained full independence from Denmark that had ruled Iceland since 1262 (the country was first settled in 874). Iceland has the oldest parliament (Alþingi) in the world, established on Þingvellir in 930. Almost until World War II the country was a farmer's society (sometimes referred to as a peasant society). However, this changed rapidly during and after the war. Unbelievable economic growth changed the nation from a peasant society to a developed nation over a short period of time.

Iceland is rich in two renewable resources, water (fresh and hot) in both qualitative and quantitative senses, and fish (Rannsóknaráð Ríkisins, 1975). Fish, fish products, and agriculture have been the principal industries in Iceland over the centuries. In 1975 the country was one of the first to extend its economic exclusive fishery limit to 200 miles. This decision had a great effect on the country's economic status because in the mid-70s fish products were around 90% of the country's export income. Since then this proportion has dropped, to around 79.6% in 1993. Aluminum provides the second most important source of export income, around 8.7% in 1993, while all kinds of other activities make up the remaining 14.4%.

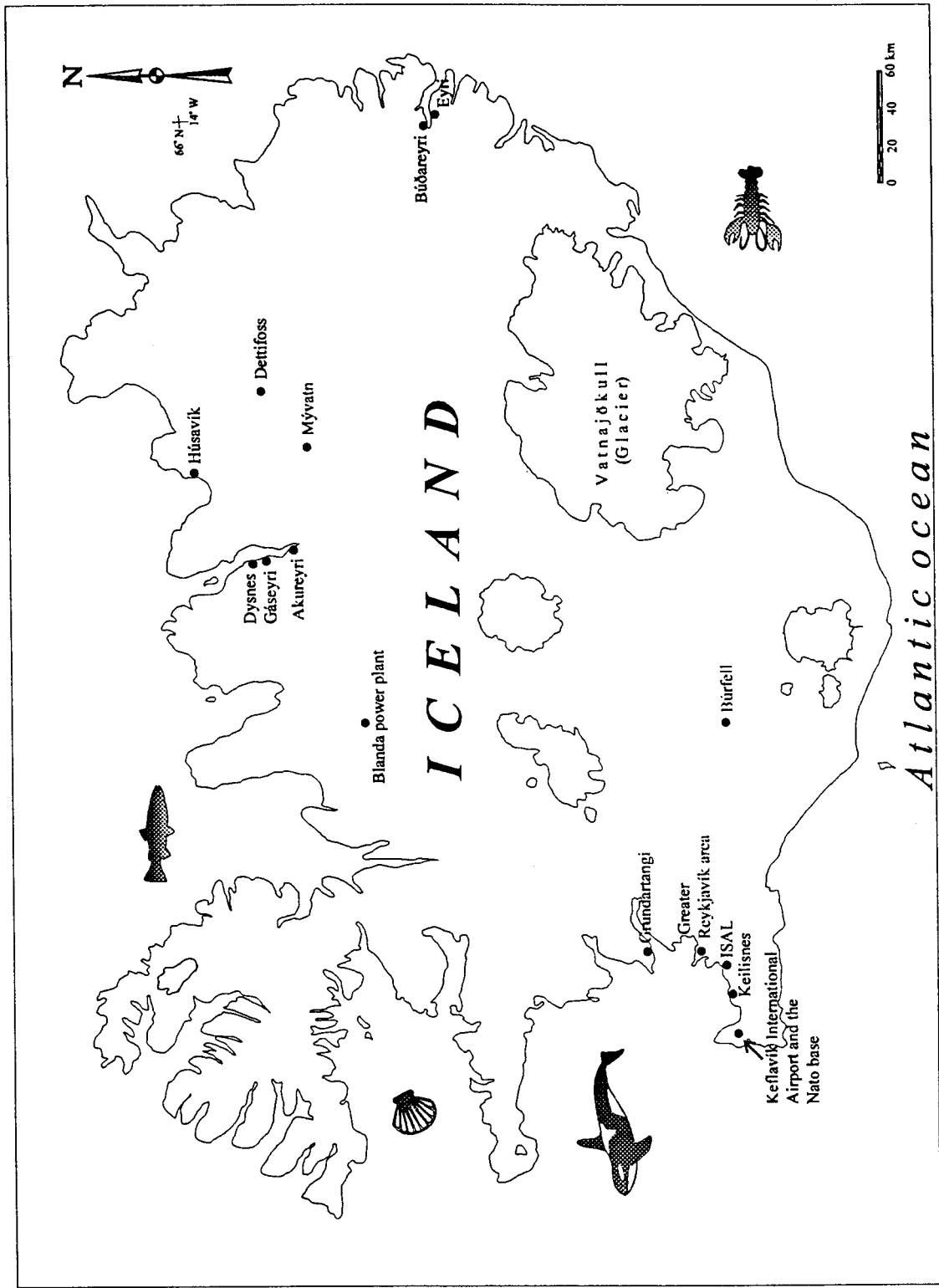


Figure 1.1. Map of Iceland

The industrial environment in Iceland has mostly evolved around the fishing industry. As early as 1918 politicians pointed out that the nation should not only rely on one source of export income but also it should try to diversify the industrial base (Hafstein, 1966b). A continuing emphasis in these pleas for diversification has been the suggestion to utilize the energy resource (rivers and geothermal energy) in connection with different kinds of industrial activities, especially power intensive industry.

It can be argued that the history of power intensive industry in Iceland began in 1953, when a small fertilizer plant was built near Reykjavík, and few years later a cement production plant was built near Akranes (a small village 100 km from Reykjavík). Since then the primary focus has been on the development of the aluminum industry.

Iceland is at a crossroad. Over the last few years there have been dramatic changes in Europe. The European Free Trade Agreement (EFTA), in which Iceland has been a member since 1970, will probably be dissolved soon because most of the countries that were members of EFTA have applied for membership in the EU (except Iceland and Switzerland). These changes will have great effect on Iceland's trade with European countries, which are the largest consumers of Iceland's exports. Iceland has not applied for membership in EU and that will probably not happen during the next few years, because recently the former EFTA nations signed a business treaty with EU concerning trade, to give EU time to evaluate applications from the former EFTA nations (Schram, 1992). Sooner or later Iceland will have to decide whether to stand outside the EU or not. However, in the future the nation will be able to evaluate how the EU has affected other 'neighboring' countries, for example Norway or Sweden, which are both former EFTA nations.

Organization

This thesis is organized in six chapters. Chapter one, which presents the introduction, outlines the thesis problem, the geography of Iceland and the aluminum industry, the objectives and the research design of the study. Chapter two examines the bargaining process. Here, concepts and frameworks are emphasized to explain the bargaining process between HC(G)s and MNCs. The bargaining process is complicated and can be as different as the number of countries and firms. At the end of the chapter is a short discussion of the benefits and costs of MNCs to HCs. Chapter three is an introduction to the aluminum industry. The focus is on the location economics, global structure, and the characteristics of the industry. The importance of the bargaining process for the aluminum industry is also noted. Chapters four and five present in detail the two case studies. Both of these case studies deal with the aluminum industry in Iceland. First the bargaining process between the Icelandic government and Alusuisse, that preceded the establishment of an aluminum smelter in 1969, is traced. Then the bargaining process between the Icelandic government and the ATLANTAL-group, that was ongoing between 1987-1991 in effort to establish another aluminum smelter, is examined. Chapter six compares the two bargaining processes which includes a discussion of the 'spin-offs' from the first process and how the latter affected the second, that is, how learning has affected Iceland's bargaining strength since the last 30 years. At the end there is a short discussion on the future aspects of foreign investment in Iceland.

CHAPTER II

THE BARGAINING PROCESS BETWEEN MULTINATIONAL CORPORATIONS AND HOST NATIONS

Introduction

“Negotiation is a process through which two or more parties - be they individuals, groups, or larger social units - interact in developing potential agreements to provide guidance and regulation of their future behavior. Such negotiation is conducted not only between nations, but also between government departments, political factions, labor and management...” (Sawyer and Guetzkow, 1965, pp. 466).

This chapter reviews literature that discusses negotiations or bargaining between nation states and multinational corporations (MNCs) that precede an investment. These processes are clearly important since they determine whether or not foreign direct investment takes place, and if it does, under what conditions benefits will be distributed between participants.

There are two polar schools of thought regarding the local impacts of foreign direct investment (Edgington, 1991). The ‘pro-foreign investment school’ pictures MNCs as adding new resources to the host economy (e.g., capital, technology, management, and marketing) in a way that improves efficiency and stimulates structural change. The opposing ‘dependencia’ school asserts that MNCs will never bestow advantages on host countries (HCs) because their power is essentially unconstrained and will always lie outside the control of the state. Some argue, for example, that MNCs draw upon local capital for their projects rather than bringing in new resources, use technology which is inappropriate to the needs of the host economy and drive domestic producers out of the market. Between these two polar views there is a third approach that recognizes that investment repercussions are often complex and evolve in unforeseen ways and that, in

practice, both MNC strategies and local responses can change over time. As well as the difference between particular countries in which MNCs are established, investment outcomes have proven highly sensitive to difference between corporate strategies and cultural background. The role taken by host country governments (HCGs) has been equally important in shaping the course of corporate operations in their countries (Edgington, 1991). Grieco (1985) calls this third approach the 'bargaining school' approach. In this approach two themes dominate the understanding of relations between (developing) countries and MNCs. First, bargaining school models emphasize the terms by which an enterprise operates in a country and that the distribution of benefits between the parties result from negotiations which are shaped by the balance of bargaining power and abilities between the country and the company. Second, bargaining school models emphasize that the balance of power and benefits between the MNC and the HC can change over time (see Figure 2.5). In this respect, Grieco (1985) argues that the developing country may control access to its markets and resources while the enterprise has more important bargaining assets through its control of capital, technology and managerial expertise. Over time, however:

"...., according to the bargaining school, prolonged contacts with foreign enterprises afford developing countries the experience needed to manage these relations more effectively and to their greater benefit". (Grieco, 1985, pp. 56).

Supporters of this approach have tried to clarify what it is that MNCs and HCGs bring to the bargaining table; how their relative strengths might shift over time; what will determine the outcome of negotiations; how the benefits are likely to be divided; and what are the most appropriate organizational responses by governments in their discussions with foreign firms (Edgington, 1991).

This chapter reviews the bargaining school approach to foreign investment. The review is organized according to three issues: the structure of bargaining situations; the nature of the bargaining process; and changes in the bargaining process over time. By way of introduction, the basis for the controversy over foreign investment will be briefly reviewed.

The Controversy of Direct Foreign Investment

There are various 'immediate' reasons why firms invest in foreign countries. These reasons can be to supply new markets with goods, to obtain cheap labour or resources in the foreign country, or to further exploit technological advantages.

Watts (1987) argues that two phases can be discerned in the overseas operation of firms, expansion and reorganization. He divides the expansion phase into two types: market-led expansion and cost-led expansion. Cost-led expansion is mainly to reduce variable cost, and according to Watts (1987) the key variable cost is labour. Market-led expansion emphasizes the advantages of penetrating and producing in new markets. Firms need to access more diversified markets especially if growth in the home market is not permitted, for example, because of market saturation. The reorganization phase is a more recent phenomenon. In this phase, because of cost pressures and for other reasons firms integrate and reorganize their existing multinational production systems, including by closing down operations in some locations. This pressure to reorganize has been further stimulated as trade barriers between countries have been reduced and as larger economic units, such as the EU, have become established.

The controversies over MNCs are deep and related to several issues. Thus views differ as to whether MNCs expand national or local economies or exploit them; whether they are either a dynamic force in economic development or a distorting influence;

whether they either create jobs or destroy them; or whether they either spread new technology or pre-empt its wider use. The list of contrasting views is almost endless. All aspects of the MNC operations - economic, political, and cultural, have been judged in diametrically opposed ways by its proponents and its opponents.

Normally an immediate implication of foreign direct investment for a host economy is an inflow of capital. This is not always the case since some new overseas ventures undertaken by MNCs borrow capital on the HC's capital markets or they arise from the reinvestment of retained earnings from the foreign affiliate. Moreover, local borrowing of capital can have negative effects on local firms because they can be squeezed out of local capital markets to the extent that the MNC is more attractive as a use for local savings. Eventually there is a reversed flow of capital (given that an inflow of capital occurred in the first place) from host to donor economy as the foreign firm sends earnings and profits back to its parent company (or head office). Over time, this flow can exceed the inflow of capital so the vital issue is the extent to which financial 'leakage' occurs from host economies through the conduit of the MNC. MNCs may use transfer pricing, for example, to avoid paying taxes. It is a problem, however, to assess the actual extent of transfer pricing. The financial balance accruing (gain or loss) to the HC from MNCs not only results from the effects of the net capital flows but also from any net earnings from trade. Even so, as Edgington (1991) notes, MNCs are embraced by both developing and developed countries as harbingers of growth and restructuring and, everywhere, there are expectations that MNCs can play a key role in restoring economic activity, contributing to development through transfer of technology, and by providing capital to relieve the burden on commercial bank lending.

Two of the important questions surrounding the impact of MNCs on host economies concerns their role in the HC's trade with the outside world, and the extent to which they are integrated into the local economy through linkages with domestic firms.

MNCs affect the balance of payments of HCs through their control over the marketing and purchasing practices of subsidiaries. If these subsidiaries, for example, import components and parts from the parent company to a considerable degree then such behaviour can result in a negative trade balance. On the other hand, a MNC may prefer to export resources without adding value resulting in a positive trade balance while restricting diversification possibilities. However, more significant in the long run, is the extent to which MNCs are integrated into the national or local economy. The direct links with indigenous firms are the most significant means by which technology is transferred, additional employment created, and opportunities increased for the formation of new local enterprises (Dicken, 1992).

MNCs do not only invest in foreign countries to reduce costs, increase the rate of return on fixed R & D investments, evade tariff barriers, and to ensure more uniform quality and stability of operations but also to eliminate competition, tie up resources, evade taxes, increase flexibility in responding to external demand, and simply to grow. There are certain advantages to size (Hayter, 1981). Often the case is that foreign plants are larger than their domestic competitors. This can both force domestic competitors out of business and create new domestic enterprises. The major long term effect of the MNCs entry is likely to be an increase in the level of industrial concentration in the HC (Watts, 1987).

For many observers, the most important issue in the debate over the MNC is its effect on jobs. According to Dicken (1992) the most important factors are the volume of employment, the type of employment, and wages. In this regard, Dicken (1992, pp. 402) offers a simple formula to summarize the net employment (E) contribution of MNC to host economy, namely, $E = (DJ + IJ) - JD$

where:

DJ= Number of direct jobs created in MNC

IJ = Number of indirect jobs in firms linked to MNC and in other sectors

JD= Number of jobs displaced in other firms

According to this formula MNCs may make a net positive or negative contribution to jobs in a local economy.

There are also differing view points regarding the implications of MNCs for competition and efficiency. There are two main viewpoints. The first viewpoint argues that MNCs promote a more efficient distribution of resources since, by internalizing imperfect markets, they are able to overcome distortions in the economic system, such as barriers to the transfer of technology, tariff and non-tariff barriers and inappropriately valued exchange rates. Their more efficient scanning and monitoring processes, and their flexibility to respond better to market signals, is a useful competitive stimulus in a world of uncertainty and information imperfection. The alternative viewpoint is that far from overcoming market imperfections, the MNCs are themselves a major distorting force in resource allocation, at least partly because of their ability to bypass market mechanisms and/or government regulations. The result is that they engage in restrictive practices, raise barriers to entry, and, by their internalization and centralization of decision-making, adversely affect the efficiency of resource allocation between countries (Dicken, 1992).

It is very difficult to calculate the actual costs to HCs arising from the activities of MNCs. Truncation, is an umbrella concept that summarizes these costs. It means from the perspective of the HC economy, less decision-making, fewer jobs for scientists and professionals, fewer export opportunities in high value added manufactures, less discretion over investment policies and increased dependency upon imported goods, services and technology than might have been expected in the absence of foreign investment (Hayter, 1982).

Some nations also wish to avoid a high level of dependence on the MNC because of the threat to national sovereignty and autonomy. Goals pursued by nation states and MNCs are different and each is concerned to maximize its own welfare. If the HC's economic activity is effectively controlled by foreign firms, non-national goals may become dominant, a pattern which becomes more likely the more dependent the HC is to MNCs (Dunning, 1981).

There are many reasons why the analysis of the benefits of a project as seen through the eyes of a MNC may differ from the evaluation of a HCG. The benefits from the viewpoint of the MNC are likely to be calculated in economic terms whereas the government is likely to do its calculations in political and social terms as well (Vernon and Wells, 1976).

In attempting to measure and evaluate the contribution of direct foreign investment to an HC, Dunning (1981) claims that three important points arise which are not always given the attention they warrant. First, the identification of the criteria by which the contribution of direct foreign investment should be assessed is often unclear especially given that the criteria, in the sense of what comprises a country's welfare, will vary between countries, in the same country over time, and between different sectors within any country. Second, Dunning (1981) notes that the difficulty in evaluating the effects of direct foreign investment net of those effects that would have occurred if the resources used by the investing companies had been differently deployed (see also Hayter, 1985). The third and final methodological issue raised by Dunning (1981) concerns policy prescription. Even if it is possible to measure the contribution of MNCs to employment in a particular country, at least two questions arise: (1) is this the best possible contribution; and (2) assuming it is, and it is beneficial, does this mean that inflow of direct foreign investment should be encouraged? Whatever the answers, there is a great temptation among policy makers to direct any change perceived necessary towards the MNC. For

example, if the balance of payment's contribution is negative, policy makers typically seek to persuade MNCs to export more or import less, or, failing that, to reduce their capital stake in the investment. In some cases, such policies may be the correct ones, particularly where it can be established that the MNC is behaving in a less than optimum fashion. However, in other cases it may not be so for example, because, there may be a trade-off between achieving one national goal and another (Dunning, 1981).

Many other factors have influenced the internationalization of firms over the century. New technologies in transportation and communication have shrunk the globe and made it almost a single market area that is open to everybody who wants to sell, produce or market a product, anywhere at any time. However, before entering another country or another economic unit, there are frequently negotiations between at least two participating actors, the HCG and the MNC. This process is known as the bargaining process.

Models of the Bargaining Process

The actual distribution of benefits and costs between MNCs and HCs depends on the terms of an agreement that are, in turn, a function of the relative bargaining power and ability of HCGs and MNCs (Kobrin, 1987). The key point for the HCGs is to try to recruit those desirable production factors from foreign sources, for example, capital infusion, technology transfer, foreign sales, while keeping out the undesirable ones, for example, foreign management and ownership, competition against local producers, and threats to HCGs political autonomy. On the other hand, MNCs would like to maximize their ownership control, management flexibility, the protection of trade secrets, access to local market, and favourable laws or administrative treatments regarding business tax, labour relations, and profit repatriation. Conversely, the HCGs can be expected to try to

maximize their bargaining leverage to the extent that they possess important resources, large consumer markets, strong social and industrial infrastructures, and/or geographic or political proximity to the home governments of the MNCs (Chan and Mason, 1992).

A few models of bargaining between MNCs and HCs will now be reviewed. It should be noted here that several of the models overlap and many originate from similar sources. However, the discussion is organized to reflect different emphases in the literature specifically the structure of the bargaining process, the nature of bargaining and how bargaining evolves after investment.

The Structure of Bargaining Situations

In the literature that examines the structure of bargaining there is a 'smorgasbord' of concepts which often overlap and are occasionally even contradictory. This section will focus on several key concepts notably the relative bargaining strength and ability of actors; the interdependence and asymmetry of actors; and the debate over relative bargaining power of nation state vis-à-vis MNC. It should be noted that the literature, especially in the discussion about interdependence, distinguishes interactions between: on one hand government vis-à-vis government and on the other hand government vis-à-vis MNC. However, this distinction is sometimes not clear as the literature in many cases overlaps.

Some time ago Hirschman (1945) argued that relative bargaining power is the result of the relative evaluation of consequences and the relative value that bargainers place on what is at stake in their negotiations. He illustrates his argument with reference to the bargaining power of an entrepreneur in relation to the non unionized worker, typically the former would not only enjoy advantages in bargaining skill, cunning, and information, but would also derive bargaining strength from the fact that the worker 'needs' the entrepreneur more than the entrepreneur 'needs' the worker. Thus, on the one hand,

relations between negotiators may be 'asymmetrical', that is, they have different degrees of bargaining power in relation to each other, and, on the other hand, negotiators may have different abilities (see also Wagner, 1988). Moreover, outcomes are not solely based on bargaining power but also according to the 'bargaining ability' of each actor. Cross (1965) adds that the concept of bargaining ability is vague and is primarily intended to devolve the whole problem to psychologists, thus absolving economics of the guilt of leaving the issue up in the air.

In the context of bargaining theory, the concept of 'interdependence' is crucial. Coddington (1972) notes that before using bargaining theory it is necessary to distinguish between two different types of interdependence. First, there is interdependence which is recognized by the actors, and which they take account in their decision-making. Second, there is interdependence which is unrecognized by the actors, and therefore not taken into account in their decision-making. This means that if interdependence is not recognized by a actor, he or she will make decisions in the 'false' belief that the other actor will make decisions independently of his or her own. Decision-making of one actor is not independent from the other's decision-making.

"The result, then, is that decisions made in the belief of independence, but on the basis of expectations subject to adjustment in the light of experience, lead to a form of interdependence unrecognized by the actors themselves". (Coddington, 1972, pp. 49).

In his study, Wagner (1988) uses 'asymmetrical interdependence' to explain how bargaining theory can be used to explain economic interdependence and political interdependence among nations:

(1) If asymmetrical interdependence means that one party to a mutually beneficial economic relationship needs the benefits from it more than another, the asymmetrical economic interdependence does not imply that the less dependent actor will be able to exercise political influence over the other.

(2) *The use of economic interdependence for political influence requires, instead, that the exchange of economic resources for political concessions make both parties to a relationship better off than they would be if they bargained over the distribution of the gains from the economic relationship alone. Whether this is true is entirely independent of the degree of asymmetry in the economic relationship, or its direction.*

(3) *If political concessions are expected as a result of a threat to interrupt an existing economic relationship, this must be because there is unexploited bargaining power in the existing relationship, that is, the party demanding the political concession could, if it chose, successfully demand more favorable terms in the existing relationship.*

(4) *Even if there are unexploited bargaining gains in the existing economic relationship, this need not be because there is asymmetrical interdependence, in the sense defined above, since these unexploited bargaining gains may involve a subsidy of one party by the other.*

(5) *Thus, in the case of trade sanctions, the existence of unexploited bargaining gains may be the result of the existence of unexploited market power. This is not necessary, however, since they may be the result of an unrequited subsidy rather than of a failure to exploit market power.*

(6) *Even if there is unexploited bargaining power in an existing economic relationship, there may be no way to convert it into political influence, since there may be no feasible exchange of economic benefits for political concessions that is mutually beneficial.* (Wagner, 1988, pp. 481).

As can be seen from these arguments, Wagner (1988) shows that being less dependent than one's partner is neither necessary nor sufficient to exercise influence in a bilateral relationship. It is not necessary because a weaker actor with intense preferences on one issue may make great concessions on other matters to attain its objectives. Nevertheless, asymmetrical interdependence can still be a source of power in bilateral relationships. Less dependent actors will be able to make bargaining concessions at lower cost than more dependent actors. Furthermore, relationships between powerful and weak actors are often defined by multilateral rule or convention, without bilateral bargaining. Under such conditions, strong states willing to break the rules or alter the conventions may have unexploited bargaining power (Keohane and Nye, 1989; Wagner, 1988).

Keohane and Nye (1989) point out that to be able to understand the role of power in interdependence, it is necessary to distinguish between two dimensions, 'sensitivity' and 'vulnerability'. Sensitivity involves degrees of responsiveness within a policy framework;

how quickly do changes in one country bring costly changes in another; and how great are the costly effects? Vulnerability is particularly important for understanding the political structure of interdependence relationships. In a sense, it focuses on which actors are 'the definers of the, *ceteris paribus*, clause' and can set the rules of the game. Vulnerability applies to sociopolitical as well as political-economic relationships. According to Keohane and Nye (1989) the vulnerability of societies to transnational radical movements in the late 1960s depended on their abilities to adjust national policies to deal with the change and reduce the costs of disruption.

Vulnerability is clearly more relevant than sensitivity, for example, two countries, each importing 35% of their petroleum needs may seem equally sensitive to price rises; but if one could shift to domestic sources at moderate cost, and the other had no such alternative the second country would be more vulnerable than the first. The vulnerability dimension of interdependence rests on the relative availability and costlines of the alternatives that different actor's face (Keohane and Nye, 1989).

How does this distinction help us understand the relationship between interdependence and power? Clearly, it indicates that sensitivity interdependence will be less important than vulnerability interdependence in providing power resources to actors. If one actor can reduce its costs by altering its policy, either domestically or internationally, the sensitivity patterns will not be a good guide to understanding decision-making power (Keohane and Nye, 1989).

This discussion about interdependence and bargaining has primarily drawn from literature which has focused on nation to nation relationships. However, these arguments can also be applied to interactions between the nation state vis-à-vis the MNC. For example, Keohane and Nye's discussion about vulnerability of each actor is relevant in this context to the extent that MNCs often have more power than the nation state as they 'set

the rules of the game' because often they have more alternatives in response to a given change in the global environment.

Within the literature on the power struggle between the MNC and the nation state, however, there are distinct and contradictory views. Kobrin (1987) argues that the relative bargaining power of MNCs and HCGs is a function of three related elements (see Figure 2.5); first, the relative demand by each of the two participants for resources which the other controls; second, the constraints on each that affect the translation of potential bargaining power into control over outcomes; and finally the bargaining ability of the participants. Figure 2.5 tends to suggest that HCs are subject to a greater variety of constraints than are MNCs, a reflection of the latter's greater potential flexibility in negotiations. The extent to which a MNC can implement a globally integrated strategy is constrained by nation state behaviour. Where a MNC particularly needs access to a given location and where the HC does have leverage, then the bargain that is eventually struck may involve the MNC in making concessions. It is in this kind of context that the HC's ability to impose performance requirements on foreign firms are greatest (Kobrin, 1987).

Galbraith (1983) states that the power struggle between the firm and the state has changed considerably during the last century. During, what Galbraith calls, 'the age of the organization' enterprises became powerful and were able to use their power to influence the nation states and their governments.

"The corporation is a creature of the state..... As such, it enjoys full governmental protection. Its power, including that of the international or multinational enterprise, is also a source of worried comment and concern." (Galbraith, 1983, pp. 88).

Other researchers support this view (Harvey, 1982; Dugger, 1988; Peterson, 1988). Peterson (1988) also argues that, from the perspective of the contemporary supranational economy, there is an erosion of the power of the individual nation state to manage its own economy.

“There is a sense of ‘disenfranchisement’ of ‘national powerlessness’ before the behemoth that is the integrated world economy.” (Peterson, 1988, pp. 159).

Zurawicki agrees and points out that in many negotiations the MNC is in a better position than the HCG as it has far better knowledge of the nature of its activity and can better anticipate the impact of these operations on the economy and its environment (see Figure 2.5). That is why it is far easier for a MNC to convince the government in question that the accepted terms are optimal. This is especially evident in developing countries and/or where political conditions are not stable and where the learning process has been short (Zurawicki, 1979). Krumme (1981) adds that firms can be in a better bargaining position as a result of competition between countries for investment. When MNCs decide to invest in new facilities, countries may become rivals in attracting the firm and the MNC has a further possibility of waiting and then locating where the highest bidder is.

However, according to Galbraith (1983), nation states have been gaining in relative bargaining power in relations to MNCs. The reason, he argues, lies in the distinction between compensatory to conditioned power. Compensatory power refers to power held by MNCs that operate in a clear monopoly. Conditioned power allows many more interests access to the state, some of which are hostile to the MNC and thus contribute to the adversary relationship, seeming or real, between MNC and modern government. According to Galbraith (1983), throughout the 20th century there has been a shift from compensatory to conditioned power. Also, as Harvey (1982) points out the nation state will always hold the power of setting laws and regulation concerning the MNC, and will hold a considerable power when negotiating and contracting with such enterprises. Kobrin (1987) adds that through development and transfers from foreign investment the HC climbs up the so-called ‘learning curve’ and at the same time increases its bargaining power as it gains technological and managerial skills, earlier possessed by the MNC.

Peterson (1988), however, argues that individual nation states lose some of their powers as a result of the creation of new institutional arrangements such as the EU which comprise a collection of nation states. This view gains further credence given that after the most recent changes in the EU there are almost no restrictions to the mobility of firms which can make negotiations between MNCs and HCGs an obsolete phenomenon.

The Nature of the Bargaining Process between MNCs and HC(G)s

Most discussions of international business environments focus on how constraints internal to the MNC and the HCG affect the nature of their objectives and how a given benefit will be distributed among the parties involved. The objectives of other firms in the international industry of which the MNC is a part can affect this division of benefits in a decisive fashion. If the MNC and other firms have formed formal or informal cartels, the MNC may be able to bargain with the HCG with the assurance that no competitor will put in a rival bid for the arrangement under negotiation. If no such agreement exists, then the HCG may try to solicit bids from a number of MNCs, thus increasing its bargaining power. On the other hand, competition in some industries is rather tightly controlled by relationships among the principal producers in that industry. In such cases of cooperation and forbearance among competitors, the HCG may experience difficulties improving on existing terms unless they can identify a firm that, for its own internal reasons, is willing to break ranks (Goodman, 1987). Such was the case when Jamaica attempted to re-negotiate the terms of its business relationships with international aluminum producers. Negotiations were at a standstill until a relatively minor aluminum producer, Anaconda (a small aluminum producer but a large copper producer), made an offer more favourable to Jamaica than those offered by major producers (Litvak and Maule, 1975).

A business relationship can be forged and sustained only if a wide range of considerations are taken into account and evaluated in terms of the opportunity in question. In pursuing separate objectives, the actions of decision makers in MNCs and HCs are conditioned by a wider context. This context affects both the total size of benefits resulting from a given business relationship and how those benefits are divided. The elements in this wider context are shown in Figure 2.1 (Goodman, 1987).

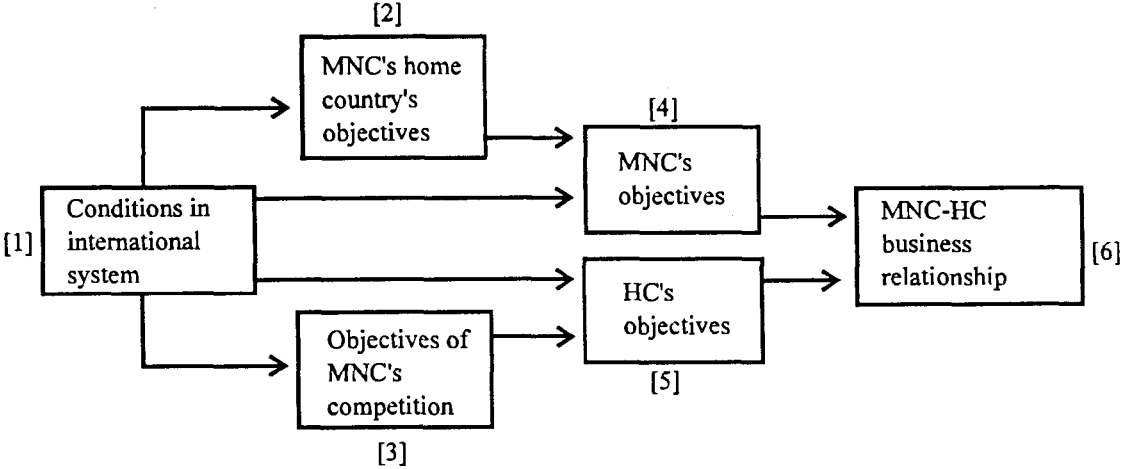


Figure 2.1. Factors Affecting a MNC-HC Business Relationship.
 Source: Adapted from Goodman (1987), pp. 68.

Locating the firm’s decision process within the broader context of a business environment moves the discussion from how a decision is made by one party acting in relative isolation to a much more complex setting. In pursuing their objectives, decision makers in the firm respond to their own internal constraints (box 4, Figure 2.1), and they also take into account the constraints and objectives of the HC in which they hope to do business (box 5). In the final analysis, the MNC-HC business relationship (box 6) is shaped by the objectives of the two parties involved. These objectives are, in turn, affected by the objectives of other firms in the same industry as the MNC in question (box 3) and by the

concerns of the country in which the MNC's home office is located (box 2). All of these are affected by other exogenous conditions in the international economic and political systems (box 1) (Goodman, 1987; see also Krumme, 1981).

Nixson (1988) argues that bargaining between the participating actors is the process that in large part determines the extent, nature and distribution of the costs and benefits that arise as a result of direct foreign investment. Figure 2.2 shows a simplified model of the bargaining relationship between a MNC and an HC.

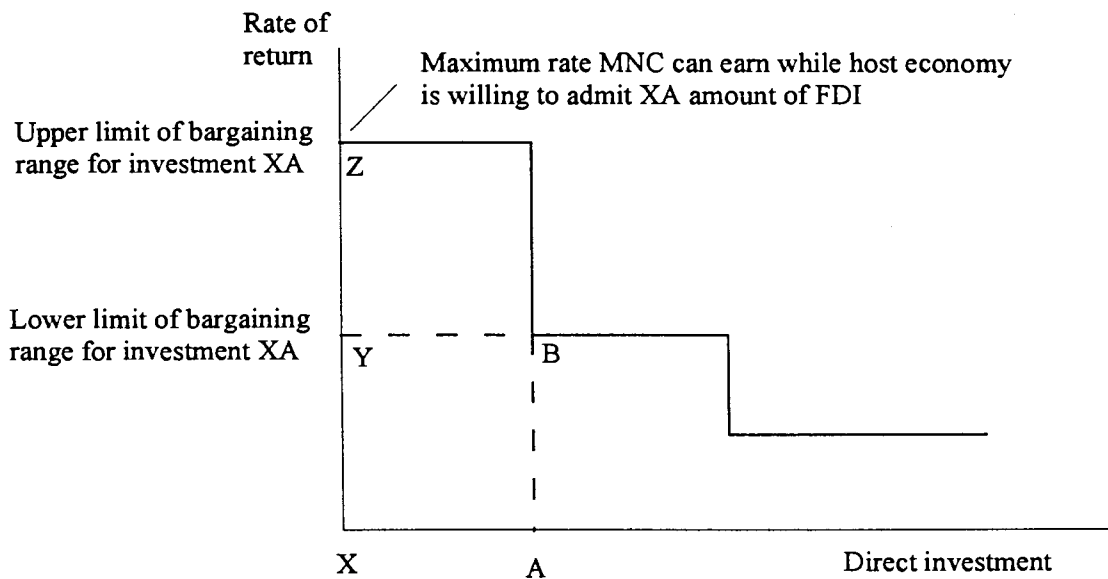


Figure 2.2. A Simplified Model of the Bargaining Relationship between a MNC and HC. Source: Adapted from Nixson (1988), pp. 380.

In Figure 2.2 the bargaining range for a particular level of MNC investment (XA) is shown to vary between: (1) lower limit (XY), that is the minimum rate of return that the MNC is prepared to accept for the amount of investment XA; and (2) an upper limit (XZ), that is determined by the cost to the host economy of either developing its own operation, finding an alternative investor or managing without the particular advantages provided by

the MNC. XZ is the maximum return the MNC can make for the amount of direct investment (XA) permitted by the host economy. It is in the interests of the MNC to try to raise the upper limit (XZ); similarly, the greater the cost to the host economy of losing the proposed direct foreign investment, the greater are the possibilities for the MNC of setting the bargain near the maximum point (Nixson, 1988).

The bargaining strength or the bargaining power of each actor depends on the relationships between the minimum requirements and motivations of the HC and the MNC, as well as on the advantages (resources, services, and incentives) which each can offer in terms of the other's objectives. In Contreras and Gregersen's (1975) framework (Figure 2.3) two points are, to begin with, worth noting about the factors that motivate both MNC and HCG and their relationship. First, some of the motivations of one party may be complementary with those of the other party, while others may be competitive or conflicting. Second, there are tradeoffs between different objectives or factors motivating the HCG and MNC. Ultimately, it is the sum total of the interactions between these factors that determines the relative bargaining position of each participant and the final result of negotiations. It is a complex matter, partly because objectives and advantages are not specifically described, and partly because the potential tradeoffs between any two sets of advantages are difficult to predict quantitatively (Contreras and Gregersen, 1975).

Goodman (1987) uses almost the same framework as Contreras and Gregersen (1975) (Figure 2.4) in his study, which is perhaps not surprising because both Goodman (1987) and Contreras and Gregersen (1975) studies are conducted in the same industrial sector in Latin America.

According to Contreras and Gregersen (1975), both MNC and HCG have certain minimum requirements that have to be met. For the HCG, those requirements may be expressed as laws or guidelines while some corporate investors tend to have certain guidelines for minimum profitability requirements and ownership shares. A problem can

occur if the minimum requirement of one party is in direct conflict with the other's minimum requirement. If either party does not relax their requirements the project has to be abandoned. Another reason for abandoning the project is if particular physical, technical or economic characteristics are such that one or more of the requirements cannot be met. In other situations, the minimum requirements of both the HCG and the MNC can evolve or change through discussions and can therefore lead to negotiations. This development leads to a different situation, the so-called 'negotiable situation'. The final settlement in this case depends on negotiation or bargaining. The final situation is called the complementary situation. This stage exists where both parties have complementary objectives and minimum requirements of both parties merely reinforce each other (Contreras and Gregersen, 1975).

The various factors determining minimum requirements are shown in Figure 2.3. According to Contreras and Gregersen (1975) there are three main factors that determine minimum requirements for the MNC. First, internal conditions in the MNC, for example, in management objectives and profit position; second, home country conditions, for example, markets, and laws; and finally, relevant issues in the rest of the world, for example, other investment opportunities determine changes in company policies and minimum acceptable conditions. Also according to Contreras and Gregersen (1975), there are three main factors that determine minimum requirements for the HC. First, internal HCG policy conditions, for example, changes in government and political motivations; second, other conditions in the HC for example, resource availability and markets; and finally, conditions in the rest of the world determine HCG policies and minimum acceptable conditions for accepting foreign investment. These conditions then provide the context within which the MNC and HC set their objectives and develop their motivations which in turn determines the type of interaction situation which arises in any given case (see Figure 2.3).

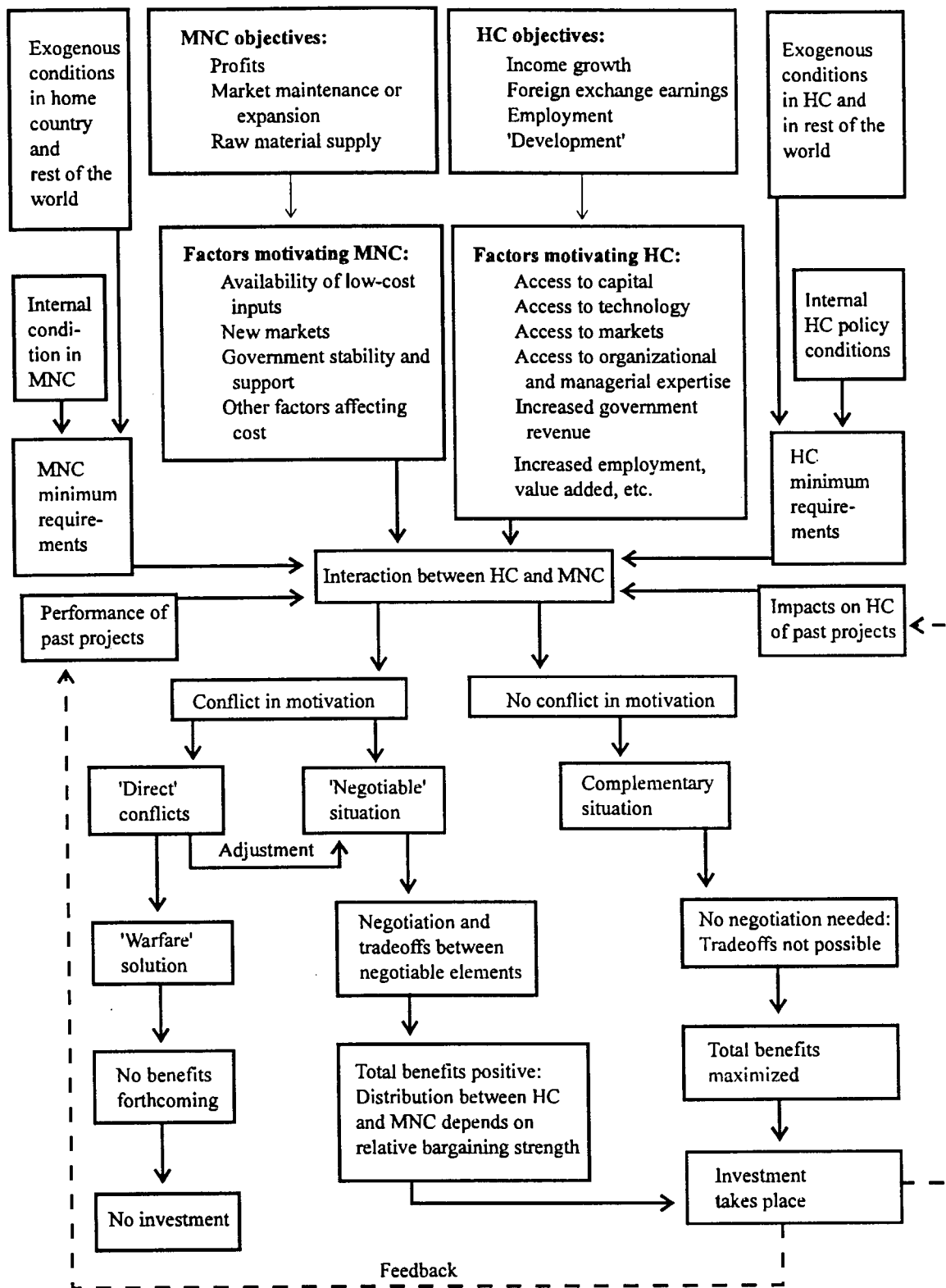


Figure 2.3. Summary Model Describing the Interaction between MNC and HC for a Given Investment Proposal. Source: Adapted from Contreras and Gregersen, 1975, pp. 49 & 51.

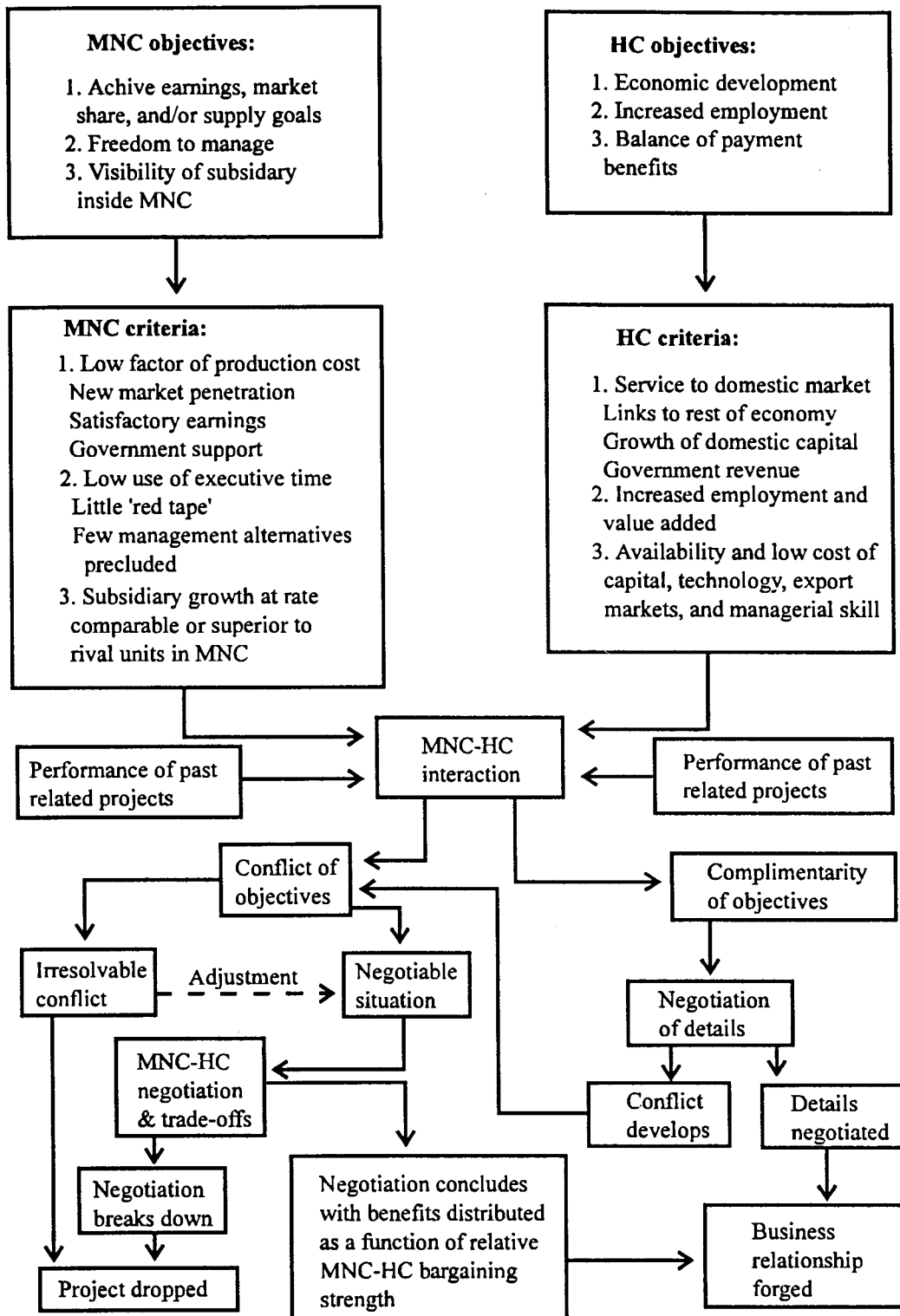


Figure 2.4. Interaction between a MNC and a HC about a Possible Business Relationship.
Source: Adapted from Goodman (1987), pp. 75.

Despite constraints imposed by the international economic and political systems, home countries of MNCs, and other members of the international oligopoly of which the MNC is a part, the possibility of forging a business relationship are, in the end, feasible only when there is a minimum of mutual interest and compatibility of objectives between the MNC and the HCG. Figure 2.3 shows the whole framework of the bargaining process which HCG and MNCs attempt to forge business relationships once their individual objectives have been specified (Contreras and Gregersen, 1975). Objectives, initially phrased broadly, can be specified in terms of more specific criteria by both parties and, as MNC-HCG interaction proceeds, are eventually stated in terms specific to the relationship at hand. For example, specific tariff levels or tariff exemptions can be stated for inputs to a manufacturing process; exemptions from certain taxes and import restrictions can be negotiated. A specific minimum of the value added resulting from domestic labour can be required, thus aiding the host's balance of payments, ensuring local jobs and/or the development of local ancillary industries. Intracorporate loan interest rates, royalty payment levels, management, and sales and service contracts can all be determined through negotiation at levels mutually acceptable to both parties (Contreras and Gregersen, 1975; Goodman, 1987).

Normally, a business relationship is not worked out overnight, although there have been projects of such obvious mutual interest that have been negotiated rapidly. However, it is not feasible to explore every issue in its entirety when working out a agreement. It is not feasible because all information can never be collected and impractical because executive time is an especially scarce commodity for both firms and nations. At some point in negotiations, the costs of continuing to use scarce executive time and tolerate start-up delays may exceed gains resulting from complex bargaining. However, a potential project may be dropped quickly by one or both parties (Goodman, 1987). In this regard, Contreras and Gregersen (1975) point out that the main causes of failure among the

projects they studied were change in governmental policy or uncertainty with regard to future policies; inadequate information on resources; technical problems which raised costs; market problems; change in company policy; lack of adequate government support in providing infrastructure and technical services, which were agreed upon; and lack of MNC control of interest. In sum, it appears that the same factors that are important in explaining failure or abandonment of projects and the lack of new investment. The main factors include extent of government stability and support, change in HC conditions, and amount and quality of information available on resources, costs, market conditions and profitability prospects. In addition, failures and abandoned projects are associated with internal changes in the investing corporations and lack of sufficient interest and control on the part of the parent company (Contreras and Gregersen, 1975).

The Bargaining Process after Investment

Since World War II HCGs have been rapidly improving their ability to evaluate and monitor business relationships. The same has been true of MNCs, although, for the most part, they have possessed more highly developed skills for a longer period of time (Goodman, 1987). However, bargaining between MNCs and HCGs is complex and this complexity partly results from the attempt to take into account as many factors as possible when working out a business arrangement. According to Goodman (1987) there is a strong pressure from both sides to include every little detail in negotiations which increases the complexity. Despite this strong pressure for increasing complexity, counter pressures for simplicity, from both the HCG and the MNC, also exist. These counter pressures exist because; scarce executive time in both firms and nations is consumed by complex bargaining; and while often suggesting new areas for negotiations, learning can also lead to devices that simplify bargaining (Goodman, 1987).

“Bargaining between firms and nations goes on, spawning business arrangements of varying complexity. These arrangements are negotiated, however, in continually changing environment that is altered by both forces external to the firm-state bargaining process and by forces intrinsic to it. Although it is difficult to specify aspects of environments exclusively affected by bargaining, it is possible to indicate a variety of circumstances in which new phenomena have been created, at least in part, as a result of newly complex firm-state bargaining. For the sake of crispness, let us refer to these new circumstances as spin-offs, since they exist side by side with the bargaining process. Spin-offs have resulted from two aspects of the bargaining process; (1) the learning that both parties have experienced over time, and (2) the outcomes of the bargaining.” (Goodman, 1987, pp. 133-134).

Spin-offs from Learning

Both firms and HCs as well as donor countries and other interested observers have had the opportunity to derive lessons from firm-nation state bargaining and to modify future practice and policy in the light of this experience. This learning has resulted in a number of new developments, among them new goals for both firms and nations, new forms of doing international business, new division of activities between firms and nations, new guidelines for links between politics and business, new institutions especially created to service situations resulting from the complexity of firm-nation state bargaining, and new forms of legislation for international business, enacted by both the host and home countries of MNCs (Goodman, 1987).

Spin-offs from Bargaining

The results of MNC-HCG bargaining have themselves caused changes in international business and politics. These changes are only beginning to be recognized because many Third World nations have just begun pursuing development objectives that are both nationalistic and comprehensive. Furthermore, the uproar surrounding certain bargaining situations, especially those involving the nationalization during the 1970s of raw material properties owned by MNCs, has sometimes seriously clouded understanding. There are

three areas in which spin-offs from the bargaining process are currently visible; first, the way in which bargaining between MNCs and HCs now takes place; second, the emergence of a new pattern of international stratification that corresponds to outcomes of the bargaining process; and finally, the evolution of an international order based less on economic or political principles than commonalities of objective economic and political interests (Goodman, 1987).

According to Kobrin (1987) much of the literature on bargaining focuses on vertically integrated, extractive investments characterized by risk, sunk costs, government learning, and oligopolistic rivalry. In the natural resource industries, there is strong evidence that; outcomes are a function of relative bargaining power; and it has been suggested that from the MNC point of view, the bargain obsolesces over time as power shifts to developing HCs (see Figure 2.5) (Kobrin, 1987).

Obsolescing Bargaining

There may have been a time in international affairs when foreign producers of raw materials anticipated that a bargain with a HCG, once made, would not come unstuck. The opposite is generally assumed today. The assumption derives in part from an increasing appreciation of the process that leads governments repeatedly, almost predictably, to reopen the issues involved in the exploitation of raw materials or other resources (Vernon, 1971).

In most cases when a MNC enters another country, the event is generally celebrated by the signing of some sort of contract (Master Agreement) between the MNC and the HCG. This contract or the bargain is quite formal in character, and usually includes a series of commitments on the part of both parties. For example, the MNC may not be able to engage in certain stated programs or projects while it may be required to

train and provide social service for its labour force. The government, on the other hand, may not be allowed to, for example, tax the MNC beyond certain levels. These contracts maybe long term, thirty years or longer is common. Yet, almost from the moment that the signatures have dried on the document, powerful forces go to work that quickly render the agreements obsolete in the eyes of the government (Vernon, 1971; 1980).

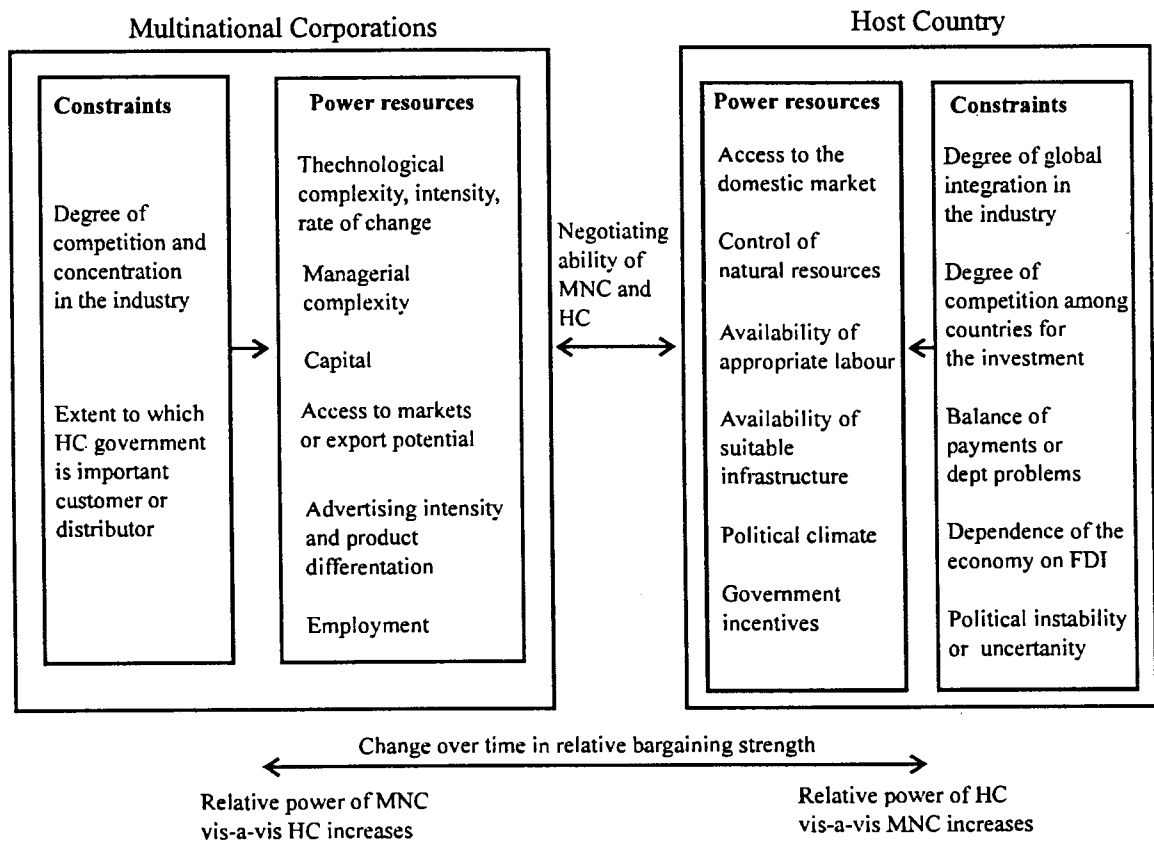


Figure 2.5. Components of the Bargaining Relationship between MNC and HC.
 Source. Adapted from Kobrin (1987), pp. 628.

Vernon (1971) explains:

“As foreign operations become more and more integrated in the economic life of host countries - through increasing payments to government and the increasing use of local labour, materials, and resources - the vulnerability of the economy to changes in these operations inevitably seems to increase. The obscure questions of law, the complex issues of fact, and the generous outpourings of ideology that have been injected into the disputes on these occasions have not masked the prime fact - that the sense of dependence that host governments experienced was at times beyond bearing.” (Vernon, 1971, pp. 52).

These factors are sufficient to explain the sources of tension and unhappiness on the part of HCG. However, there is one other factor that should also be taken into consideration and that is political stability. Governmental changes can alter the bargaining process or even the contract as a whole, especially in developing countries where revolutionary events more often occur (Vernon, 1971).

Because the agreement can grow obsolete quickly the agreement should be open to changes after certain time. Both sides are aware of the fact that in the majority of cases the terms of the agreement reflect the actual bargaining power of the two parties and consequently these arrangements must be changed at a time when these relations assume a different nature. Thus, it would be most appropriate to make reservations in the first contract that certain terms are subjected to alteration within a definite period of time. The length of this period may become a subject of negotiations and, on the one hand, for the sake of stability, it cannot be too short, on the other hand neither can it be too long if sudden changes are to be avoided (Zurawicki, 1979).

Vernon (1985) argues that one of the factors that explain the attack and threats to MNCs during the 1970s, was the inexorable operation of the obsolescing bargain. As shortages appeared in various raw materials, MNCs lost the bargaining power that their marketing capabilities normally afforded. From time to time, in the future as in the past, when that happens, some of those enterprises will be nationalized, joining the plantations,

the power plants and the oil wells that have been taken over by governments in years past (Vernon, 1985).

“But the future is no simple extrapolation of the past. Some forces seem to be speeding up the process by which the bargain between governments and foreign investors becomes obsolescent. At the same time, other forces seem to be diffusing and defusing the underlying hostility that gives the process of the obsolescing bargain some of its motive force.

The expectation that agreements between governments and investors will be breached even more quickly in the future than in the past is based on various factors. In reappraising their bargaining positions, governments are better informed and better equipped than they have ever been. Perhaps more to the point, opposition forces that are bent on embarrassing their governments have more information and more expertise....., individual multinationals have nothing like the bargaining position they sometimes held in the past.

Yet governments seem constrained to use their increased bargaining power in more ambiguous ways. Instead of outright nationalization, they seem disposed to settle for other arrangements, such as arrangements that make a gift of some of the equity to favored members of the local private sector or to an expanding state-owned enterprise, or contracts that allow the MNC's to manage their properties without formal ownership.” (Vernon, 1985, pp. 257-258).

Summary

As can be seen from the above discussion, the bargaining process is complicated. Contreras and Gregersen's (1975) framework of the bargaining process (see Figure 2.3) provides a reasonably comprehensive picture of interactions between HCGs and MNCs, and it is a useful framework in which to analyze the bargaining process between the Icelandic government and aluminum MNCs. However, bearing in mind that Contreras and Gregersen's (1975) framework was structured on the basis of research of foreign investment in the forest industry in Latin America, it is impossible to apply their framework without any adjustments. There are three main reasons why the framework has to be adjusted to the topic of this thesis. First, the framework does not give any specific reference to location which is of main concern in this thesis and, in relation to location,

there is little discussion about regional development and the environment. Second, important issues are not the same for the aluminum industry as for the forest industry. Third, the research area (Iceland) in this thesis is not comparable to Latin America in terms of size, situation, and stage of development. Because of these constraints it is impossible to structure the case studies directly after this framework.

Moreover, Contreras and Gregersen's (1975) framework does not incorporate all the important issues that affect negotiations between a HCG and a MNC. In particular, concepts such as 'bargaining power' and 'bargaining ability' are important and need to be included. The bargaining power and ability of each actor have to be examined and how they affect the outcome of the negotiations. In addition, spin-offs, learning, and the obsolescing bargaining have direct impact on negotiations and how the bargaining process evolves. These concepts will be examined and how they affected the negotiations between the Icelandic government and aluminum MNCs.

Before turning to the actual case studies of this thesis, the next chapter gives background on the aluminum industry and outlines the relevant aspects of the bargaining structure among governments and firms.

CHAPTER III

GLOBAL DEVELOPMENT OF THE ALUMINUM INDUSTRY

Introduction

“...within the lifetime of many people now living, aluminum has gradually penetrated the consciousness of industrial societies. If steel was the workhorse of the industrial revolution, the light metal has been the queen of a newer technology. Aluminum has bridged the gap from railroads to rocket ships.” (Brubaker, 1967, pp. 3).

The purpose of this chapter is to outline the evolution and characteristics of the aluminum industry, specifically since World War II. In particular, the chapter focuses on the locational economics or requirements of the smelting stage of the industry. As part of the discussion the chapter will strengthen the ties between the framework of the bargaining process and the aluminum industry and note the nature and extent to which bargaining among firm and between firms and governments is important to the aluminum industry.

As can be seen from Brubaker's (1967) quote aluminum is known today as a relatively 'young' metal. Although aluminum was not separated as a metal until 1825, various bauxite-type silicates were treated as early as 5300 BC in Northern Iraq for making pottery. Exposing various clays to the hot sun or placing them next to a fire would eventually make them as hard as stone (Banks, 1979).

The primary aluminum industry comprises three different stages; mining, smelting, and refining. First, bauxite is mined from ore deposits and converted into alumina by the Bayer process. The Bayer process treats bauxite chemically by removing impurities and water to form 'aluminum oxide' or alumina. Then alumina is converted into primary aluminum by the so-called 'reduction' process using the Hall-Heroult electrolysis process. This process requires copious amounts of electrical power to create a strong electrical

current to liberate oxygen from a molten bath of alumina. This process was developed in 1886 (Woods and Burrows, 1980; Holloway, 1988; Peck, 1988; Banks, 1979). On average, the production of 2 kg of alumina requires 4-6 kg of bauxite. Similarly, a typical Hall Heroult process requires 2 kg of alumina to produce 1 kg of aluminum (Banks, 1979). The third stage in the primary manufacturing process involves the conversion of aluminum ingots into (one of the following) foil rolling, rolling, extrusion, forging and/or casting (Peck, 1988; Holloway, 1988). Once in one of these stages aluminum is either converted into a wide variety of consumer products (e.g. pots and pans) or used to fabricate components for an assembly line product (such as airplanes). In addition aluminum finds its way into paints, pharmaceuticals, and even fibers in gowns (Holloway, 1988).

As mentioned above this chapter will specifically focus on the second stage, the reduction process or aluminum smelting.

The Global Production of Aluminum

During World War II the potential for an aluminum crisis developed because of the greatly increased demand for aluminum and uncertainty as to whether the supply would be able to expand rapidly enough to avoid a serious shortage. However, a rapid production increase prevented any major crisis (Woods and Burrows, 1980). The increase in production did not slow down after the war (see Figure 3.1). As an example, while steel production expanded at roughly the rate of GNP increase, aluminum grew three times as fast in the decade following World War II. Much of this expanded consumption can be explained in terms of the unique properties of the metal, related to its light weight, corrosion resistance, electrical conductivity, and non-toxicity. Aluminum has one-third the weight of copper, brass or steel. Because of these characteristics, aluminum is ideal for

aviation and other transportation uses. Expansion in aircraft output alone explains much of the dramatic increase in production. With respect to corrosion, unlike iron and steel, aluminum is not afflicted by rust, thus opening up nautical and architectural uses. These first two properties lead to uses in the manufacturing of light boats, ladders, and other utilities. The military has long been a major consumer which explains major production expansions during the wars of this century. Aluminum has twice the conductivity on a pound by pound basis (but not volume) of copper. This property results in the use of aluminum long distance transmission lines. Finally, aluminum gives off no toxic chemicals leading to numerous cooking and packaging applications such as aluminum cans, pots and pans, bottle caps and foil (Holloway, 1988).

As can be seen from Figure 3.1 there has been a tremendous increase in the production of aluminum ingots during the last few decades. Technological innovations in producing aluminum do not explain this rapid production increase. The basic Hall-Heroult process is still used though it has been improved often during this century. Figure 3.1 also shows that production has never exceeded consumption during the last four decades. Instead, at times, demand, has exceeded the supply, though the industry has never faced any crisis. This situation, however, has changed during the first half of the 1990s as production has far exceeded consumption. This situation also explains the crash in the price of aluminum in recent years (Figure 3.2). Price trends further reveal the 'stable life' of the industry from World War II until early 1970s and the more recent 'turbulent life' since then. The most recent changes, towards more volatile production and price behaviour, are due to increasing exports of cheap aluminum from Eastern Europe, especially from Russia, to Western countries. However, there are some indications that this trend is coming to an end. Russia, which had stockpiled huge amounts of aluminum in case of warfare, has been selling its stocks. The country has also decided to cut production during 1994, due to low price on aluminum (Morgunblaðið, 1994a).

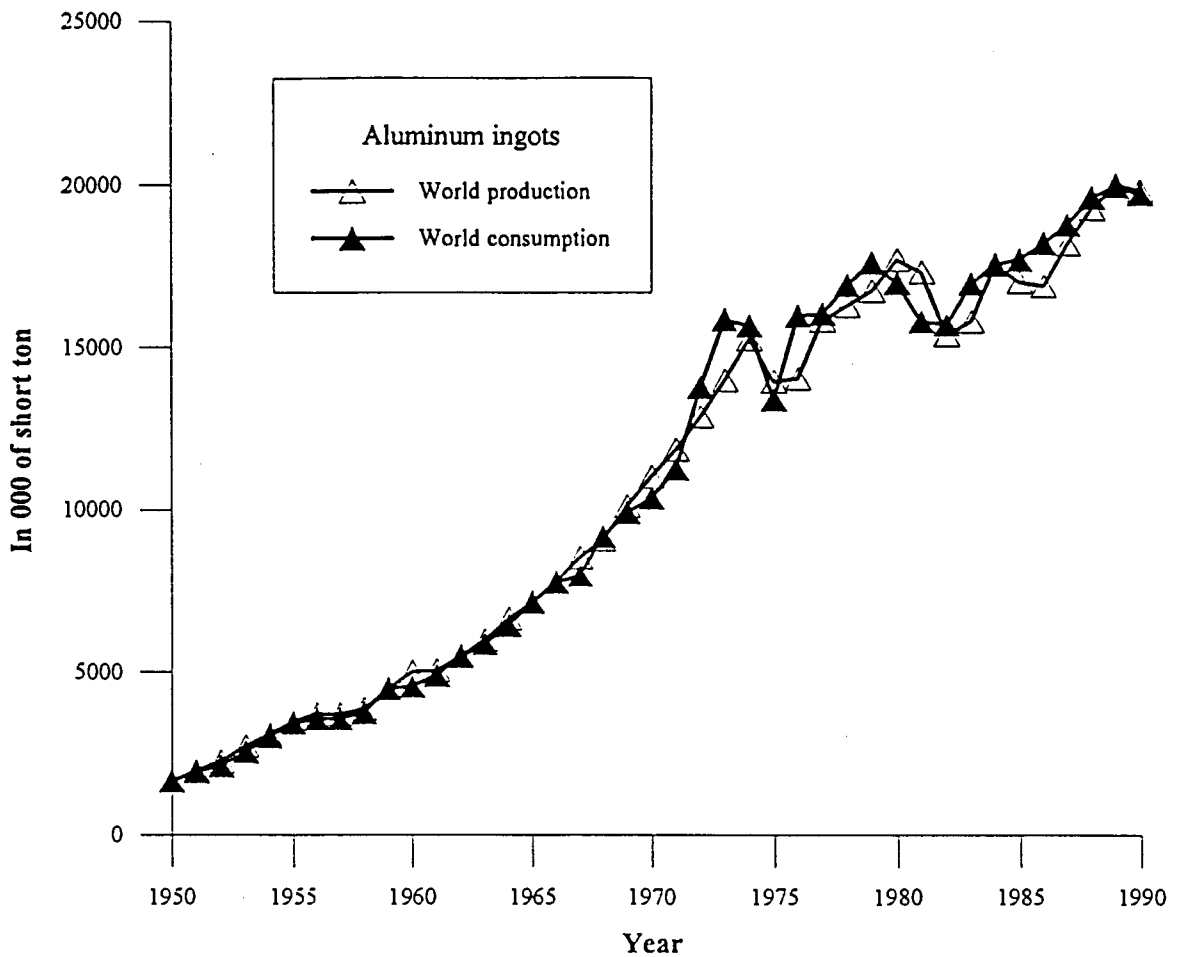


Figure 3.1. Production and Consumption of Aluminum Ingots 1950-1990.
 Source: Adapted from ABMS (1955; 1961; 1967; 1972; 1977; 1982; 1987; 1991).

Another indicator is that bauxite production in Eastern Europe has dropped from 6.3 million tones in 1988 to 3.2 million tones in 1991. The reason is that most mines in the region are small in size and mining conditions are among the most unfavourable in the world. So far, the use of poor equipment combined with labour-intensive methods, low real wages and very cheap power (4-9 mills per KWh), have allowed many operations to continue. This situation cannot continue for long, and as a result production will have to be reduced. Another problem for the industry is that the Eastern European bauxite is of

poor quality, and as the market demands better quality aluminum it will be difficult for Eastern European countries to compete (Bomsel and Hirschhausen, 1992).

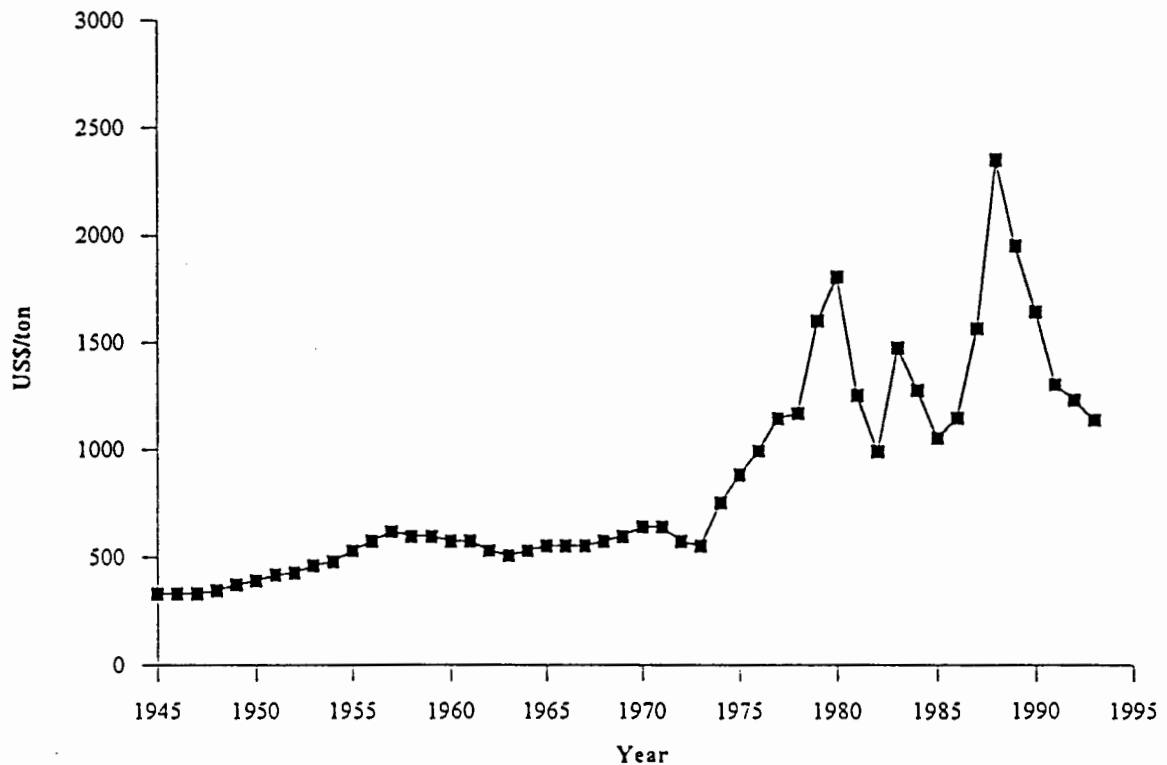


Figure 3.2. Unadjusted Price of Primary Aluminum 1945-1993.
Source: Adapted from U.N. (1981); Peck (1988); Pálsson (1993); ABMS, (1990).

The global production of aluminum is closely tied to the specific location requirements that the industry needs. The most important locational characteristic that the industry needs is electrical power. Electricity is required in such large amounts, in the smelting of alumina, that it becomes a major component of cost and it is a cost that varies considerably among locations. It is usually the second largest item in terms of cost (alumina ranks first) but the most important locational cost. This makes it very important for aluminum firms to locate where there is abundance of low-priced power (Holloway, 1988; Brubaker, 1967; Peck, 1988). The industry is also capital intensive and exhibits

considerable economies of scale so that large-scale processing occurs at all stages, although especially with respect to bauxite refining. Other stages, such as the reduction stage, have favoured at least 200,000 ton annual capacity since the 1980s. In fact, the aluminum industry is more capital-intensive industry than steel making (Brubaker, 1967; Holloway, 1988). Even at full operation capital costs are an unusually large share of total costs. Capital intensiveness, combined with advantages to scale, means that large investments are required and therefore investors favour politically secure locations for such expensive facilities (Brubaker, 1967). Other characteristics do not have as much to do with location except for transportation. However, the cost of transportation is only a fraction of the total cost of smelting and does not put any constraints on where aluminum smelters are built. Hence a typical European aluminum MNC mines in Africa (the refining of alumina is usually operated where the bauxite is located to reduce transportation costs), reduces in Norway (or where there is a cheap source of electricity), and fabricates in central Europe close to its major markets (Holloway, 1988; Brubaker, 1967). Table 3.1 shows the global distribution of production of aluminum ingots in 1970 and 1990.

TABLE 3.1
WORLD TRENDS IN PRODUCTION OF ALUMINUM INGOTS 1970 AND 1990.

	1970	1990
	in 000 of short ton	
U.S.A.	3,976.1	4,462.5
Canada	1,061.0	1,727.8
S-America ¹	181.5	1,969.1
Europe	2,226.4	4,739.3
(Iceland)	(25.0)	(85.0)
Russia	2,146.2 ²	2,425.1
Asia	1,015.0	2,218.7
Africa	182.3	662.6
Oceania	226.6	1,645.1

¹. Including Mexico

². Conjectural. All communist countries including China.

Source. Adapted from ABMS (1972; 1992).

Organizational structure of the aluminum industry

“Any industry’s behaviour depends primarily on such aspects of its structure as the degree of concentration, the height of barriers of entry, the degree of product differentiation, the extent of vertical integration, the nature of channels of distribution, the rate of growth and stability of demand, and government intervention and regulation.” (Woods and Burrows, 1980, pp. 11).

The present organization of the aluminum industry, since its establishment as an industry in 1886, reflects a long process of evolution from small, localized operations to a complex, international industry. Before World War II the aluminum market was too small to support more than a few efficient size firms. Since then the aluminum market has become increasingly international in character as a result of the multinational operations of the principal aluminum firms, the declining importance of transportation cost, and the widespread location of bauxite deposits, alumina, and smelter capacity (Woods and Burrows, 1980).

Vertical integration is an important factor in the organizational structure of the industry (Woods and Burrows, 1980). To be competitive in the industry, firms have to engage in all aspects of the production, including the three production stages. Peck (1961) concluded that vertical integration as a structural feature of the industry is an important entry barrier, for new firms, into the industry and is at least a partial explanation of why the industry is so highly concentrated. It has also been established that the industry has other basic structural features that promote vertical integration. According to Peck (1961), briefly, the argument is that bauxite mining, alumina refining, and primary smelting each has structural features that even without vertical integration would produce moderate to high firm concentration at each stage. Each vertical pairing of the three technically linked stages could confront problems at any other stage, according to how symmetrically market power is distributed at each production stage. On the one hand, symmetrical

market power is a likely event in the bauxite market, but on the other hand, asymmetrical market power leads to the exploitation of the weaker stage by the stronger stage, a likely event in the alumina market and a problem for primary aluminum producers. Though this is only an example of how market power can affect the industry this can pose a problem to firms that are not integrated into all production stages.

Vertical integration is only one of a few entry barriers into the industry. Most production stages favour large scale production, leading to considerable economies of scale. These economies of scale make the aluminum industry a very capital intensive industry, even more so than the steel industry. This capital intensiveness further promotes entry barriers, thus leading to moderate or high levels of firm concentration (see Table 3.2). In fact, apart from brief periods of state regulation during World War II, the aluminum industry has long exhibited high levels of corporate concentration and it has been characterized by the growth of few firms, notably the six majors. These six leading firms are Aluminum Company of America (Alcoa), Alcan Aluminum Limited (Alcan), Reynolds Metals Company, Kaiser Aluminum and Chemical Corporation, Compagnie Pechiney, and Schweizerische Aluminium A.G. (Alusuisse) (Woods and Burrows, 1980; Graham, 1982; Peck, 1988; Brubaker, 1967; Stuckey, 1983). Table 3.2 shows the shares of industry, for all three stages of production, for these six major aluminum firms, presented at four equidistant points in time over the 25 year period of 1955-1979. As can be seen from this table the majors have dominated all three production stages since World War II though their ratio of world production has been lowering. This trend has continued. Alcan and Alcoa are still the leading firms in all stages of the aluminum industry, but their share, and the share of the others, has declined considerably. In 1987 Alcan produced a little over 10% of primary aluminum in the world and in 1993 Alusuisse produced just over 1%. Similar trends can be noticed at other production stages. The reason for this trend is that these firms have diversified their operations and other large

corporations have emerged into the market and others have expanded their operation, for example, AMAX an old American based firm (see Table 5.2).

At this level of concentration, the theory and evidence for oligopolistic markets implies that mutual dependence would be recognized and that firms in each stage of the industry would attempt to 'gang up on' and extract rents from their mutual suppliers, customers, or both (Stuckey, 1983). Because the firms are few and vertically integrated they can work together, for example, to force aluminum prices up or lower the cost of raw materials. The industry's development has also been marked by substantial government support, both financially in the form of loans, subsidies, tariff protection and concessions, and politically in the form of military expenditures, stockpiling, and diplomatic pressure. This stockpiling, especially in the case of warfare, explains why aluminum prices have been falling. Nations, such as Russia, are selling their stock because they are no longer afraid of a major warfare in the near future.

The six majors and the markets they operate in have characteristics that are conducive to coordination. Moreover, the market-share data in Table 3.2 show clearly that Alcoa has dominated the other five, a pattern also supported by history. The only possible challenger is Alcan, originally an Alcoa subsidiary. The remaining four have quite similar market shares, which could encourage their tacit collusion, since they would be well aware of the other's situation. In fact the majors have similar vertical and horizontal structures, they each have production and selling operations in all major regions of the world, and they have each invaded each other's home market. The firms also use the same basic technologies, have similarly sized plants, and have similar cost structures. The firms manufacture commodities (in the sense used in marketing studies) and although the products are not all homogeneous, quality differences are easily measured. The products are unbranded and largely undifferentiated.

TABLE 3.2
SHARES OF THE SIX MAJORS IN WORLD BAUXITE, ALUMINA, AND
PRIMARY ALUMINUM CAPACITIES: 1955, 1963, 1971, AND 1979
(In Percentages at Start of the Year)^a

Stage of production	1955	1963	1971	1979
<i>Bauxite</i>				
Alcoa	28.2	20.0	19.1	23.5
Alcan	25.6	22.4	14.1	8.1
Reynolds	16.4	13.7	10.6	6.7
Kaiser	11.0	17.3	12.3	8.1
Pechiney	4.7	6.7	5.3	4.5
Alusuisse	2.3	1.9	2.1	3.5
Total ^b	88.2	82.0	63.5	54.4
<i>Alumina</i>				
Alcoa	24.8	18.0	23.0	27.6
Alcan	27.3	26.3	19.0	13.9
Reynolds	16.9	15.4	11.1	9.2
Kaiser	12.3	11.7	12.2	9.4
Pechiney	5.1	8.6	11.0	8.9
Alusuisse	4.2	4.6	2.9	4.8
Total ^b	90.6	84.6	79.2	73.8
<i>Primary Aluminum</i>				
Alcoa	20.4	16.9	17.1	15.1
Alcan	26.2	19.2	19.9	16.3
Reynolds	15.0	13.4	11.8	8.8
Kaiser	14.6	11.6	8.4	7.8
Pechiney	5.8	8.1	10.0	8.3
Alusuisse	3.9	3.0	5.8	5.9
Total ^b	85.9	72.2	73.0	62.9*

Source: Adapted from Stuckey (1983), pp. 84.

^a. Based on plant capacity data in primary equivalents.

^b. Equals the six-firm concentration ratio.

*. Of the remaining 37.1%, USSR produced 19% (Holloway, 1988).

The major variables requiring coordination are price and quantity, the two variables usually considered the easiest to coordinate in an oligopoly. Pechiney, has diversified into other industries and during the 1970s Kaiser and Alusuisse also diversified away from the aluminum industry. It is not obvious how these differences affect cooperation among the

firms, although it is argued that cooperation declines as the number of diversified firms and their degrees of diversification increase (Stuckey, 1983). The average financial performances and financial structures of the majors are similar, which is an assistance to, and possibly an indication of, successful cooperation. Most of the majors have ample opportunity for, and give evidence of, effective interfirm communication (Stuckey, 1983). This cooperation can strengthen the bargaining situation of the firms. However, the invasion into each other's markets leads to competition between the firms which undermines their ability to cooperate.

This structure, makes it difficult, for new firms, to enter the industry. The high concentration and the limited free market in the upstream aluminum industry mean that the potential entrant must choose from several difficult options, options that were even less attractive prior to the mid-1960s. The typical strategy for a firm entering the industry has been, first, entry into primary aluminum production and/or fabrication to secure a foothold in the market, and then to integrate into other stages later. Entry barriers prevent immediate complete integration. The six majors have an incentive to retain full and balanced integration as a means of restricting entry. Entrants or unintegrated firms have an incentive to become vertically integrated to avoid price squeezing or rationing by the majors. Also, the fact that bauxite and alumina production are technically complementary, means that without vertical integration, firms would operate in oligopolistic or bilateral monopolistic markets. The bargaining costs and financial risks associated with these market structures cause market failure, and firms resort to the relative efficiency of internal organization. There are strong incentives for upstream integration for firms that are integrated across mining, refining, and smelting, and often also semi-fabrication and final fabrication (Graham, 1982), because they can have approximately balanced capacities across the three stages (Stuckey, 1983). Each stage is associated with a higher added value and the possibility of increased external economies as other inputs are brought under

corporate control (Graham, 1982). Those firms that do not have full balanced integration are pursuing strategies to take them in that direction (Stuckey, 1983).

Joint ventures have been established frequently in the aluminum industry, especially since the early 1960s. Such firms account for almost 50% of the industry's capacity. Participation in joint ventures can make it easier for the individual firm to simultaneously achieve balanced vertical integration, low unit costs, and sufficient markets for their final output in the short run. The private advantages that accrue here would also seem to accrue to society, at least potentially (Stuckey, 1983; Woods and Burrows, 1980).

“To the extent that joint ventures are a more efficient means than the alternatives of organizing the intangible assets used in aluminum projects such as technical know-how and nation-specific knowledge, society can again benefit from them. Intangible assets are difficult to transact at arm's length, because of contractual incompleteness and the risks of strategic misrepresentation, but when they are exchanged implicitly within a joint venture, transaction costs and risks may be reduced, and this improves the industry's performance.” (Stuckey, 1983, pp. 209).

Furthermore, joint ventures make it possible for individual firms to add relatively small chunks of capacity, hence each firm can share in the industry's growth while aggregate capacity grows at a collectively optimal rate. Joint ventures also affect the industry's performance to overcome entry barriers. Most successful new entrants into the industry, during the last decades, have relied heavily upon participation in joint ventures as part of their entry and growth strategies (Stuckey, 1983; Woods and Burrows, 1980).

“The many joint ventures between the multinational aluminum firms and host governments or private, local firms seem to be initiated by the host country because joint ventures are the best means by which a government can protect and promote the interests of (ultimately) its constituency.....The multinationals are often forced to accept local partners, but there is some evidence that they too benefit from foreign joint ventures because geographical diversification results within the firm.” (Stuckey, 1983, pp. 211).

Woods and Burrows (1980) also point out that by allowing non-aluminum firms to purchase minority interests, in joint ventures, the aluminum producers can spread their available capital over larger production capacity. It is also a way of bargaining for both the HC and the firms. The market for aluminum has grown rapidly during the postwar period, and as initial capital costs for aluminum production are quite high, the joint ventures improve the ability for the already existing producers to expand their production. Joint ventures reduce the risk of any one investment for each firm and allow firms to pool their technical know-how and market experience. Finally, joint ventures allow firms without bauxite or alumina supplies to pool their interest with firms that do have bauxite or alumina production facilities.

Location Strategies and Bargaining in the Aluminum Industry

The mining of bauxite and the conversion of bauxite into alumina is a weight losing process and is therefore located near the source of the raw material to minimize transportation cost. Although the smelting process is also a reduction process, transportation costs are no longer the major locational determinant. Rather, the principal locational cost is electricity while other costs are carbon electrodes, labour, and capital costs. While all of these costs can vary with location, the most significant variations are in electricity and labour (Brubaker, 1967).

“Comparative advantage in smelting is related to the availability of low-cost power, which depends in turn on the endowments given to a region by nature relative to the demand for electric power from users. Still, it falls within the realm of public policy to decide whether to develop low-cost power sources and, once developed, whether to use the power for aluminum smelting. And it is a public policy decision to raise the price existing smelters must pay for electricity and so reduce their international competitiveness.” (Peck, 1988, pp. 9).

The objectives of HCGs in attracting the aluminum industry are at least threefold; to find outlets for surplus energy; to promote regional development; and finally, to promote industrialization (OECD, 1983). Auty (1982) argues that the expansion of the aluminum industry has encountered severe opposition in some OECD regions, for example the Pacific North West and Australia, largely because of the low level of employment and limited linkages per unit of energy used and because of potential threats to the environment in the form of pollution.

Not only is the aluminum industry an extremely capital-intensive production process, but usually certain operating costs are partially fixed in the short run. For example, electric power and alumina are often bought under contracts that require minimum (large-scale) purchases, and union contracts often impose cost penalties for layoffs. Furthermore, there are costs, sometimes a few million dollars, in closing and opening a smelter. As a result, a smelter will continue to operate, even if the price of aluminum is below its operating costs, if the firm regards the current price levels as a short term condition (Peck, 1988).

Expanding an existing smelter is often cheaper than constructing a new one, that is, up to some point usually set by such constraints as the supply of low-cost power, the capacity of the transportation system, the availability of land and labour, and, recently, potential environmental regulations. Because of these factors, and the fact that low-cost locations are not always available, producers tend to grab the opportunity if a low-cost location becomes available and to initially build small smelters that are planned for expansion a few years later. Kirchner (1988) argues that Alusuisse investment in Iceland in 1969 (see chapter 4) was a good example of a firm grabbing such an opportunity. A 'typical' example is to build a smelter with 60,000-100,000 tones of annual capacity with the possibility of expanding until capacity has reach 200,000 tones or more giving that

economies of scale are important in aluminum smelting. It has been argued that smelters below 100,000 tones of capacity will not be economically feasible. The U.S. aluminum industry is a good example. By 1972 only four of the 32 existing smelters in the U.S. had less capacity than 100,000 tones of annual capacity. The actual pattern of capacity suggests that economies of scale may well exist beyond the 100,000 ton mentioned repeatedly in the literature on the aluminum industry (Peck, 1988).

Electricity and bargaining

As mentioned earlier, the price of electric power is the major determinant of the international competitiveness of smelters. It is the cost that varies most by geographic location.

Electric power is produced in several ways: oil thermal generation, coal thermal generation, nuclear power, geothermal energy, or hydropower. Each source has a different level of cost. Oil is the most expensive at roughly 65 mills per KWh, and hydropower is the least expensive possibly as low as 15 mills per KWh. Although electricity can be transported over increasing distances, it is still consumed most economically in the region in which it is produced. The economic consequences of these technological facts are that the lowest cost smelters are located largely in regions with hydropower (see Table 3.1 and 3.3) (Peck, 1988).

Because the operating costs of hydropower facilities are low, about 10% of total costs, there is a strong incentive, when a facility or a region has a considerable power surplus, to attract aluminum smelters and charge low power rates. The importance of such a strategy is that the rates charged to the user will make some contribution to the fixed capital costs, even if those rates are well below those charged to other customers and below the total (including capital) cost of generating electricity (Peck, 1988).

“The kind of bargaining that occurs between a primary aluminum producer and a power supplier depends on whether the power will supply a new or an existing smelter. With a new smelter the primary producer can compare the power costs at alternative locations and bargain with each potential supplier of power - even though they may be thousands of miles apart. For a nation to attract a smelter, it must offer power rates competitive with alternative location.” (Peck, 1988, pp. 15).

Table 3.3 shows different prices of electricity (1982), at different locations, to aluminum smelters. The way of charging electricity has changed since the early 1980s. Most power agreements charge electricity to the smelter as a calculated percentage of aluminum prices, with a certain minimum and maximum charge. As a result, electricity prices fluctuate in accordance to aluminum prices. For example the minimum charge in Iceland in 1994 is 12.5 mills per KWh and as aluminum prices have risen from US\$ 1,000 per ton end of 1993 to almost US\$ 1,500 in six months electricity price in Iceland has risen from the minimum charge of 12.5 mill per KWh to 12.81 mill per KWh (Morgunblaðið, 1994d).

TABLE 3.3
PRICE OF ELECTRICITY TO ALUMINUM SMELTERS IN 1982.

Location	Mills per KWh
<u>Low-cost power locations</u>	
Australia	15-19
Brazil	13-17
Canada	8-16
Iceland*	6.45*
<u>High-cost power locations</u>	
U.S.	25-38
France	26
F.R. Germany	25
Italy	35
Norway	20
Greece	15
Japan	56

Source: Adapted from Peck (1988), pp. 23.

*. Source: (OECD, 1983). Note, this price rose shortly after 1982 (see chapter 4).

The bargaining process between the firms and the power suppliers, who are often governments, is not a simple process. The bargaining often includes provisions for taxation, local financing, and government furnished infrastructure. High electricity prices can thus be offset by liberal provisions in other areas (Peck, 1988).

Both parties are interested in electricity rates over the life of the smelter. However, the primary producer is potentially at a disadvantage in that once the smelter has been constructed, the producer loses a great deal of its bargaining power because it can no longer consider other location options. Because of this, producers can use three methods to try to prevent the offset and their loss of bargaining power once a factory has been built. First, they can examine the possibility of owning their own power facilities. This option requires large capital outlays, particularly for hydropower plants. Furthermore, building dams requires government permission, which is sometimes not easily forthcoming. Second, they can sign long-term contracts that guarantee low-cost power. This has been the most common method for capitalizing on the producer's strongest period of bargaining power, when they are choosing among sites. Yet, such contracts do not provide complete certainty because they can be abrogated by governmental action. Finally, they can diversify the location of their smelting among regions, among suppliers of power, among power sources, and finally among nations. With such a diversity of sources, actions related to a particular power supply will affect only some of the smelters of a primary producer and so place the producer at less of a disadvantage vis-à-vis his competitors (Peck, 1988).

Each of these options has disadvantages and none of them provides certain protection from rise in power prices. The risk that power prices will change despite long-term contracts has become particularly great during the late 1970s and 1980s. Before that time, power costs for aluminum smelters were usually set by long-term contracts, and they usually did not change. However, the decade of the 1970s saw rapidly rising electricity

prices, reflecting the overall increase in power prices following the two oil shocks (Peck, 1988). Such price volatility in the major input has in turn complicated the bargaining process that has at the same time become more important for both actors and determines the competitiveness of the industry at different locations.

“The political influences in this whole bargaining process are also quite important because power suppliers are often government agencies or, at least, regulated private companies. Thus the suppliers may have explicit objectives beyond selling power, objectives such as promoting regional development or maintaining employment.....

.....Perhaps the only generalization possible is that the outcomes are diverse and that the bargaining often determines the international competitiveness of a nation's aluminum industry.” (Peck, 1988, pp. 17).

The existence of the six majors may have a special significance for structural adjustment to changes in international competitiveness. Because of their multinational operations, these firms can locate new smelters in areas that have the best prospects for the lowest cost operations with an ease that a strictly national company cannot match. Irrespective of national location, the firms can also concentrate production at those of their existing smelters with the lowest operation costs. However, their ability to concentrate production in this way is limited by the start-up and shutdown costs, expansion restrictions, union contracts and power contracts with minimum consumption provisions.

The international scope of operation of the six majors gives the firms a good position for effective bargaining on favourable power contracts and other concessions when decisions on the location of new smelters are made. They can choose fairly freely among countries, although competition for the ‘scarce’ supply of low-cost power limits their bargaining power. However, it is unclear, just how much the six major’s status increases such bargaining power (Peck, 1988).

Auty (1993) points out that the concept of obsolescing bargaining (developed by Vernon, 1971; 1980) applies to the bargaining process of the aluminum industry. During the feasibility stage, when the terms of the project are negotiated the MNC has the strongest bargaining position, it has most information and only a modest financial commitment, whereas the HCG is keen not to deter new investment. By the time the investment has been completed, the HCG has a stronger position, much of the secrecy surrounding the prospects for the project has lifted and the HCG can seek renegotiation of the concession secure in the knowledge that the MNC is now vulnerable because it needs to secure the return of its capital, with a profit. Yet both sides can gain by eliminating such potential friction through transparent taxation agreements.

Bargaining Structure in the Aluminum Industry

Peck (1988) concluded that the bargaining process 'determines the international competitiveness of a nation's aluminum industry'. Since the outcome of the bargaining process relies on the relative bargaining power, bargaining ability, and the interdependence of the each actor, both sides have certain advantages. Aluminum firms, such as the six majors, are big powerful firms that, prior to an investment, explore every possible location option in detail and by comparing them they gain a certain advantage in upcoming negotiations. Competition between nations and regions seeking investments further increases this advantage. According to Auty (1993) this advantage shifts over time. The MNC becomes more vulnerable after investment has taken place and the HCG gains 'power'. However, since the aluminum industry requires specific location characteristics some locations hold advantages over others because they (better) fulfill these requirements. Exactly in what environment a new smelter, then, operates in, is subject to the bargaining process.

As these big aluminum corporation explore possible location options countries like Iceland, which only recently entered the scene as a possible location, try to get their attention. Fulfilling all the industry's requirements, Iceland is a good option for the aluminum industry. Since the bargaining process determines the operating location conditions of aluminum MNCs it is necessary to examine this process, in detail, to understand the international competitiveness of a certain location. This is the subject of the following two chapters which are case studies of the aluminum industry in Iceland.

CHAPTER IV

THE BARGAINING PROCESS BETWEEN THE ICELANDIC GOVERNMENT AND ALUSUISSE (1960-1966)

Introduction

This chapter examines the negotiations between the Icelandic government and Alusuisse, a Swiss aluminum multinational corporation (MNC) (Table 4.2), that preceded the establishment of an aluminum smelter, Icelandic Aluminium Co. Ltd. (ISAL), in 1969. These negotiations are analyzed within the frameworks of the bargaining process outlined in chapter 2, in particular the model developed by Contreras and Gregersen (1975) and models of the obsolescing bargaining developed by Kobrin (1987) and Vernon (1971; 1980; 1985).

Before examining the actual bargaining process the main outcomes of the negotiations are outlined and a chronology of events is included (Table 4.1). Then broad issues that were debated are introduced. First, issues that were debated within Iceland, such as foreign investment, foreign ownership and control and the development of Hydro-electric power, and second, issues that were debated within Alusuisse, for example other location options than Iceland are discussed. These short discussions help to explain and more fully understand the complex bargaining process that follows. Also, before describing the actual interactions, it is necessary to identify motivation factors for both Alusuisse and the Icelandic government and situations where there is 'conflict' and/or 'no conflict' in motivation. Since the plant was established, all the 'conflict' situations that both parties anticipated at the beginning of the negotiations, notably location, price of power, taxes, and import duties, and issues that surfaced during the negotiations such as legal issues, were 'negotiable' (see Figure 2.3). Subsequently, after examining the bargaining process, spin-offs and benefits of the bargaining process are discussed.

Alusuisse and the Icelandic government were not the only participating parties in the negotiations. When negotiations began Alusuisse had a partner, American Metal Climax (AMC, later Alumax (see Chapter 5 and Table 5.2)), and they were working together towards erecting an aluminum smelter in Iceland. However, AMC's decision to drop out of the project in 1964 did not affect the negotiations. Alusuisse and the Icelandic government were determined to continue negotiations. Another actor that influenced the outcome of the negotiations was the World Bank. The bank joined the negotiations in 1964 when the government started negotiations to raise capital to finance the construction of the Búrfell power plant that would provide the new aluminum smelter with energy.

The Bargain: Key Elements

After intense negotiations between 1961-1966 the Icelandic government and Alusuisse signed a Master Agreement on March 28, 1966.

This Master Agreement had to be approved by both the Icelandic Parliament and the Board of Alusuisse. Because of the matter's importance, it was put forward in the Parliament on April 1 and then approved, after very long discussions, on April 30, 1966 (Morgunblaðið, 1966b; Hafstein, 1966b; Alþingistiðindi, 1966), and a little later the Master Agreement was also approved by the Board of Alusuisse.

ISAL, located in Straumsvík on Reykjanes, is provided with electricity from the Búrfell Hydro-power plant (see Figure 1.1 and 5.6). The first delivery date for electricity was, according to the Agreement, to be June 1, 1969. At that time Búrfell was supposed to be ready to deliver electricity and ISAL should have finished erecting a 30,000 ton aluminum smelter. However, in the Agreement there was a clause which gave both parties the opportunity to postpone this date, for a short period of time (Icelandic government

and Alusuisse, 1966; Hafstein, 1966b). As it turned out, the start-up day June 1 was postponed and operation of both facilities did not begin until October 1, 1969.

According to the Agreement, the price of power in 1969 was 3.0 mills per KWh. The Agreement required that this price would stay unchanged for the first six years but would be lowered to 2.5 mills after that time. Instead, the smelter would pay lower taxes during the first six years of operation and these taxes would be raised as the price of power dropped. After the first six years the smelter was expected to have reached its full annual production capacity of 60,000 ton. Simultaneously with the enlargement of the smelter, the Agreement anticipated that Búrfell power plant would be enlarged from its original 105 MW production to a fully built 210 MW power plant. The Búrfell power project was supposed to be financed through loans from the World Bank and subsequent expansion was also supposed to be financed by the World Bank.

Taxation of ISAL was a fixed amount for each produced ton of aluminum. According to the Agreement the smelter was supposed to pay US\$ 12.5 per ton during the first six years of operation. After these six years this amount was supposed to rise to US\$ 20 per ton and after nine more years to US\$ 35. The Agreement also included a clause about maximum and minimum tax.

According to the Agreement the smelter is exempt from import duties on machinery and raw materials.

Also, according to the Agreement ISAL is a Icelandic firm but is exempt from some laws and regulations. The firm is 100% owned by Alusuisse and disagreements between the government and Alusuisse will be solved by using an international court of arbitration which, however, will use Icelandic laws as guidelines.

The duration of the agreement is 25 years, but both parties can extend the agreement for another 10 years which means that the scope of the Agreement is potentially 45 years.

Since operation of ISAL began on October 1, 1969 the plant has produced close to 2 million ton of primary aluminum. Since 1993 the smelter has had an annual production capacity of 96,000 ton. The company's main exports consist of aluminum slabs and other cast products made for ISAL's sister companies in Europe, which make final aluminum products for sales and export. So, the smelter has been 'successful'. However, the decisions reached in the Master Agreement of 1966, and made operational with some modification at the plant's start-up in 1969, evolved after intense debate which contemplated various alternatives (Table 4.1). At the national level, there was considerable debate within Iceland about whether an aluminum smelter should be built at all and if so, if it should involve a MNC. Once these conditions had been (more or less) accepted, decisions had to be reached regarding various characteristics of the aluminum smelter. These were, most notably, location, price of power, taxation, import duties, environmental issues and legal issues. However, before examining each of these issues separately, the next section will examine the context of debate, especially focusing on the debate within Iceland preceding and during the negotiations between the Icelandic government and Alusuisse.

The National Context of Debate

Prior to, and especially during, the negotiations with Alusuisse there was a debate in Iceland concerning two vital issues concerning the aluminum project. In particular, there was a debate over 'foreign investment' and foreign capital entering Iceland and a debate over the future development of power production in the country. This section will also examine issues that were openly discussed within Alusuisse, such as other location options.

TABLE 4.1
 CHRONOLOGY OF EVENTS DURING THE NEGOTIATIONS BETWEEN THE
 ICELANDIC GOVERNMENT AND ALUSUISSE 1960-1969

Date or Period	Comments:
October 1960:	Alusuisse sends the Icelandic government a letter stating interest in erecting an aluminum smelter in Iceland.
June 1961:	The government receives a questionnaire (Table 4.3) from Alusuisse, where the firm is looking for information whether Iceland is a feasible location for a new aluminum smelter.
During 1961:	The government establishes TIDC to continue negotiations with Alusuisse.
November 1961:	Both parties meet in Zürich. The government is to prepare a memorandum that outlines commitment's which it is possible to make at this stage. Also discussions about electricity price.
April 1962:	TIDC asks Alusuisse to build a larger plant, than 27.000 ton, to make constructions of a power plant more feasible.
During 1962:	The government promises that import duties would not be an obstacle in the negotiations.
November 1963:	Both parties agree on price of power and that there should be a connection between price of power and taxation. An idea for a tax formula was put forward.
During 1963:	Harza Engineering recommends Búrfell as the best option for a new power plant.
During 1964:	The government negotiated with the World Bank to raise capital for Búrfell power project.
September 1964:	Alusuisse decides that Straumsvík would be the best location for the smelter.
October 1964:	The World Bank argues that taxes + price of power can not be lower than 3,7 mills per KWh otherwise the project would not be economically feasible for the government.
December 1964:	Both parties reach an agreement concerning most issues for example the tax formula and price of power (see appendix 1). The World Bank agrees to finance the Búrfell power plant project.
January 1965:	A draft of the Master Agreement is ready.
March 1965:	Alusuisse argues that a 30.000 ton smelter is too small. It is decided that Alusuisse will build a 30.000 ton smelter which will be enlarged within 6 years to a 60.000 ton smelter.
During 1965:	A final agreement of taxation is negotiated. Two conflicts occur; first, the duration of the agreement; and second, the jurisdiction of the smelter.
March 28, 1966:	A Master Agreement is signed and approved first by the Icelandic Parliament and then by the Board of Alusuisse.
October 1, 1969:	Operation of the smelter begins.

The debate within Iceland

In 1918 ideas for building large power plants in Iceland were first put forward. Simultaneously, ideas for power intensive industry were also suggested including, for example, construction of a fertilizer plant, an aluminum smelter, and/or even iron or zinc

industry. At this time (1918), circumstances in Iceland were totally different, Danish influences were still very powerful and people afraid of foreign capital and control. Since then, circumstances have gradually changed (Nordal, 1965c; Jónsson, 1965). Though foreign capital had entered Iceland prior to the 1960s, it was principally in the form of loans to strengthen existing industries. It had been the government's goal and practice, since the country became sovereign in 1918, that Icelanders should own firms that operated in the country. This policy enabled Icelanders to control and develop resources located in the country. Consequently, the beginning of negotiations with Alusuisse in the early 1960s marked a major change in that policy. Jónsson (1966) pointed out the danger for small nations in relying on large MNCs:

“By inviting a MNC into the country the government has lost faith in its own people. So far the nation has been able to do things of its own and why not now as before. The country should use its own resources and profits should stay in the country. Iceland should have control over its resources and activities within the country. Though by allowing one MNC into the country, Iceland will probably not lose its control but other MNCs will follow and the country can lose its control. This is what has been happening, for example, in South America.” (Jónsson, 1966, pp. 1372).

Entry barriers facing foreign investment into Iceland are different from many other countries. Thus resources have traditionally been protected from foreign ownership and control with laws and regulations (see chapter 1) but by potentially allowing Alusuisse to construct an aluminum smelter, the government proposed a change to these laws which potentially opened up the possibility that other foreign firms would enter Iceland. For the critics of foreign investment such development threatened the independence that has so recently been established (Olgeirsson, 1966; Jósefsson, 1966). In response, the government's negotiators and supporters argued that the MNC is not coming to Iceland to take over the country or destroy its freedom. Rather, the MNC's attraction, to Iceland, is because it sees financial gains in locating there. In addition, Hafstein (1965) argued that

the government would only allow foreign investment in the country if Iceland would see some economical benefits from such an investment and if it would not threaten economical, social, nor political independence of the country. According to Nordal (1965c) there is no chance that Alusuisse's investment will in any way threaten Icelandic independence because though Iceland is dealing with a very powerful MNC, it is owned and governed in Switzerland which is a small neutral country and the MNC will not have unlimited right of operation in Iceland. Nordal further argued that in the agreement then being negotiated, there are no doubts about Alusuisse rights and duties, so by negotiating with this MNC Iceland is not opening up for other MNCs without earlier negotiation (Nordal, 1965c).

One way for countries to protect their sovereignty from MNCs is to demand that the new firm must be a joint venture between the MNC and the governmental and/or local firms. Indeed, such joint ventures have been widespread in the aluminum industry (see chapter 3). However, the idea that the proposed smelter could be a joint venture between the Icelandic government and/or local firms and Alusuisse is nowhere to be found in the references. The reason could be that the government realized that the related power project which would be so large that it would be impossible to provide capital for such a joint venture. In addition, the proposed smelter did not impose any threat to the government's policies of protecting natural resources located in Iceland.

Critics of foreign investment (Jónsson, 1966; Helgason, 1965; Olgeirsson, 1966) argued that a MNC that will invest US\$ millions will protect its investment and in doing so the firm will seek to lobby powerful persons in Iceland. They argued that even if it is not dangerous to let some foreign capital enter Iceland, an investment of the size that the government is now negotiating with Alusuisse is too large to be taken in one step. For these critics, the Icelandic economy is too small to handle such an investment and the consequences could be devastating as, foreign capital could in a short period of time

overtake the Icelandic economy, and by doing so threaten the political independence of the nation.

“This MNC will be the most powerful force in Icelandic politics during the next decades.” (Olgeirsson, 1966, pp. 1437).

The critics further argued that the proof that the government is doing something wrong is how eager the Swiss firm is to sign an agreement with the government (Olgeirsson, 1966; Jósefsson, 1966; Jónsson, 1966; Valdimarsson, 1966; Kjartansson, 1965; Arnalds, 1966). They even quote one of Alusuisse directors, in a interview, arguing that ‘Alusuisse owns smelters all around the world but this was the best agreement, and the lowest electricity price, the firm had ever negotiated’. Even after the government had signed the Master Agreement the critics of foreign investment continued to raise this issue:

“A well-trained negotiating committee from Swiss has gotten a signature from the Minister of Industry, approved by the government and they don’t know the consequences.” (Olgeirsson, 1966, pp. 1596).

Within Iceland, the debate over foreign investment during the 1960s was further complicated by a debate over a new Hydro-power plant(s) for domestic use. The development and utilization of Hydro-power became a fierce debate and because the location of a new power plant was closely interrelated with the location of a new aluminum smelter, this debate was of most importance to the negotiations.

One the side of the government, Jónsson (1965) argued that from the beginning of time Icelandic rivers have run freely to sea without any economical benefits. In addition, he noted that some scientists had forecasted that in 20-30 years Hydro-electrical power plants would not be able to compete with nuclear power plants. Given that power from such plants is becoming cheaper, Jónsson (1965) emphasized the need for Iceland to start

building Hydro-power plants as soon as possible since if it did not the country might lose its advantage, over other locations, in offering cheap power to industries and/or MNCs.

“It is not only childish to wait, it is a crime towards future generations.” (Jónsson, 1965 pp. 19).

After Harza Engineering, an engineering company hired by the government in 1961 to examine possible sites for Hydro-power plants, recommended that Búrfell would be the best location for a new large power plant, the government examined three possible strategies. The first strategy was to build many small power plants only for domestic use, each of them fairly cheap to build but they would have a much higher operation cost (per KWh) than one larger plant such as Búrfell. The second strategy they considered was to build the first step of Búrfell (110 MW) without the market of power intensive industry. The third strategy considered was to build the Búrfell (110 MW) power plant in connection with power intensive industry and to enlarge the plant, in two or three steps, to a size of 210 MW, that would produce electricity at half price, compared to many small power plants (Nordal, 1965c; Jónsson, 1965).

The government argued that strategy two could be eliminated because the government would never be able to finance such a large project without power intensive industry. The first strategy would also have some financial constraints and is not as feasible as the third strategy because of the high operating cost. Therefore, according to the government and its supporters the third strategy is not only the cheapest option but also the best (Nordal, 1965c). In support of this view, the government argued that the power agreement currently being negotiated with Alusuisse is going to pay for 2/3 of the construction cost of a 210 MW power plant at Búrfell. A 60,000 ton aluminum smelter will only use 1/2 of the energy (110 MW) and after Iceland finishes paying the loans and interest of the financing for the power plant (with income from power sales to the

aluminum smelter) over an estimated 25 years, it will not only own the plant but the power plant will also be a source of income (foreign income) for future generations (Nordal, 1965c; Jónsson, 1965). It should be noted that by signing a Master Agreement with Alusuisse the government did not have any other options than to follow the third strategy. However, this rationale was criticized within Iceland.

The Icelandic negotiating committee was criticized for presenting confusing figures to the public. Critics argued that total estimated foreign income from building the aluminum smelter and income from electricity sales to the smelter are too high (Helgason, 1965; Kjartansson, 1965).

“This is done on purpose, so the outcome of the new power intensive industry will be better.” (Helgason, 1965, pp. 19).

Kjartansson (1965) also criticized the power agreement on the basis that the cost of constructing the power plant were underestimated by Harza Engineering and the government. He claimed that problems like ice and mud flows had not been thoroughly investigated. Therefore the electricity price is much too low. According to Jónsson (1966), the Agreement permits Alusuisse to pay 28% less for electricity in Iceland than it is doing in Norway (Husanes aluminum smelter; see Table 4.2). In addition, Jónsson (1966) noted that if the estimated construction cost of building the Búrfell power plant rises by 3.3% or more, the result would be that Alusuisse would pay less per KWh than the production cost per KWh (assuming the price will be 2.5 mills per KWh, which had been anticipated by Alusuisse). According to Jósefsson (1966) 2.5 mills is the lowest electricity price to an aluminum MNC in Europe. Even if the electricity is paid in foreign currency Kjartansson (1965) suggested that the government will maybe devalue the Icelandic currency after the agreement has been signed and by doing so, increase its income, but at the same time, ruin the economic status of the country. Another problem

raised by critics of the government was that a simultaneous construction of a power plant and an aluminum smelter would add to the already expanding economy. Such expansion will increase the inflation rate, which will only create problems in other industries such as the fishing industry. In this view, the project as a whole is working against Iceland's own interest (Valdimarsson, 1966).

According to Harza Engineering (1962), the Búrfell power plant offered the cheapest option for energy production in Iceland. Without an aluminum smelter, the energy it produces would last the nation until 1985. However, the critics noted that with an aluminum smelter it will only provide domestic users with electricity until 1976 which means that in 1976 Iceland would have to build a new power plant to produce electricity which will have higher operation cost per KWh than Búrfell, which ultimately will lead to higher electricity price for Icelanders and Icelandic firms. That is:

“The cheapest and the best power plant will be used for foreigners and Icelander's will have to pay for it in the future.” (Jónsson, 1966, pp. 1385).

However, the critics lost the battle and the government used its majority in the Icelandic Parliament to approve the Master Agreement with Alusuisse. It should be noted that the discussion in the Parliament was a month long, from April 1 to April 30 (the long discussion can be found in *Alþingistiðindi* (1964B) pp 1351-1960, 2696-2738). In addition it should be noted that the government only had a marginal majority of one vote.

Alusuisse options

As the largest European producer of primary aluminum and the sixth largest producer in the non-communist world in 1960 (see Tables 3.2 and 4.2) Alusuisse examined many location choices prior and during the negotiation with the Icelandic government. During the negotiation period (1961-1966) Alusuisse finished erecting a new

aluminum smelter in Husanes (Norway), which is one of three remaining (1994) smelters operated by Alusuisse (see Table 4.2). Alusuisse was also negotiating with governments in Germany and Sweden about building aluminum smelters in those countries that would have been the firm's first smelters provided with energy from nuclear plants (Hafstein, 1966a). In the 1960s the firm was also investigating location possibilities in Africa.

TABLE 4.2
ALUSUISSE - SELECTED CHARACTERISTICS

<u>Date or Period</u>	<u>Comments:</u>
November 12, 1888:	Alusuisse was founded under the name of Aluminium Industrie Aktien Gesellschaft (AIAG) (e. Swiss Aluminum Ltd.). The firm was the first aluminum producer in Europe to apply electrolytic reduction process invented in 1886 by Heroult.
Before 1940:	The Alusuisse Group invested only in Europe.
1960:	The firm was the largest primary aluminum producer in Europe and the sixth largest producer in the non-communist world (Table 3.2). The firm is not only a multinational producer of primary aluminum but also a major producer of semi-finished and finished aluminum products.
During the 1970's:	Alusuisse diversifies into other industries such as chemicals, engineering, energy, and mining. Because of this interest the firm acquired Lonza Ltd. a major Swiss producer of chemicals, plastics, and fertilizers.
January 1, 1990:	The present name Alusuisse-Lonza Holdings Ltd. was adopted.
Current status:	Alusuisse conducts its business in Switzerland and in 26 other countries (for example: Austria, Germany, France, Italy, U.K., Canada, U.S.A., Sierra Leone, and Iceland, to name a few). Within Switzerland Alusuisse activities are carried on both directly by it and indirectly through subsidiary and affiliated companies. Outside Switzerland Alusuisse operates solely by means of subsidiaries and affiliates. The activities of the Alusuisse Group are carried on in six main Divisions: Aluminum, Mining, Chemicals, Engineering, Energy, and Research and Development.
Aluminum:	The most recent development of the aluminum division is that the firm has been focusing more on semi-finished and finished products and has been reducing its primary aluminum production. The firm has been reducing its production especially in the U.S. and is focusing more on production in Europe and the Far East. At the beginning of 1994 the firm had only 3 producers of primary aluminum in Europe. One in Germany (estimated production for 1994 30,000 ton), one in Norway (the Husanes smelter) (estimated production for 1994, close to 100,000 ton) and one in Iceland (ISAL) (estimated production for 1994 96,000 ton). The goal is to close down the smelter in Germany in the nearest future and if further reduction will occur the smelter in Iceland will close next because electricity is cheaper in Norway after recent changes in taxation there.

Source: Adapted from Moody's Investors Service (1993a); Guðmundsson (1966); TIDC (1963); Morgunblaðið (1994c).

Apart from other location options two other issues were of importance to the firm in relation to the Iceland investment. First, the firm had to decide whether to continue with the project after AMC dropped out of the proposed project in 1964, and second, the firm had to resolve legal issues that were not anticipated by neither the Icelandic government nor Alusuisse at the beginning of the negotiations. The issue concerning AMC never became an obstacle to the negotiations, but, as will be explained later, the debate regarding legal issues almost prevented that Alusuisse and the Icelandic government reached an agreement.

Objectives and Motivation Factors

In this section the objectives and motivation factors underlying the establishment of an aluminum smelter, first of the Icelandic government, and the second of Alusuisse, are examined.

Icelandic Government

Power intensive industry was introduced during the 1950s in the form of a fertilizer plant and in an attempt to further develop such industry the Icelandic government founded TIDC (The Industrial Development Committee) in 1961 (Rannsóknaráð Ríkisins, 1975). The main reason for establishing this committee was that on October 15, 1960, the government received a letter from a Swiss aluminum firm AIAG (referred to as Alusuisse, see Table 4.2) which stated an interest in building an aluminum smelter in Iceland. The original idea contained in the letter was to build a 20,000 ton aluminum smelter if an agreement could be reached about energy price, taxes, tariffs and other important issues (Briem, 1963). This letter and the fact that Norwegian specialist (see Chapter 1) had recommended aluminum industry as the best option for power intensive industry in Iceland

were the main reasons why TIDC put most of its time and effort on establishing an aluminum industry in Iceland.

In June 1961 the government received a questionnaire from Alusuisse concerning this project (see Table 4.3). This questionnaire focused on power cost and power supply as power is the most important locational cost for aluminum smelters (see Chapter 3). In addition Alusuisse was looking for answers regarding other important issues, such as, taxation, labour, depreciation rates, and location within Iceland. The answers from the government to this questionnaire were promising and the two parties met in Zürich between November 15-22, 1961. The outcomes of those discussions were that the Icelandic government was to prepare a memorandum outlining the commitments which the government was prepared to make at this stage with regards to import duties, taxes and depreciation rates, housing for labour and other social expenditures, harbour and road facilities, and other commercial problems that have come up in the discussion so far (TIDC, 1962a).

Some time during 1961-1962, the government started examining how an aluminum smelter would affect the economy and how it could rationalize the negotiations with a MNC to the Icelandic public. From the beginning, the government emphasized that an aluminum smelter would make it possible for the country to use and develop the energy resources more efficiently and speed up industrial development in doing so (TIDC, 1963a). The government argued that Iceland needed more electricity for domestic use and if an aluminum smelter was not built the government would have to build several small power plants, each of them with higher operating cost per KWh than a large plant; capital constraints would make it impossible for the government to build a large power plant without power intensive industry. So the government was standing at a crossroads concerning development of the energy resource (TIDC, 1963a; 1963b). The government and TIDC also expressed their fear that this could be one of the last chances to produce

electricity by Hydro-power plants, because later nuclear power plants would produce cheaper electricity. In addition, the government argued that if political situations in some Third World countries would stabilize, they could produce electricity cheaper than Iceland. In this regard the government cited an example of Congo that not only could provide cheaper electricity but was also a source of bauxite, and would therefore become a more favourable location than Iceland (TIDC, 1963b).

The government also claimed that the direct income of foreign capital would have a positive impact on the economy. In particular, the government stated that these positive impacts would be felt during the construction of the smelter and also later because of other income, for example taxes, sales of electricity, labour cost, and other services (TIDC, 1963a). In addition, as mentioned earlier (chapter 1), the government thought it necessary to secure a more diversified industrial base in the country beyond the fishing industry that has been the main source of export income through the century. A more diverse economy would not only be a new source of foreign income, it would also help in stabilizing the economy, which had been characterized by large fluctuations during the 1950s and 60s. Finally, an aluminum smelter would create new jobs (Hafstein, 1965; Nordal, 1994). The government also noted that power intensive industry would help in raising capital to build a new power plant. They noted that by erecting a power plant and an aluminum smelter simultaneously financial institutions would be more willing to provide capital for such a project, because the new power intensive industry would secure payments and profitability of the project. (Nordal, 1965c; 1994; Jónsson, 1965).

TABLE 4.3
QUESTIONNAIRE FROM ALUSUISSE TO THE ICELANDIC GOVERNMENT

The two main questions are:

- 1) What are the Power Costs in the South West or in the North delivered free trans mission line at the smelter?
- 2) Are there any plans as to how the funds for the power plant, transmission lines, harbour facilities etc. could be raised?

Other questions are:

- 3) What are the present rates for labour?
 - a) skilled
 - b) unskilled

What are the additional social charges?
Is there any likelihood that wages will rise further?
Does a Government pension scheme exist?
- 4) Can 250/300 workman be made available
 - a) near Reykjavík?
 - b) near Akureyri?
- 5) What is the present taxation on an Aluminium Smelter?
 - a) Capital taxes
 - b) Government revenue taxes
 - c) Local taxes
 - d) Turnover taxes (for Export or Home consumption)
 - e) Taxes on Imports
 - f) any other taxes
- 6) What is the normal rate of depreciation on
 - a) buildings
 - b) heavy electrical equipment
 - c) furnaces
 - d) transport facilities
 - e) others
- 7) Is the estimate of 10% annual cost on the Power Station a sound one?
- 8) What are the freight rates between
 - a) Rotterdam and Reykjavík
 - b) " " Akureyri

for Aluminium Ingots
Alumina (Aluminium Oxide)
Kryolith, Fluorith, Coal, Coke

Is there a regular service to Akureyri?
Should the Iceland flag be preferably used?
- 9) Are there any other industries wanted in Iceland as electricity consumer?
- 10) The length of the transmission line from Búrfell or Gullfoss to Reykjavík is said to be about 100 km. What is the length from Dettifoss to Akureyri?
- 11) What are the regulation in Iceland for founding an industrial work by a foreign company?
- 12) Could a degree of the Government avoid the menace of a strike in an Aluminium smelter, which would create very heavy damage?

(AIAG, 1961).

Alusuisse

In the early 1960s Alusuisse was looking for a location for an aluminum smelter that would fulfill several key conditions. In particular, Alusuisse wanted cheap energy prices, a stable economic and political situation, and a good location concerning transportation. In attempting to examine and compare different location options Alusuisse sent the government a questionnaire (Table 4.3). After receiving promising answers and because Iceland appeared to fulfill basic requirements regarding the establishment of a new aluminum smelter, Alusuisse was prepared to begin negotiations with the Icelandic government. Another important factor, to Iceland's advantage, was that at this time Iceland was considering whether it should join other European countries in EFTA, a decision which would connect the country better to Europe were Alusuisse's main markets are (Nordal, 1994).

Interactions between the Icelandic Government and Alusuisse

It became evident early in the negotiations between Alusuisse and the Iceland government that motivation factors and objectives were mostly complimentary and both parties were eager to meet and begin discussing matters in more detail. At the beginning of the negotiations the government did not put forward any minimum requirements. As mentioned earlier, the government's main goal was to diversify the economic base and to get adequate revenues from sales of electricity (Nordal, 1994). Alusuisse, on the other hand, did put forward, at the beginning of the negotiations, requirements that electricity price should be close to 2 mills per KWh, or at least not higher than 2.5 mills (TIDC, 1962; Nordal, 1994). This requirement and others anticipated by both parties changed as the negotiations evolved. These negotiations were organized around five main themes: location of the smelter, power supply, taxes, import duties, and legal issues. Although

each issue is examined separately it should be noted that they were clearly related and do overlap.

The Location Question within Iceland

Very early in the negotiation the question of location became critical, and at a meeting in April 1962 both parties agreed to give immediate priority to finding a location for the smelter. Both parties initially recognized that five locations should be examined: Geldinganes, Þorlákshöfn, and Straumsvík on the South coast (see Figure 5.6), and Akureyri (Gáseyri), and Húsavík on the North coast (see Figure 5.4) (TIDC, 1962b). These five locations, prior to the 1960s, had been given attention when power intensive industries were first examined in Iceland. In addition, the locations on the North coast had to be included as in 1962 there was no decision whether the Icelandic government was going to build the power plant on the North coast or the South coast. It should be noted that an aluminum smelter on the North coast implied reliance on a power plant at Dettifoss (Figure 5.1) while an aluminum smelter on the South coast implied reliance on a power plant at Búrfell.

In September 1964 Alusuisse released a feasibility report about the proposed smelter (Alusuisse, 1964b). In the report, Alusuisse compared what it considered the two best possible sites in Iceland, Straumsvík and Gáseyri (see Figure 5.1 and 5.6). It is stated in the report that these are the two best locations. However, there are no clear arguments why the other three locations were excluded. Some argue that Straumsvík had been the choice all the time and Gáseyri had only been included as it fitted well into regional development policies. Table 4.4 shows the capital cost comparison, for a 30,000 ton smelter, between Straumsvík and Gáseyri.

TABLE 4.4
CAPITAL COST COMPARISON, FOR A 30,000 TON ALUMINUM SMELTER,
BETWEEN TWO SITES IN ICELAND, STRAUMSVÍK AND GÁSEYRI

	Straumsvík	Gáseyri
<i>Alusuisse expenses</i>		
	US\$ 000.000	
Construction in 1964	21.7	24.5
including 5% price increase per year until constructions begin	26.6*	29.9*
<i>Iceland expenses</i>		
harbour	1.6	1.5
road constructions	0.02	0.1
housing for labour	0.35	4.0
Total	1.97	5.6

*including a inflation factor

Source: Adapted from Alusuisse (1964b).

Alusuisse stated in its feasibility report that it preferred to build the smelter at Straumsvík rather than Gáseyri. Indeed, Straumsvík represented the cheaper option, not only from Alusuisse perspective but also from the Icelandic government's point of view (see Table 4.4) (Alusuisse, 1964b). In fact, it is also cheaper for the Icelandic government to provide Straumsvík with energy, because it is closer to the Búrfell power plant which is Iceland's cheapest and best location for a power plant, in terms of operating costs.

The government was criticized for giving other regions, especially Akureyri (or the Eyjafjörður region; see Figure 5.4), false hopes, regarding location of the smelter. Critics argued that it was never the intention to build the smelter there or anywhere else other than the Greater Reykjavík area or Reykjanes (Teitsson 1965; Gíslason, 1966). Critics, such as Jónsson (1966), pointed out that by locating the smelter close to the largest town it would increase the difference between the Greater Reykjavík area and the hinterland. According to Jónsson (1966), it is the only place that the aluminum smelter should not be located. He argued that one of the reasons why the smelter was not located on the North

coast was because if a power plant were built at Dettifoss it would be too big for a 30,000 ton smelter. However, in 1965 Alusuisse argued that a 30,000 ton smelter was too small and that they were going to build a 60,000 ton smelter which in turn meant that a power plant at Dettifoss was no longer too big. Jónsson (1966) and Gíslason (1966) argued that at this time the government should have made the North coast a priority for the smelter and instead of erecting a power plant at Búrfell they should build a power plant at Dettifoss. Hafstein (1966b) emphasized that the government had wanted to build the smelter on the North coast but Alusuisse was not prepared to build there. The firm gave three reasons for its reluctance to locate on the North coast. First, Alusuisse noted that it would be more expensive to build on the North coast (see Table 4.4); second, they argued that pollution control equipment would be needed on the North coast but not on Reykjanes; and third, on the North coast there is a threat that drift ice could close the harbour as happened during the winter 1965-1966 (Rafnar, 1966). The government's original intention to build the smelter on the North coast reflected its concern for regional development within the country, and to prevent migration from rural areas to the Greater Reykjavík area. Indeed, once the decision was made to locate the smelter at Straumsvík, the government decided to spend part of the tax income from the smelter to create jobs in other regions in an effort to equal regional development in the country (Hafstein, 1966b).

It is Nordal (1965a) that first mentions pollution control and environmental hazards with regards to the aluminum project. According to Nordal (1965a) both Alusuisse and the Icelandic government agreed that Alusuisse should carry all responsibilities concerning pollution and environmental accidents. Also, according to Nordal (1965a), if the smelter were to be located at Straumsvík, in the lava South of Hafnarfjörður (see Figure 1.1 and 5.6), there is no threat of damaging the environment. Straumsvík is an open space location with little vegetation and winds blow towards the ocean and there is almost no threat of dangerous pollution in the ocean from an aluminum

smelter. Some environmental scientists opposed those arguments and argued that no matter where the smelter is located pollution control equipment should be required. However, at Gáseyri which is located in an agricultural area both parties had concerns about environmental pollution. According to Valdimarsson (1966), Herr Meyer, an Alusuisse Director, said in an interview that Iceland is the only country that Alusuisse has negotiated with that did not require any pollution control equipment. Apparently the reason given why the smelter will not be required to use pollution control is that there is no research which indicates the need for pollution control. If research, which is supposed to be conducted after the smelter has begun operation, shows that such equipment is necessary, Alusuisse will provide the smelter with pollution control equipment. Critics argued that then it could be too late, because the damage might already have occurred (Valdimarsson, 1966; Gislason, 1966). However, the government was satisfied with Alusuisse's responsibilities regarding pollution and environmental threats.

Another important issue regarding location choice concerned labour supply. During most of the negotiation period, 1960-1965, there was a labour shortage in Iceland. Yet it was estimated (Nordal, 1965c) that the construction of the power plant would need 300 workers in 1966, 340 workers in 1967 and 360 workers in 1968. In addition, the aluminum plant needed 320 workers in 1967 and 530 workers in 1968. According to Nordal (1965c) these figures are all maximum estimates. The total labour force needed for both projects is 660 workers in 1967 and 890 workers in 1968, including foreign technicians and specialists (Nordal, 1965c). Bearing in mind that the total labour force in Iceland in 1966 was 77,000 workers the project required over 1% of the nation's labour force (Rannsóknaráð Ríkisins 1975). In Nordal (1965c) it is estimated that between 1965-1968 some 4,240 persons would be added to the labour force as a result of natural increase. This means that the two projects would use the equivalent of around 20% of this increase and if Straumsvík would be chosen as a location some projects at the NATO-base

at Keflavík International Airport, which is located 30 km from Straumsvík, could be delayed by the government (see Figure 1.1 and 5.6) (Nordal, 1965c). In summary, it was argued by the government that it would be easier to provide a sufficient labour force if the smelter were located at Straumsvík which is located close to Iceland's largest city, Reykjavík, and that would make it easier to meet labour requirements of both projects.

Straumsvík has a further advantage over Gáseyri as a location for the new aluminum smelter in terms of future expansion. Straumsvík, as mentioned earlier, is a open space location and there are no constraints regarding further expansion of the new smelter and Alusuisse in 1965 mentioned a possible enlargement, in the future, of the smelter to 120,000 ton. In addition, an aluminum smelter potentially opens up opportunities for the further processing of aluminum. Nordal (1965c) and Hafstein (1965) argue that it is important for industrial development to have access to materials and an aluminum smelter would provide cheaper aluminum for Icelandic firms than the world market price, at least the transportation cost and such industry could therefore be competitive. According to TIDC (1963a) Alusuisse stated that it would be ready to help with the technical side of such projects which might include manufacturing materials used in the construction industry and/or cans for fishing products. Such projects would create additional jobs in the future (Nordal, 1965c; TIDC, 1963a; Hafstein, 1965) and because it is necessary to build a new harbour for an aluminum smelter there would be many advantages of locating such new industries in close proximity (in the future) to the smelter. In 1964 the Icelandic government agreed to Alusuisse's ideas that the government would provide the smelter with harbour facilities. In the Master Agreement it is stated that the Municipality of Hafnarfjörður (Straumsvík is located in Hafnarfjörður Municipality) will build the harbour and provide the smelter with a site. In return, ISAL agreed to pay back the cost of the harbour, in the form of harbour fees charged over a 25 year period, with 6 1/2% interest (Icelandic Government and Alusuisse, 1966; Hafstein, 1966b).

Power Supply

During the two-year period of 1960-1962 the Icelandic government hired an American engineering company (Harza Engineering) to look at possible Hydro-electric sites. The two locations that were the most economically efficient were Búrfell, on the South coast, and Dettifoss on the North Eastern corner of the country (see Figure 1.1). It should be repeated in this regard that, an aluminum smelter on the North coast implied reliance on a power plant at Dettifoss, and an aluminum smelter on the South coast implied reliance on a power plant at Búrfell.

Harza Engineering provided TIDC with reports, in 1962, that Búrfell is the cheapest option for a new power plant and probably the best. In those reports it is argued that the best size is a 105 MW plant that would be enlarged in three steps to a 210 MW plant. To begin with a 30,000 ton aluminum smelter would use 55 MW and when the smelter doubled in size, Iceland could enlarge the power plant simultaneously. Harza Engineering also recommended that the price of power should be 2.8-2.9 mills per KWh or at least not lower than 2.5 mills per KWh, otherwise the government would not be able to justify the project (TIDC, 1963a). It should be noted that early in the negotiations it became evident that the size of the proposed aluminum smelter would affect the construction of a power plant. Originally, in 1960, Alusuisse argued that the proposed smelter would be 20,000 ton but in 1961 Alusuisse argued that a 27,000 ton smelter would be a better size. Subsequently, in 1962 TIDC asked Alusuisse if it would be possible to enlarge the proposed aluminum smelter so it would use more of Búrfell's power production, and in 1963 Alusuisse argued that the optimum size had risen to 30,000 ton. A 30,000 ton smelter uses close to 55 MW. Later, or in 1965, Alusuisse still wanted to build a larger smelter or a 60,000 ton.

TIDC (1962b) stated that the biggest problem facing the Dettifoss location was that there is no other power plant on the North coast so it would be impossible to provide

electricity to an aluminum smelter, located on the North coast, if the Dettifoss plant would fail for some reason over certain period of time. Critics argued that this was only used as an excuse not to build the power plant on the North coast because the same problem existed on the South coast as no existing power plant there was big enough to provide electricity to an aluminum smelter. The National Power Company (Landsvirkjun) would have to build an alternate gas-turbine power plant close to the site wherever the smelter will be located. In the end, the fact that Búrfell was a cheaper power source and Straumsvík a cheaper site to build a smelter convinced Alusuisse and the Icelandic government to go with the Straumsvík-Búrfell option.

The location of the power plant was not the only concern in the negotiations. Price of power and the financing of the power plant were also important issues. As mentioned earlier, financial constraints prevented the government from constructing a large power plant without power intensive industry. However, the World Bank stated that if the Icelandic government makes a long term agreement of electrical sales to the proposed aluminum smelter, it was ready to provide the capital as long as electricity price to the smelter would be acceptable. Alusuisse had emphasized both in November 1961 and in April 1962 that the electricity price should not be higher than 2.0 mills per KWh, but according to Harza Engineering, in 1962, it was estimated that the price had to be 2.8-2.9 mills per KWh to make construction of a power plant economically possible (TIDC, 1962b).

At a meeting in Zürich in September 1963 Alusuisse confirmed that, if an agreement concerning electricity price and other unsolved matters could be reached, the firm would be prepared to build a 30,000 ton aluminum smelter as soon as 1967-1968. The smelter would not double in size for at least 5-8 years. The smelter could be smaller to begin with if that would suit the government better, regarding construction of the power plant. Alusuisse also informed the Icelandic negotiating committee that they could

not in any way provide Iceland with capital to build the power plant. The government had asked for such financing earlier and had proposed they could pay back the loan through sales of electricity (TIDC, 1963a). Because of these financial problems the government had to examine other alternatives to finance the power plant and this search led the government to contact the World Bank.

During the first half of 1964, TIDC and the Icelandic government worked on negotiating with the World Bank in an effort to raise capital for the power plant. The World Bank pointed out that further negotiation between Iceland and Alusuisse should not continue until they had finished their work regarding financing the power project (Nordal, 1964). In October, the World Bank finished their report about financing the Búrfell power plant. In a letter to Nordal (director of the Central Bank of Iceland and Chairman of TIDC) from the World Bank it is stated;

“We have just completed our review of the Búrfell power project,..... We feel that the project is large for an economy of the size of the Icelandic and would require a heavy commitment of resources during the next five years while the benefits to the economy would be relatively modest. At the same time the project appears to be within the ability of Iceland to undertake and we have taken note of the judgment you reached that no other major investment in the public sector appeared to offer a more attractive alternative and to contribute more to the diversification of the economy. We have therefore concluded that the project would be economically justified if certain minimum conditions are met.” (Cope, 1964, pp. 1).

Cope (1964) states that the World Bank is ready to finance the Búrfell power project if ‘certain minimum’ conditions are met. At that time, these minimum conditions were, electricity prices not lower than 2.5 mills per KWh and taxes at least 33% on net profits. In this regard a net profit tax of 33% was equivalent to 1.2 mills per KWh according to Icelandic taxation laws so that the mix can be translated into a total cost of 3.7 mills per KWh (Cope, 1964).

“Considering that 2.5 U.S. mills per KWh would only cover the cost of supplying the power to Alusuisse, we feel that a rate below this level would not justify the capital expenditures required for Búrfell. Similarly, we feel that the 33% rate at which the net profits of the smelter are taxable represents a reasonable level of taxation and that any concessions granted to the smelter under this heading would represent a subsidy which would not be economically justified and which would further reduce the already relatively modest foreign exchange benefit to the economy from the project. We therefore feel that payments by the smelter for power and taxes combined should not be below the equivalent of 3.7 U.S. mills per KWh if the project is to be economically justified. We should also like to point out that, on the basis of international comparisons, both a rate of 2.5 U.S. mills per KWh and a tax rate of 33% on net profits would be very favorable to the smelter.” (Cope, 1964, pp. 1-2).

After it became evident that the price of electricity would not be negotiated separately from taxes, Alusuisse required, in 1964, that the price of power and taxes should be no more than 3.2 mills per KWh, otherwise the project would not be economically feasible (Alusuisse, 1964b). These different views, World Bank’s 3.7 mills and Alusuisse’s 3.2 mills, were solved on a meeting in Zürich in December 1964. In the final agreement after it was decided that taxation of the smelter would be a fixed amount on each produced ton of metal, all participating parties agreed that the proposed smelter would pay 3.0 mills per KWh the first 6 years of operation. This price would after these 6 years be lowered to 2.5 mills per KWh (see appendix 1).

At a meeting in Washington in March 1965 Alusuisse argued that a 30,000 ton smelter was no longer economically profitable. Instead they wanted to build a 60,000 ton smelter which they argued is a more feasible size and the firm wanted to reserve the right to enlarge that smelter. This meant that the Icelandic government would have to build the Búrfell power plant faster than originally intended. The World Bank agreed to finance the project faster if Alusuisse would sign an agreement that would guarantee purchase of electricity for a 60,000 ton smelter. At the meeting all parties agreed that Alusuisse would first build a 30,000 ton smelter which would be enlarged to 45,000 ton after 3 years and

then to 60,000 ton after another 3 years. The agreement should be open to the possibility of enlarging the smelter faster than this (Nordal, et al., 1965).

In the final agreement Alusuisse agreed to pay a higher electricity price during the first 6 years of operation, instead the smelter would pay lower taxes. Alusuisse would pay 3 mills per KWh the first 6 years and after that the price would drop to 2.5 mills per KWh and taxes would be raised at the same time (Icelandic Government and Alusuisse, 1966; Hafstein, 1966b). It was agreed that the power agreement should be revised after 15 years. According to the Agreement electricity price can also change if, for example, there would be a great price increase on aluminum at the world market, and/or if prices changed elsewhere in places where Alusuisse owns aluminum smelters, for example, in Norway or Tennessee.

Taxation

At the beginning of the negotiation the Icelandic negotiators emphasized that the new smelter should be taxed as other Icelandic firms. However, the government would make exceptions in the case of double taxation, that is the government agreed to change its laws when taxing the same revenues as the home country of Alusuisse, Switzerland. The government also emphasized that the proposed smelter would be provided with the best possible depreciation options allowed according to Icelandic laws (TIDC, 1962a).

At a meeting in Reykjavík in November 1963 the two parties agreed that the price of electricity would be 2.5 mills per KWh and because of this higher electricity price, than the original 2.0 mills anticipated by Alusuisse, that taxes should be levied in accordance with a simple formula involving fixed amount per ton of metal sold. An idea for this formula was also put forward:

$$2000((A-B)t + 0.8c)$$

where:

A = world market price in U.S. cents per lbs. of virgin metal in pig form.

B = estimated gross cost price in U.S. cents per lbs. of virgin metal in pig form.

t = normal rate of total taxes in Iceland under existing tax laws expressed as a proportion of gross profits (A-B).

c = the difference between the agreed power price in U.S. cents per KWh and the base cost of 0.2 cents per KWh.

This formula was to apply as long as 'A' does not increase or decrease by more than an amount to be agreed upon (TIDC, 1963a).

In November 1965 the parties were still debating taxes and at a meeting in Zürich both parties agreed upon a tax formula (see Table 4.5). According to the Master Agreement ISAL pays US\$ 12.5 on each produced ton the first six years of operation, during that time ISAL would finish depreciating the smelter, then US\$ 20 for the next nine years. After these 15 years taxes on each produced ton of metal will rise to US\$ 35 (Icelandic Government and Alusuisse, 1966; Hafstein, 1966b). They also agreed, in 1965, on a maximum and minimum tax. In particular, they agreed that a minimum tax on a 60,000 ton smelter should never be lower than US\$ 200,000 annually, and maximum tax should never be higher than 50% of net profits. In addition, both parties agreed that the agreement for taxes should be revised after certain period of time, first after 22 years, and thereafter every 10 years (Nordal, et al. 1965).

One of the main reasons why the government focused on fixed taxes was because Alusuisse owns all three aluminum production stages, Alusuisse sells the alumina to ISAL and the firm buys the primary aluminum from ISAL. The firm potentially has an opportunity to decide where profits should be shown, for tax purposes. By bargaining for fixed taxes the government has guaranteed a certain income through taxation (Jónsson,

1965). Though US\$ 20 seems low for each produced ton it will rise very fast if the price of primary aluminum rises, for example, if world market aluminum prices go up 25% taxes will rise 125%, from US\$ 20 to US\$ 45 (Hafstein, 1966b). For support of this taxation method the government contacted specialists in many countries to ask if this new method of taxation is appropriate. All these specialists agree that this tax formula is in the favour of the government (Grøndal, 1966). In Norway, where they do not use a fixed tax, there are a few aluminum smelters and the highest tax the Norwegian government has achieved is US\$ 18.5 per produced ton (Hafstein, 1966b).

TABLE 4.5 TAX FORMULA

Tax Formula

1) Base Minimum Tax. For the whole 25 year contract period a base minimum tax of \$20 per ton of Aluminum delivered will be payable. If the world market price changes from 24.5 cents per pound, this base minimum tax will change proportionately upwards or downwards.

2) Annual Accounts. ISAL will submit to the Government annual accounts prepared by independent auditors of their own choosing. The Government will have the right to appoint at its own expense an international firm of chartered accountants to check the accounts and carry out such examinations of the books of ISAL as they deem necessary.

3) Consolidated Tax. A consolidated tax of 33 1/3% of net profits of ISAL will be calculated in U.S. dollars for every calendar year of operation. This will be operative as follows:

A. During first 15 years of operation.

If the consolidated tax during any year is below the base minimum tax actually levied, a tax credit will accrue in favor of ISAL. If, conversely, the consolidated tax is higher than the base minimum tax, then ISAL will assume a tax liability equal to the difference. The net tax credit or liability of ISAL at the end of the 15 year period will be carried over to the following 10 years as follows:

a) If there is a tax credit, this will be deductible from consolidated tax in equal annual amounts over this period.

b) If there is a tax liability, this will become payable in equal installments over the period in addition to normal taxation according to B. below.

5% interest p.a. will accrue on outstanding tax credits or liabilities. Tax balances will be expressed in U.S. dollars.

B. During last 10 years the consolidated tax will be levied every year plus or minus the tax carry-over, including interest, from the first 15 year period, always subject to the minimum of \$20 per ton of Aluminum delivered.

C. If there is a tax credit in favor of ISAL at the end of the 25 years, this will be set against taxation in the subsequent 10 year period.

(Nordal, 1965b).

Import Duties

It is stated in a TIDC (1962b) report that import duties are much higher in Iceland than in most other countries. Also, the report noted that there are import duties, in Iceland, on all kinds of things used in industries, such as machinery and materials, which have no import duties in other countries. This makes the country a less attractive location for MNCs. In an effort to continue negotiations in 1962, TIDC emphasized that the government would promise Alusuisse that regulations and laws regarding import duties for the aluminum industry, specifically concerning machinery and raw materials, would change. This is common in countries that are competing with Iceland as a location options for the aluminum industry, for example Norway and Ghana. Another possibility regarding imports was to establish a 'Duty Free Zone'. The aluminum plant would then be build within this zone. Whether the new smelter would be built in a duty free zone or not the government promised, in 1962, that import duties would not be an obstacle for the new smelter (TIDC, 1962a; 1962b).

Legal Issues

At a meeting in April 1962, the 'safety' of the investment was first mentioned. The term safety refers to the possibility that foreign investment could be overtaken, at any time, by the Icelandic government. The Icelandic government had never negotiated with a foreign company before so the government had no former experience in such matter (TIDC, 1962b; Nordal, 1994). Another legal issue that was not anticipated by either party at the beginning of the negotiation, was that ISAL is an Icelandic firm but will have exemptions from Icelandic laws. It will be 100% foreign owned (Alusuisse), and it will not be under Icelandic jurisdiction. If disagreements arise between the government and ISAL an international court of arbitration will have the final verdict. This judicatory is though supposed to use Icelandic laws (Icelandic Government and Alusuisse, 1966; Jósefsson,

1966). This debate surfaced rather late in the negotiations. Originally it started because Alusuisse's lawyers argued that Iceland did not have internationally recognized laws, concerning foreign investment, so that it would be impossible to solve disagreements only with regard to Icelandic laws (Icelandic Government and Alusuisse, 1966; Nordal, 1994). In October 1965 this issue almost became an irresolvable conflict. Alusuisse argued that the court of arbitration should not use only Icelandic laws. The government then gave Alusuisse an ultimatum, only Icelandic laws or the government would drop the project. After one day of consideration Alusuisse agreed that an international court of arbitration would only use Icelandic laws and the negotiation could continue (Hafstein, 1966b). This way of solving problems in the world, that is using an international court of arbitration, is used more and more. Conflicts between nations are most often solved in another country and Iceland has made such an agreement before with other countries. Iceland has also made such an agreement with foreign companies, for example a Soviet Union oil company (Hafstein, 1966b).

Though the Icelandic negotiating committee could force Alusuisse to agree upon using Icelandic laws, this issue was criticized fiercely in the Icelandic Parliament. Jósefsson (1966), among other members of the Parliament, argued that ISAL is an Icelandic firm, and disagreements should be solved in Icelandic courts. The Icelandic negotiators argued that this is the first time a MNC enters Iceland and Icelandic courts do not have any experience dealing with such matters so it is best that an international court of arbitration will solve these matters but in doing so use Icelandic laws. Critics, however, did not agree and argued that it is strange that people (judges) which do not understand the language nor know the laws, are supposed to interpret both (Jósefsson, 1966; Gíslason, 1966).

“If the government does not trust Icelandic judges why don't they settle all cases abroad. Even Herr Meyer (Alusuisse Director) said in interviews with the Icelandic press that ‘this was the first time that Alusuisse has negotiated something like this’.” (Jósefsson, 1966, pp. 1400).

This way of settling disagreements, between Alusuisse and Iceland, was first used when construction at the harbour site began and it became evident that the construction cost would be higher than estimated because of inefficient research. ISAL was then judged to pay the contractor compensation for the extra cost (Halldórsson, 1994).

Duration of the Master Agreement

Another conflict, concerning the duration of the Master Agreement, arose late in the negotiations. Alusuisse emphasized that the Agreement should have the duration of 50 years (Alusuisse, 1964c). The Icelandic government, on the other hand, emphasized that the agreement should only have the duration of 25 years and that both parties would be able to extend that time for another 10 years which means that the scope of the agreement would be 45 years (Olgeirsson, 1966; Jónsson, 1965). At the end Alusuisse agreed to the terms of the Icelandic government (Icelandic government and Alusuisse, 1966).

Critics (Olgeirsson, 1966; Jósefsson, 1966; Jónsson, 1966; Valdimarsson, 1966; Kjartansson, 1965; Arnalds, 1966) argued that the duration of the Master Agreement was far too long, and if the government was going to tie the nation for 45 years the least it could do is to have a national referendum about the Master Agreement.

Revising the Bargain

As can be seen from the above discussion Contreras and Gregersen's (1975) framework (Figure 2.3) has been adjusted to fit the purpose of this thesis. At the beginning of the chapter it was argued that all 'conflicts' became negotiable as the smelter was built. However, the framework does not explain why Iceland was chosen as a location nor how a location within the country was chosen. Also, in practice, the idea of 'minimum requirements' was more relevant, or at least specified, in the case of Alusuisse than the

Icelandic government. This implies that the outcome of the bargaining process does not rely only on minimum requirements as the framework indicates. In addition, it should be noted that a HC is not the same as the HCG. The HCG is usually the negotiator for the HC but the HCG does not represent all interest groups and there are also opposing views, for example, in the Parliament and in the this case the Icelandic government got the Parliament's approval of the Master Agreement with the margin of one vote.

The bargaining process, outlined in this chapter, created location conditions that made Iceland a desirable location for power intensive industry, in particular the aluminum industry. Kirchner (1988) describes this well when discussing the evolution of the aluminum industry in Western Europe:

"The Iceland story is the simplest. The country had considerable hydropower capacity, and in 1966 it offered Alusuisse low electricity rates for fifteen years to encourage the company to build a smelter there. Alusuisse built a relatively small smelter... and Alusuisse took all the production from the smelter to serve its customers. When the fifteen-year initial power contract expired in the early 1980s, the Icelandic government sought to raise its electricity price to the smelter significantly.... Alusuisse resisted the increase and threatened to close the smelter, setting off considerable political controversy. A new compromise rate was finally negotiated,..." (Kirchner, 1988, pp. 72).

As Kirchner (1988) indicates the Master Agreement was rendered obsolete particularly in regards to the power contract. It set off a considerable debate during the late 1970s but especially at the beginning of the 1980s. Due to changes in the global energy environment (such as the two oil shocks) the power agreement had to be revised sooner than anticipated and because of these changes the electricity price never did go below 3.0 mills per KWh. Changes in the world energy environment affected the agreement and instead of dropping, the price of electricity kept rising (Nordal, 1994). In 1975, when the power agreement was first revised, the price of electricity had already tripled. The power agreement was again under pressure in 1980, but was not revised until 1984 (Halldórsson,

1994). During the first half of the 1980s the Master Agreement was revised as a whole. The most important change that was made was to tie together power price and aluminum price. Nordal (1994) argues that Iceland was a pioneer in doing this and today this is common in most Master Agreements between governments and aluminum MNCs. Halldórsson (1994) argues that if the debate during the late 1970s and early 1980s had not come up, Alusuisse would have asked for an enlargement of the ISAL smelter in 1982-1983. It should be noted that Alusuisse did not ask for an enlargement in 1983 when a 'more friendly government' took power and negotiated a new power agreement. The ISAL smelter, however, has enlarged during the last 25 years. The smelter was originally built as a 30.000 ton smelter then enlarged first to 44,000 ton in 1970, to 77,000 ton in 1972, to 88,000 ton in 1980 (Iðnaðarráðneytið, 1991a), and finally to 96,000 ton in 1993 (Pálsson, 1993).

Though location conditions that Alusuisse negotiated seemed favourable, another problem, apart from the power contract, surfaced shortly after the Master Agreement was approved. The problem was the basis of the firm's relation with labour unions. There were 10 unions involved. They all fought for their own rights. They realized quickly that the smelter would have to operate 24 hours a day, every day of the year, and that the smelter could not stop for any reason because it would be so expensive. Therefore the unions realized that they would have more bargaining power because the smelter could not afford a strike by one union and by threatening a strike they could ask for higher contract improvements than the domestic labour force generally received. After negotiations began between ISAL and labour unions, ISAL argued early that it would be difficult to negotiate with 10 different unions and that it would be in the best interest, especially for the smelter, that the unions in question would agree on one negotiation party on their behalf. The unions disagreed and argued that they would lose most of their bargaining power if they agreed to ISAL's ideas. This situation became a big debate, but after one year of

negotiations, between 1968-1969, the unions agreed to create one negotiation party for all the unions (ISAL, 1979; Halldórsson, 1994).

Though some problems surfaced after the Master Agreement was signed, it seems that most people agree that the agreement reached with Alusuisse in 1966 was a good agreement for the nation.

CHAPTER V

THE BARGAINING PROCESS BETWEEN THE ICELANDIC GOVERNMENT AND THE ATLANTAL-GROUP

Introduction

This chapter examines the negotiations between the Icelandic government and the ATLANTAL-group, a joint venture of three (originally four) aluminum multinational corporations (MNCs), between 1987-1991. These negotiations are again analyzed within the frameworks of the bargaining process outlined in chapter 2, in particular the model developed by Contreras and Gregersen (1975).

Before examining the actual bargaining process the main outcome of the negotiations is outlined, including a chronology of events (Table 5.1). Then the context within which the negotiations occurred is briefly introduced and after that discussion, the motivation factors for both the ATLANTAL-group and the Icelandic government, and situations where there is 'conflict' and/or 'no conflict' in motivation, are identified. Though the plant has not yet been established all 'conflicts', such as location, taxes, and price of power, situations were 'negotiable' (see Figure 2.3). Conditions in the rest of the world created an environment which made it impossible for both parties, especially the ATLANTAL-group, to sign a Master Agreement, though both parties had reached a 'negotiable situation'. In conclusion, there is a discussion examining the delay of the ATLANTAL project and whether the smelter will ever be erected.

The ATLANTAL-group and the Icelandic government were not the only participating parties in the negotiations. Local governments in Iceland affected the negotiations, especially regarding the location of the proposed smelter, and the debate

over regional policies and environmental issues also affected the negotiations. In addition, the ATLANTAL-group changed during the negotiation period. The so-called ATLANTAL-group was originally established in 1987, with the purpose of building an aluminum smelter in Iceland, and consisted of four aluminum MNCs, Alusuisse (see Chapter 4), Gränges AB (from Sweden), Hoogovens Aluminium BV (from Holland) and Austria Metall (from Austria). During 1989 two firms dropped out (Alusuisse and Austria Metall) and in 1990 one new aluminum MNC joined the group (Alumax) (see Table 5.1 and 5.2). Gränges and Hoogovens emphasized that the project would have to be a joint venture as they were not capable of building the proposed smelter alone. The advantages for aluminum MNCs engaging in joint ventures are many, for example to spread the risk and make financing of projects easier (see Chapter 3).

The Bargain: Key Elements

Though the negotiations were not completed with the signing of a Master Agreement and the smelter has not been built, the two parties reached a preliminary agreement which includes agreement on most important issues. This section will list the main outcome of the preliminary agreement reached through negotiations between the ATLANTAL-group and the Icelandic government between 1987-1991 (see Table 5.1 for chronology of events).

According to the preliminary agreement, the proposed smelter is supposed to have 210,000 ton annual production capacity and will be located at Keilisnes in the Reykjanes region (see Figure 5.1 and 5.6) and is to be provided with energy from the Blanda power plant (Figure 5.1) and other, yet to be constructed, power plants. In the preliminary agreement the price of power is calculated as a certain percentage of the price of aluminum with a certain minimum and maximum charge. The power agreement is

supposed to be for 25 years with the smelter having the option to extend the contract period by two additional five year periods.

According to the preliminary agreement, the proposed smelter will be taxed pursuant to Icelandic law although there will be some exceptions because of its size and specialization. Disputes, between the parties, are supposed to be settled by Icelandic courts pursuing Icelandic laws.

The proposed smelter is planned to operate as a tolling smelter and therefore does not have to pay import duties.

Duration of the Master Agreement will probably be the same as for the power agreement.

This agreement was reached after intense negotiations between the Icelandic government and the ATLANTAL-group between 1987-1991. Table 5.1 shows the chronology of events during this negotiation period. Before describing the interactions between the Icelandic government and the ATLANTAL-group the next section discusses the context within which the negotiations occurred.

Context

This section briefly examines the Iceland's and the corporate context for the negotiations of the proposed smelter. In particular, it identifies debates in Iceland in the mid-1980s regarding foreign ownership, especially regarding the aluminum industry, and other issues, such as environmental issues and development of the Hydro-electrical resource, that provided influential background to the negotiations between the ATLANTAL-group and the Icelandic government. In addition, the ATLANTAL-group context for the negotiations is introduced.

Iceland

During 1969-1987 the debate within Iceland regarding power intensive industry, in particular the aluminum industry, changed. After Alusuisse erected the ISAL aluminum smelter in 1969 the opposition to foreign investment and the fright over foreign control, in Iceland, declined. As has been described before, there was a fierce debate regarding foreign ownership and foreign control in Iceland prior and during the negotiations with Alusuisse 1961-1966 (Chapter 4). Though these issues were still relevant, other issues notably regional development and environmental issues had become more important in relations with the future development of the energy resource in Iceland.

TABLE 5.1
CRONOLOGY OF EVENTS DURING THE NEGOTIATIONS BETWEEN THE
ICELANDIC GOVERNMENT AND THE ATLANTAL-GROUP 1987-1994

<u>Date or Period</u>	<u>Comments:</u>
During 1987:	Formal discussions begin between the Icelandic government and the ATLANTAL-group.
June 1988:	Parties reach a preliminary agreement to enlarge the ISAL smelter in Straumsvik.
In 1989:	It became evident that there were different views within the ATLANTAL-group and Alusuisse dropped out of the group because the other firms wanted to build a new smelter, not enlarge ISAL.
September 1989:	Austria Metall dropped out of the group.
February 1990:	Alumax joins the group (and soon becomes the leader).
March 1990:	Both parties sign a declaration of intent. Negotiation shall finish within a year and operation of a new smelter shall start in 1994.
June 1990:	Both party's emphasis is on the location within Iceland.
October 1990:	Keilisnes is chosen as a location for the new smelter. Both parties agree that the new smelter would be taxed pursuant to Icelandic laws and that electricity price would be calculated as a percentage of aluminum price. Also that the smelter would be a tolling smelter and does therefore not have to pay import duties.
November 1990:	Negotiations mostly finished and it was agreed that a Master Agreement should be signed no later than February 1991.
February 1991:	Negotiations have delayed because of the Gulf War and because aluminum prices have fallen rapidly.
August 1991:	Negotiation progress slowly because the ATLANTAL companies can't raise capital to finance the project. Signing of the Master Agreement postponed until March 1992.
November 1991:	Negotiation finished, but it came evident that the project had to be postponed longer because of the capital constraints.
1994:	Both parties still willing to pursue with the project but conditions in rest of the world make the project economically impossible.

Also, between 1969 and 1987 a few small power intensive companies were established in Iceland, notably a Ferro silicon smelter at Grundartanga and a diatomite processing factory at Mývatn (see Figure 5.1). These new plants were jointly owned by the Icelandic government and MNCs and were located outside the Greater Reykjavík area. However, during this period aluminum production was commonly considered by the government as the optimum choice for future development of power intensive industry in the country.

During 1987 the possibility of a new aluminum smelter became real and the debate about power intensive industry and power plants surfaced again in Iceland (Iðnaðarráðneytið, 1988; Morgunblaðið, 1987). At a conference about power intensive industry in November 1987, Zoega (1987) argued that the government's policy should stay unchanged and that Icelanders should own and control resources located in the country and allow foreigners to own power intensive companies. By following this policy the nation could avoid the risk of operating such companies. Instead, Icelandic industrial companies should focus on semi-finished or finished production, for example, value added aluminum industry. The government believed that there were many opportunities for value added production utilizing aluminum although in 1987 Icelandic firms only used 200 tons, of the 85,000 tons that were produced at ISAL, principally in the production of pots and pans.

Nordal (1987) argued that the only possibility in attracting power intensive MNCs is to provide them with energy at a competitive price. He argued that Canada and Venezuela are selling their energy cheaper than the cost of production in an effort to attract power intensive industry, but the cost of energy production in Iceland is still lower than the price they are offering.

Apart from the price of power, two other issues created special attention in discussions concerning the attraction of aluminum MNCs to Iceland, first, environmental issues, and second, the debate about location within Iceland.

Until 1980, when standards for the aluminum smelter were first set, ISAL did not use any kind of emission control. After that the smelter was allowed to release a maximum of 1.5 kg of fluorides per ton of primary aluminum produced. During the 1980s the regulatory situation in Iceland was similar to that of the other Nordic countries in that emission standards were not fixed or prescribed. Each case was evaluated separately and an optimal solution sought according to 'best practicable means'. Several observers argued, however, that a new aluminum smelter would probably at least have to meet the United States New Source Performance Standard which would mean that the new smelter would be allowed to release no more than 1 kg of fluorides per ton of aluminum produced (96-97% removal) (Guttormsson, 1987; Einarsdóttir, 1988; Iðnaðarráðneytið, 1986). Einarsdóttir (1988) argues that stricter standards are needed for pollution, particularly with respect to ground water pollution and sulfur dioxide pollution. According to Einarsdóttir (1988) the threat of environmental pollution and damage is far greater than the benefits from a new aluminum smelter. She also argues that pollution and environmental damages can affect another growing industry, the tourism industry. Valgeirsson (1990) notes that since Iceland has been trying to attract tourists to the country by advertising that the country is one of the cleanest in the world it is strange that the government is also attracting aluminum firms to locate in the country which do not have to install the best pollution equipment available for such an industry. Valgeirsson (1990) continues and points out that the country should rather focus on power intensive industry that does not pollute as much as an aluminum smelter, for example, hydrogen production. The government argued that the proposed smelter would probably have to install the best pollution equipment available (Nordal, 1994). However, the government indicated that there could be some difference between locations and therefore a possibility that there will be different requirements for different locations.

During the late 1970s and the 1980s there was an increasing emphasis by the Icelandic government on regional development. As a result, it has been argued, that the government's goal for the location of the new proposed aluminum smelter and the future development of the power resources would compliment regional development policies (Morgunblaðið, 1988). During the 1980s regional development policies focused on creating jobs in rural areas, in effect any where else other than close to the Greater Reykjavík area. However, supporters of the aluminum industry in Iceland argued that the government could not require a certain location within the country because the aluminum industry is so competitive and the MNC must be able to locate at the cheapest possible option or where it wants to locate (Morgunblaðið, 1989).

“Political preferences cannot determine the location, of the proposed smelter, within Iceland. MNCs that are prepared to provide capital in business activity in Iceland will, of course, want to choose the location that is the most feasible from an economical viewpoint.” (Sigurðsson, 1989, pp. 16).

There were other important issues. The experience and the learning process of the negotiations with Alusuisse (see Chapter 4) and the experience of ISAL, made these more recent negotiations easier for the government. Issues such as, special tax agreements, resolution to conflicts and import duties no longer needed extensive deliberation. The ATLANTAL project was also compared to the ISAL project to show that the government could handle such a project. This comparison shows that the investment of the ATLANTAL project, as a ratio to total investment in Iceland is 31% which is only 4% higher than the ratio for the ISAL project and that total labour force needed for the ATLANTAL project, as a ratio of total labour force in Iceland is only 1.4% which is almost 1% less than the same ratio for the ISAL project. It should be mentioned that both figures are peak estimates for the project.

The government had also been focusing on changing the business environment within the country to make it more accessible for foreign direct investment. Entry barriers such as the complicated tax system and restrictions on foreign exchange transactions were reduced or eliminated during the 1980s (Sigurðsson, 1994). This has made the country more comparable to other Western countries. As part of this strategy, the government specifically sought to make the country a more attractive destination for aluminum MNCs. Studies by Staðarvalsnefnd um iðnrekstur (1983); (1986); Guðmundsson and Bóasson (1988); Reyðarfjörður district (1992); Iðnaðarráðneytið (1990); (1991a); Industrial Development Corporation of Eyjafjörður (1990) also prepared the government better to engage in negotiations with big MNCs.

As in the negotiations with Alusuisse, the optimum goal in attracting power intensive industries to Iceland for the Icelandic government is to get adequate revenues for the sales of electricity. However, during the late 1980s and early 1990s another option to utilize the energy resource, other than power intensive industry, considered by the government was, and still is, to export electricity directly to Europe. Technical innovations during the last decades have made this strategy possible and some observers noted that an advantages to be gained by using the energy resource this way is that no polluting industries would have to be built (Gestsson, 1991). This idea has been referred to as 'LSD' ('Landsins Stærsti Draumur', e. (the nation's) Largest Size Dream). The idea was, and has been, widely criticized, however, on the basis of the argument that by exporting all the energy there would be no (long term) job creation in the country, only short term jobs while the construction of power plants is ongoing. Another point raised by the critics of direct exports of electricity to Europe is that it must be in such huge quantity that the nation could hardly finance such a mass construction of power plants simultaneously (Ólafsson, 1993). At the present time, the export option is still in the research stage and

the country's focus to utilize the energy resource is on attracting power intensive MNCs to locate in Iceland.

The ATLANTAL-Group

ISAL was originally built as a 30,000 ton smelter in 1969. Since then its production capacity has been increased a few times without any major construction of new facilities (see chapter 4). However, in 1987 the ATLANTAL-group originally intended to enlarge the ISAL smelter in Straumsvík. The idea about enlarging the ISAL smelter had been discussed earlier and Halldórsson (1994) argues that Alusuisse would have enlarged the smelter between 1982-1983 if the controversy within Iceland, regarding the firm's electricity price, would not have surfaced in the late 1970s and early 1980s (see Chapter 4). In 1987, this idea to enlarge the smelter surfaced again, this time among Alusuisse and three other aluminum MNCs, Gränges, Hoogovens, and Austria Metall whose plan was to establish a joint venture smelter located beside ISAL which could use the same facilities, notably the harbour.

At this time aluminum prices were rising fast (see Figure 3.2) and aluminum firms were expanding and increasing their production. However, in 1989 when it became evident that Gränges and Hoogovens did not want to enlarge ISAL but rather build a new smelter, Alusuisse dropped out of the project. There were two main related reasons why Alusuisse did not want to participate in building a new smelter. First, during the 1980s, Alusuisse was reducing its production of primary aluminum and was closing smelters in Austria, Switzerland, Italy, and Germany; and second, the firm was diversifying into other industries (see Table 4.2) (Halldórsson, 1994). Due to financial constraints Austria Metall also dropped out of the group in 1989.

The decisions of Alusuisse and Austria Metall did not affect the other two firms which started looking for a new partner(s). The negotiations between 1987-1989 were so

promising that the firms were convinced that Iceland was, at this time, the optimum location option for a new aluminum smelter and after Alumax joined the group in 1990, negotiations with the Icelandic government began again. The ATLANTAL-group's announced intention at that time, if the group could reach an agreement with the Icelandic government, was to build a new 210.000 ton aluminum smelter.

Objectives and Motivation Factors

As the section above, this section is also divided into two. The first part examines objectives and motivation factors for the Icelandic government and the second part for the ATLANTAL-group.

Icelandic government

The government objectives and motivation factors were, in general, the same as they were 25 years previously. In general terms, the most important issue was to strengthen the country's economic structure. Other important objectives were (and are); the creation of new jobs, it was estimated that during the construction phase (1991-1994) 5,000 workers would be needed (Alþingi, 1991a); to increase foreign income; to further develop the water resource (power production); and to promote economic development (Sigurðsson, 1994; Nordal, 1994). Sigurðsson (1994) argues that an important benefit arising from foreign investment is that capital will immediately flow to the host country (HC) and into its economy and, according to him, such capital does not increase the host economy's foreign debt, which might be true in the short run.

"The ultimate goal is very simple, to increase the nation's income foundations" (Sigurðsson, 1994).

Prior to the negotiations, the importance of regional development in connection to power intensive industry had been emphasized. However, the government did not set forward any requirements with regard to the location of the smelter within Iceland when negotiations with the ATLANTAL-group began. The primary emphasis was to attract an aluminum smelter to Iceland, so the location within Iceland was a secondary albeit important consideration. The government's minimum goal is that any new power intensive industry should at least pay for the marginal cost of the power production. Power sales and taxes are the main sources of income from aluminum smelters in Iceland. Therefore the government wanted to reach an agreement which would provide the economy with certain income through power sales and taxation.

ATLANTAL-group

Cheap energy has been the main attraction for MNCs, including the ATLANTAL-group, to locate in Iceland. Other secondary important factors to the ATLANTAL-group were political and economic stability while in subsequent negotiations Iceland's situation in relation to Europe was mentioned as an important factor, specifically after Alumax joined the group (Table 5.2) and became the leader of the group. For the American firm, ties to Europe and the economic agreements that Iceland had made with other European countries were of the utmost importance principally because there are no tariffs on primary aluminum produced in Iceland entering Europe but there is a 6% tariff on aluminum imported from the U.S. (Sigurðsson, 1994).

For the ATLANTAL-group, energy was the main attraction for its investment plans in Iceland. Iceland is one of the few developed countries with a surplus of renewable energy from geo-thermal and Hydro-electric resources. This source of power offers numerous advantages notably that it is environmentally acceptable, it can be incrementally and progressively developed at competitive costs, and the risk of escalation in fuel prices

does not exist because it is natural and renewable. These characteristics are what attracts power intensive industry to the country (Nordal, 1994; Sigurðsson, 1994; Evans, 1993).

Energy is not the only reason why the group examined Iceland as a location option. Evans (1993) (President & CEO of Alumax, until May 1994) argues that Iceland is a preferred location for the group on the basis of assessment of political and economic risk. The country is developed with practically 100% literacy rates, high longevity, and a good communications network. The rule of law has been upheld in the country for a thousand years. The sanctity of contracts is held in high regard. Evans (1993) continues, if you make a deal in Iceland, you have a deal, and commitments will be honored.

“If future contract interpretation or dispute resolution is required we (Alumax) have confidence it will be done in a way that is impartial and just to all parties. This is extremely important when large capital investments are involved. There are some other advantages to locating high capital, high energy demand industry in Iceland. Most of these projects involve a high level of automation and systems sophistication. People are very well educated. And, where necessary, can be easily trained.... When local resources are fully employed or not available, suitable arrangements for foreign labour and materials importation can be obtained.... While the country may seem remote, year-round transport is available. Iceland is in good proximity to North America and Europe. Three or four days by sea is much the same as coast-to-coast trucking in the U.S.” (Evans, 1993, pp. 3-4).

These are the conditions that the ATLANTAL-group is looking for, and if the group can reach an agreement, concerning price of power, taxation, and other important issues, with the Icelandic government the group will erect a new smelter in Iceland.

TABLE 5.2
ALUMAX - SELECTED CHARACTERISTICS

<u>Date or Period</u>	<u>Comments:</u>
1973:	Alumax was incorporated in Delaware as Demax Realty Co. and operated as a joint venture principally between AMAX Inc. and Mitsui & Co., Ltd.
1975:	Present name was adopted.
1986:	AMAX acquired the remaining 50% in Alumax Inc. (AMAX was incorporated in New York in 1887 as The American Metal Co., Ltd. The name was changed to American Metal Climax Inc. in 1957. The present name was adopted in 1974).
Current status:	The firm is engaged in the production and sale of primary aluminum, semi-fabricated products such as sheet, plate, extrusion and foil, and diverse fabricated products. The corporation operates in two business segments: Primary and Semi-fabricated Products, and Fabricated Products. The firm operates over 100 plants and other facilities in 30 states, Canada and Western Europe. The most recent Alumax project was the construction of a primary aluminum reduction plant in Quebec which began operation in 1990, the so-called 'Laurelco Project'.

(Moody's Investor Service, 1993b; 1993c).

Interactions between the ATLANTAL-Group and the Icelandic Government

During the summer of 1987 formal negotiations started between the Icelandic government and the ATLANTAL-group. Two possibilities were discussed; first, expansion of the ISAL aluminum smelter; or second, building a new aluminum smelter in Iceland (Nordal, 1994).

In June 1988 the Icelandic government reached a preliminary agreement with the ATLANTAL-group to expand Alusuisse's aluminum smelter, ISAL, in Straumsvík (Iðnaðarráðneytið, 1990). This was supposed to be a new firm that would be built beside ISAL but the firms would share existing facilities, such as the harbour (Iðnaðarráðneytið, 1988). However, between June 1988 and December 1989 a conflict arose within the ATLANTAL-group. Two of the three ATLANTAL companies, Hoogovens and Gränges decided they wanted to build a new 200,000 ton aluminum smelter but Alusuisse did not want to participate in such a venture. In addition, Austria Metall decided to quit the project in September 1989, because of financial problems. Alusuisse's intention had been

to enlarge ISAL, not to build a new smelter (Alþingi, 1990). Alusuisse was diversifying and was focusing on semi-finished and finished aluminum production rather than increasing its primary aluminum production. In the late 1980s the firm considered Iceland as the optimum location for primary aluminum production, however, Alusuisse was not prepared to participate in such a huge project as a new 200,000 ton aluminum smelter is (Table 4.2).

Alusuisse's decision to drop the project did not affect the two other firms and they decided to look for a new partner(s) to participate in erecting a new aluminum smelter in Iceland (Alþingi, 1990). One of the first MNCs that the ATLANTAL-group contacted was Alumax (American Metal Climax (AMC), see Chapter 4 and Table 5.2). The firm had shown interest earlier in erecting an aluminum smelter in Iceland (Chapter 4), and after two meetings, first in January 1990 and then again in February 1990, Alumax decided to join the ATLANTAL-group and continue negotiations with the Icelandic government with the purpose of building a new 200,000 ton aluminum smelter (Alþingi, 1990).

Shortly after this turbulent start, it became evident that the motivation factors and objectives of both parties were mostly complimentary and both parties were eager to meet and begin discussing matters in more detail.

In March 1990 the Icelandic government and the ATLANTAL-group signed a declaration of intent which stated that the parties will finish negotiations within a year, and the smelter will start production in 1994. The ATLANTAL-group would own the smelter and each firm will own stock as follows:

- | | |
|------------------------|--------|
| 1) Alumax | 30-40% |
| 2) Gränges | 25-35% |
| 3) Hoogovens Aluminium | 25-30% |

It is also stated in this declaration of intent that the ATLANTAL-group and the Icelandic government would adopt the following agenda to guide the negotiations: the

location of the smelter to be decided before the end of May 1990; all negotiations to be finished before September 20, 1990; the government will try to get confirmation of the Master Agreement, in the Parliament, before end of 1990; and, the ATLANTAL companies will try to get confirmation from their boards of directors before end of 1990 (Alþingi, 1990).

After this joint declaration, it was obviously necessary to act quickly and start negotiations as soon as possible (Alþingi, 1990).

The Location Question within Iceland

During the previous 15 years, prior to starting negotiations with the ATLANTAL-group, the government had conducted studies to find the optimum location for power intensive industries. In October 1980 the Minister of Industry (Hjörleifur Guttormsson) organized a committee (Staðarvalsnefnd um iðnrekstur, e. The industrial location committee) to seek this optimum location and during the next few years the committee did an extensive survey of locations in Iceland. The committee then recommended a few locations that seemed to be the best choices although they emphasized that each of these locations needed to be investigated further (Staðarvalsnefnd um iðnrekstur, 1983). The committee also looked specifically for location choices for an aluminum smelter. The result of the first report was that five sites in two regions were identified as the most promising and should be investigated further (Staðarvalsnefnd um iðnrekstur, 1982). These five sites were; Helguvík by Keflavík; Vogastapi by Njarðvík; Keilisnes on Reykjanes; and, Geldinganes by Reykjavík, all in the Reykjanes region (Figure 5.1 and 5.6); and, Dysnes not far from Akureyri, in Eyjafjörður region (Figure 5.1 and 5.4) (Staðarvalsnefnd um iðnrekstur, 1986). It might be noted that during the negotiations between the Icelandic government and the ATLANTAL-group two other locations were investigated, Grundartangi just North of Reykjanes region (Figure 5.1) and sites in the

Reyðarfjörður region on the East coast (Figure 5.1 and 5.2). These two sites are examined later in this chapter.

In a final report (Staðarvalsnefnd um iðnrekstur, 1986), the committee did a further investigation on the five locations it had recommended. In that report the committee made a cost estimate for each site which included; the cost of the site, construction on or by the sites, providing water to the site, road and harbour costs, wet scrubbing of sulfur dioxides (environmental pollution control equipment), construction of power lines, and everything else except the construction of the smelter itself (Table 5.3).

Best possible pollution control equipment for aluminum smelters is very expensive. Wet scrubbing of sulfur dioxide is a part of such equipment and the cost of such equipment is estimated at 630 million Icelandic krónur at all five locations. However, the report argued that Keilisnes has the special advantage of being far from populated areas, it is an open space location and winds blow towards the ocean and there is almost no threat of dangerous pollution in the ocean from an aluminum smelter. Consequently, the report suggested that an aluminum smelter at Keilisnes would probably not require a wet scrubbing system and would therefore not have to pay the cost of wet scrubbing of sulphur dioxide. This assumption established Keilisnes as the cheapest location (Table 5.3) (Staðarvalsnefnd um iðnrekstur, 1986).

The government emphasized that the location should affect regional development and help in creating a better economic balance within the country. The location that fitted best into the government's regional development policies was the Dysnes location in the Eyjafjörður region because it would create much needed jobs there and prevent further migration of people from the region to the Greater Reykjavík area. As a result the government tried to affect the location choice of the ATLANTAL-group. It was even ready to pay for some of the difference in construction cost between different locations (Iðnaðarráðneytið 1990), especially if the ATLANTAL group agreed to build the new

smelter in the Eyjafjörður region (Morgunblaðið, 1990a). However, as the Eyjafjörður area is a good agricultural region state of the art pollution control would be required which made Dysnes a more expensive location in comparison to Keilisnes. The Eyjafjörður region has further disadvantages compared to the Reykjanes region. More than half of Iceland's population lives in Reykjavík and the Reykjanes region and by locating the smelter there amenities are more accessible. Another issues that also affects location choice is providing the smelter with labour.

TABLE 5.3
COST ESTIMATES FOR FACILITIES IN RELATION TO CONSTRUCTION OF AN
ALUMINUM SMELTER IN FIVE LOCATIONS IN ICELAND
(Not Including Construction of the Smelter itself)

<u>Location</u>	<u>Region:</u>	<u>Site:</u>	<u>000,000 Icelandic krónur*</u>
Reykjanes (map 5.4):		Helguvík	1,619
		Vogastapi	1,914
		Keilisnes	860
		Geldinganes	1,435
Eyjafjörður (map 5.3):		Dysnes	1,560

*Prices January 1, 1986.

Source: Adapted from Staðarvalsnefnd um iðnrekstur (1986).

One report estimated that the available labour force for the proposed smelter are workers that live within 40-50 km radius from a site and the population in that area should be no less than 5,000-6,000 people. Because of this the actual site should be in, at least, some proximity to the largest population center in each region (Byggðastofnun 1990b). Table 5.4 shows that 645 workers are needed for operation of the smelter. According to this report, smaller population centers than 5,000-6,000 will not be able to guarantee the smelter with that many workers. The distance is the estimate of how far a worker is willing to go to seek employment and also how good the transportation system is and possible

closures of roads during winter storms (Byggðastofnun, 1990a; 1990b; Iðnaðarráðneytið, 1990).

The debate about the location of the proposed aluminum smelter within Iceland reached its peak during the first eight months of 1990. Morgunblaðið (1989) describes the battle between Municipalities/regions to attract the new smelter, as an auction. According to Morgunblaðið (1989) the smelter will locate in the Municipality/region that is the highest bidder and is ready to sacrifice the most, such as taxes, harbour fees, and other facilities. This is exactly what many had argued earlier that Icelanders would have to avoid, that is domestic disputes over the location within Iceland. According to Morgunblaðið (1988; 1989) such disputes make the country a less attractive location in the eyes of MNCs. However, it became evident that the parties would have to make a decision where the smelter should be located.

TABLE 5.4
TOTAL LABOUR FORCE (ESTIMATES) NEEDED FOR CONSTRUCTIONS AND
OPERATION OF AN 200,000 TON ALUMINUM SMELTER AND NEW POWER
PLANTS (MAN-YEARS)

	1990	1991	1992	1993	1994	1995	1996
Constructions of the aluminum smelter	50	550	780	950	70		
of that foreign workers	10	110	160	190	10		
Constructions of power plants	278	635	810	718	447		
Operation of smelter	-	-	-	175	410	645	645
Total labour needed	338	1295	1750	2033	937	645	645

Source: Adapted from Byggðastofnun (1990b).

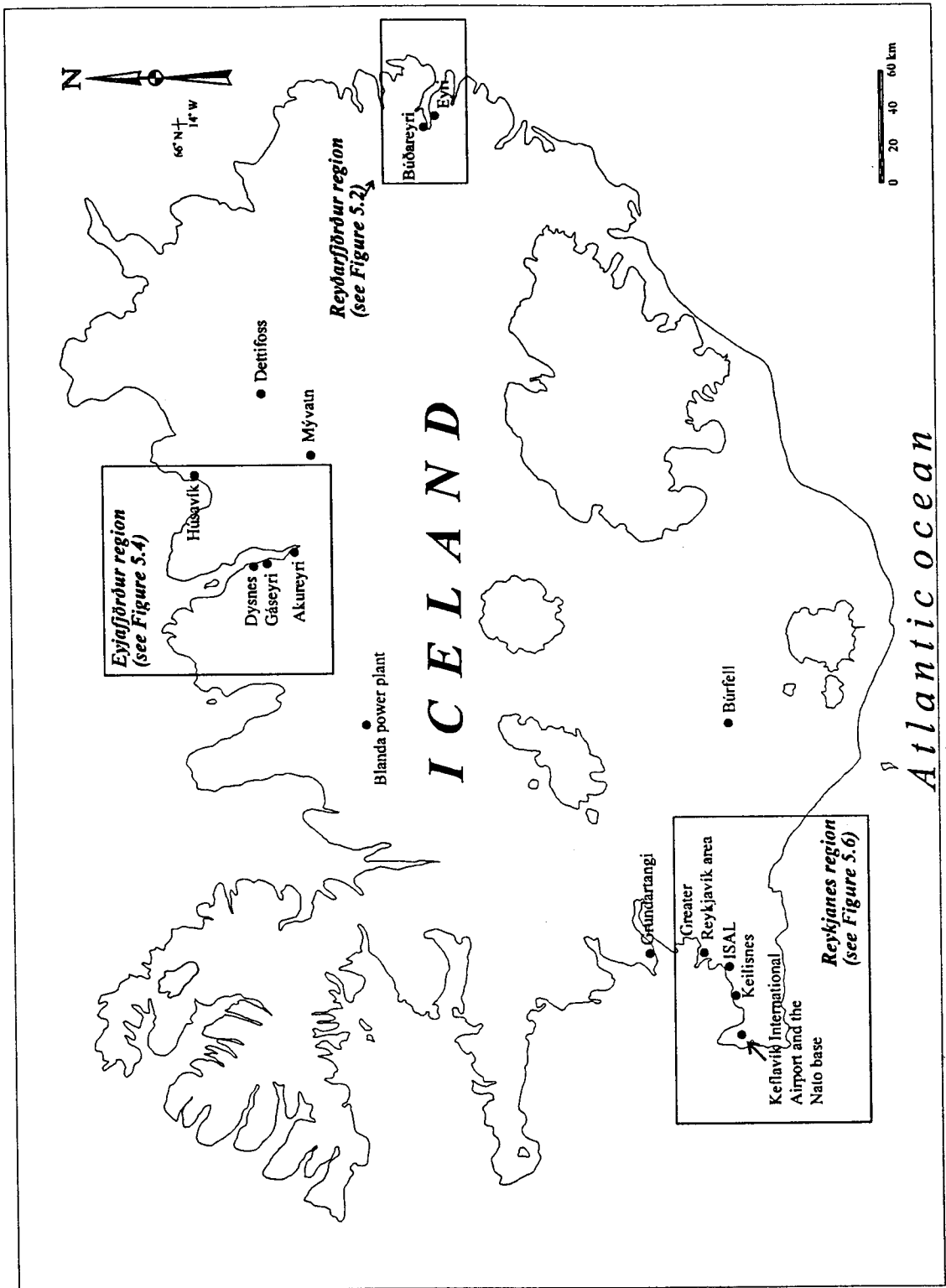


Figure 5.1. Regions Considered for Power Intensive Industry

In June 1990 the two parties confirmed that three regions should be investigated further, the Reyðarfjörður region which contained three possible sites, the Eyjafjörður region which offered the Dysnes site, and Reykjanes region which contained the site of Keilisnes (see Figure 5.1, 5.2, 5.4 and 5.6) (Iðnaðarráðneytið, 1990). The other three sites in Reykjanes region had been dropped because they were more expensive than Keilisnes (Table 5.3). Interestingly, Reyðarfjörður region on the East coast (see Figure 5.1 and 5.2), had not been mentioned before but the fjord had a history of being a location option for power intensive industry. In 1982, for example, the Ministry of Industry published a feasibility report for a silicon metal factory in Reyðarfjörður. A firm was established and the government negotiated with RTZ Metals to finance the project. However, due to external changes, like higher supply cost, increase in construction costs and the world market price of silicon metal during the latter half of 1986 and beginning of 1987, the project never became economically possible. Some observers argue that if this silicon metal factory had been built in 1987 it would have been a economically justifiable project, that would have showed profits (Bóasson, 1994). However, because the Reyðarfjörður region had already been considered as a possible location for power intensive industry much of the research work on location for an aluminum smelter had been done.

It might also be noted that another location possibility was considered by the ATLANTAL-group, notably Grundartangi (Figure 5.1). The idea to build power intensive industries at Grundartangi is not new because in 1977 a Ferro silicon smelter was built there (see Chapter 1). However, the group, in a confidential letter to the government, stated that Grundartangi was too close to the Greater Reykjavík area (75 km). This argument, of course, is very strange since the location actually chosen is closer to the Greater Reykjavík area than Grundartangi.

Ultimately, it were three regions that were given the greatest consideration and these three possible locations will now be examined separately in the following order, Reyðarfjörður region, Eyjafjörður region, and Reykjanes region.

Reyðarfjörður Region

It is hard to explain why one of the 'final' three regions examined for the new aluminum smelter was the Reyðarfjörður region in view of the fact that the committee that recommended locations for power intensive industries and an aluminum smelter (Staðarvalsnefnd um iðnrekstur, 1982; 1986) had not included the Reyðarfjörður region as a possible location for an aluminum smelter. The main reason cited was that the communities in the fjord are too small to provide an aluminum smelter with labour. It should be noted that the committee (Staðarvalsnefnd um iðnrekstur) recommended the region is a good location for medium size industry that only needed 100-300 workers. However, after the Reyðarfjörður region became an option as a location for the new smelter three possible sites around the fjord were examined. According to Reyðarfjörður district (1992) Eyri was considered as the best option (see Figure 5.2). The site within the region was not a big issue; rather development and creation of new jobs in the region were the main issues.

Ólafsson (1993) argues that Reyðarfjörður region is a good location for power intensive industry mainly because the construction of a harbour would be relatively cheap compared to other possibilities in Iceland, the distance from Iceland to Europe by ship is shorter from the East coast, and the next major power plant will most likely be constructed on the East coast. He points out that few years ago the government had decided to build a silicon metal production plant in the region but that the project had been abandoned in 1987 and shortly after that the idea to build an aluminum smelter in Reyðarfjörður region surfaced. Ólafsson (1993) also argues that it was never the intention

of the government to build either of these factories in Reyðarfjörður region and the option was only kept open for political reasons since it fitted well into regional development policies.

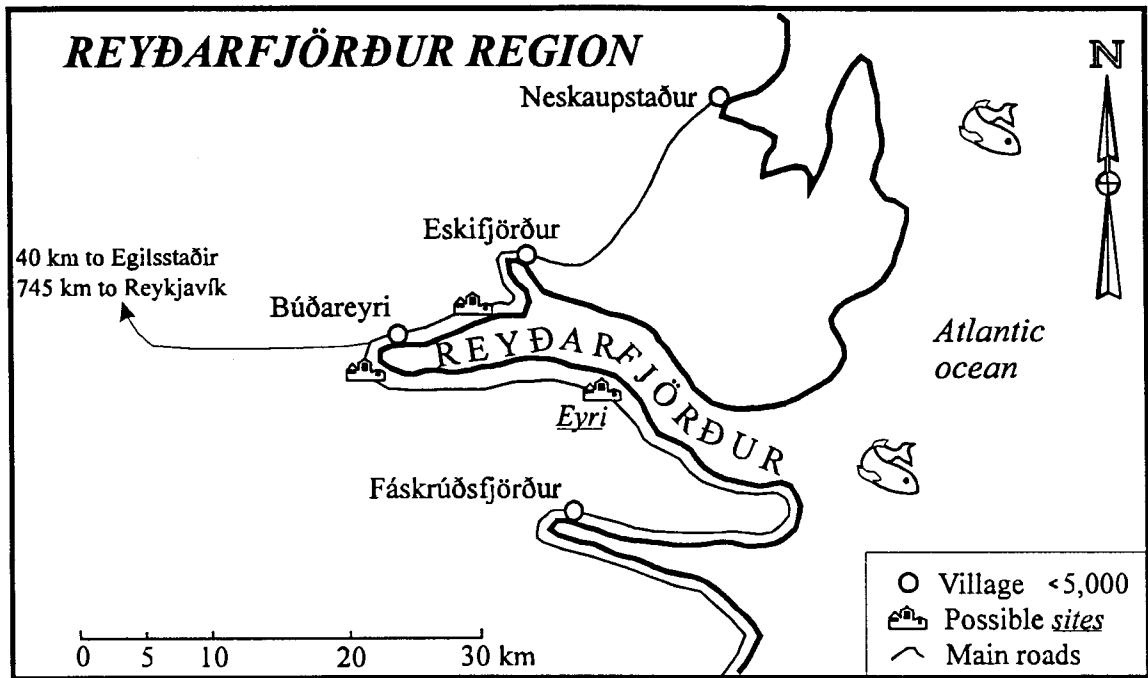


Figure 5.2. Reyðarfjörður Region and Possible Sites for Power Intensive Industry. Source. Adapted from Reyðarfjörður district (1992); Staðarvalsnefnd um iðnrekstur (1986).

Many have argued that the region has suffered because the government has been implying that the East coast, in particular the Reyðarfjörður region, will soon get some kind of power intensive industry and therefore the region has not gotten as much financial assistance for regional development as other regions. People in the region have been very disappointed how the government has given the region false hopes, for more than 10 years (Ólafsson, 1993; Morgunblaðið, 1990b).

In summary, four reasons have been offered to explain why the smelter was not located in the Reyðarfjörður region:

- 1) Some observers argue that Reyðarfjörður region was only kept open because it fitted well into the governmental regional development policies. These same observers argue that the government never intended to build the smelter any where else than close to the Greater Reykjavík area. By keeping the option open disputes within the country were avoided. Evidence that supports this view is that the government did not spend as much money or time to do research in the region as it did on sites close to the Greater Reykjavík area (Ólafsson, 1993; Morgunblaðið, 1990b).
- 2) The only site that did not require wet scrubbing of sulfur dioxide was Keilisnes, which made it impossible for other sites to be competitive, with regards to construction cost (Staðarvalsnefnd um iðnrekstur, 1986). One source argued that a person in the Icelandic negotiation committee mentioned (without authorization) that the government would not require wet scrubbing if the group would locate the smelter at Keilisnes even though the government's original intention had been to require state of the art pollution control equipment wherever the smelter would locate.
- 3) It was argued that Búðareyri and the communities in the region would not be able to provide the necessary labour for the project (see Figure 5.3). However, some observers have argued that if the transportation system were improved and tunnels constructed to connect fjords, people from more communities could be accounted for and there would be no labour shortage for the project (Morgunblaðið, 1990b; Ólafsson, 1990; Reyðarfjörður district, 1992).
- 4) Reyðarfjörður is a long fjord and is surrounded by mountains. Pollution is considered as a major threat in the area because it is not a very windy location and pollution would not be blown from the fjord toward the sea. Yet, Ólafsson (1993) and in Reyðarfjörður district (1992) it is stated that sufficient research has not been made to estimate the effect of pollution in the region and Ólafsson (1993) argues that winds would clean the fjord of pollution. According to Ólafsson (1993) the government has not been willing to provide

capital to do the necessary measurements, and pollution is a good reason (for the parties) to eliminate Reyðarfjörður region as a possible location (Ólafsson, 1993).

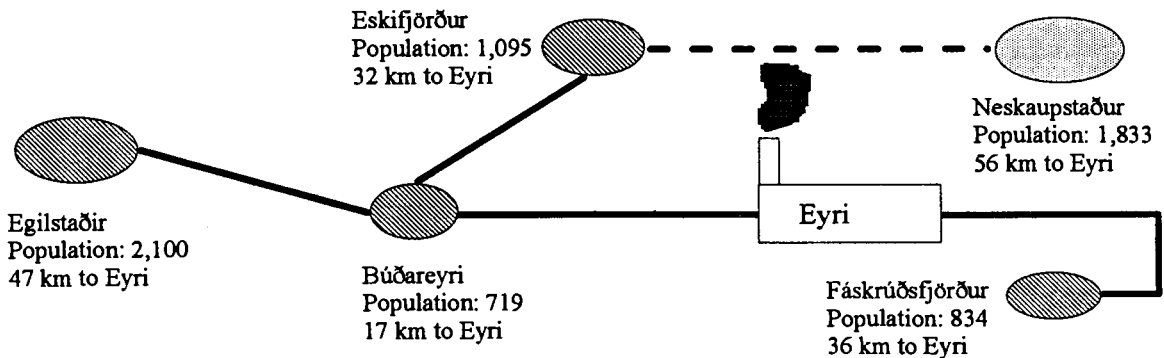


Figure 5.3. Population Centers in the Reyðarfjörður Region and Possible Labour Pool for an Aluminum Smelter Located at Eyri.

Source: Adapted from Byggðastofnun (1990a), pp. 13.

No direct discussions or negotiations took place between participants from the Reyðarfjörður region and the ATLANTAL group (Ólafsson, 1993).

Eyjafjörður Region

The communities in Eyjafjörður region put a lot of effort and work in attracting the new smelter. The Industrial Development Corporation of Eyjafjörður did an extensive study of the area, which included physical, human, and economic perspectives. The Eyjafjörður region fulfilled all requirements that the ATLANTAL-group had listed, for example, in terms of providing labour (see Figure 5.5), harbour, suitable site and other services (Industrial Development Corporation of Eyjafjörður, 1990). As in the Reyðarfjörður region the main emphasis was put on attracting the smelter to the region not to specific sites. In Staðarvalsnefnd um iðnrekstur (1986) Dysnes was considered as

the best site and during negotiations it was assumed that a location in the Eyjafjörður region meant that the site would be Dysnes.

The Eyjafjörður region was the optimum location with regards to the government's regional development policies (Morgunblaðið, 1990b). In addition, the Minister of Industry (Jón Sigurðsson) wanted the new smelter to be located in the Eyjafjörður region (see Figure 5.4). According to Morgunblaðið (1989; 1990) the Minister was considering running for office in the constituency which Eyjafjörður region is a part. Providing an aluminum smelter in the constituency would strengthen his position to be re-elected (Morgunblaðið, 1989; 1990b).

In summary, three reasons have been offered to explain why the smelter was not located in the Eyjafjörður region:

- 1) The same political reason mentioned for the Reyðarfjörður region also apply in the Eyjafjörður region (Ólafsson, 1993; Morgunblaðið, 1990b). However, there are indications that the government wanted to build the smelter on the North coast, in particular Eyjafjörður region, as it fitted into regional development policies. There are, however, arguments that the ATLANTAL-group opposed to such a strategy for reasons mentioned below and because of disputes within the region concerning this new project. Thus farmers in the region opposed the project and argued that an aluminum smelter would destroy their farmland. The ATLANTAL-group had concerns about these protests (Morgunblaðið, 1990b).
- 2) The same environmental reasons mentioned for Reyðarfjörður region, that is wet scrubbing of sulfur dioxide was not required at Keilisnes which made that site the cheapest location (Staðarvalsnefnd um iðnrekstur, 1986).

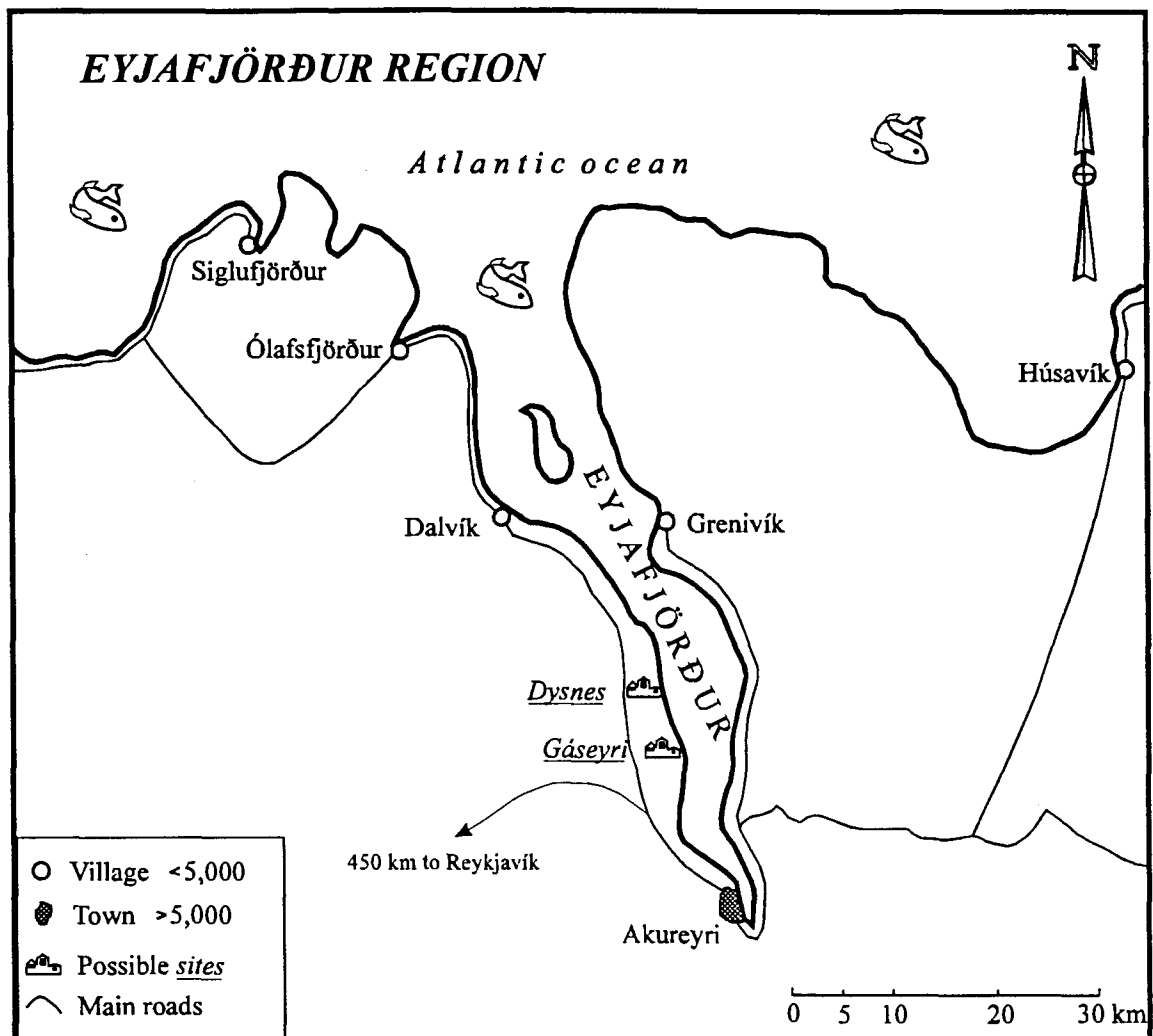


Figure 5.4. Eyjafjörður Region and Possible Sites for Power Intensive Industry. It should be noted that Gáseyri was considered as a location choice in the negotiation with Alusuisse 1961-1966. Source. Adapted from Industrial Development Corporation of Eyjafjörður (1990); Staðarvalsnefnd um iðnrekstur (1986).

3) It was argued by both the Icelandic government and the ATLANTAL-group that harbours in the fjord could close during winter time, due to drift-ice. However, since 1940 drift-ice has blocked Eyjafjörður (the fjord) only twice, in 1965 and 1968, and only for a short period of time (Industrial Development Corporation of Eyjafjörður, 1990). Because this issue was used (among others) to eliminate Dysnes as an alternative for the new smelter the Industrial Development Corporation of Eyjafjörður conducted a new research

to examine if drift-ice eliminated the Eyjafjörður region as an alternative for power intensive industry. The conclusion was that drift-ice is a concern, but that the Eyjafjörður (the fjord) harbours have very rarely been closed to ships from both East and West at the same time. Drift-ice should not be concerned as a major threat, and should not affect decisions concerning the location choice of an aluminum smelter (Kristinsson, 1993).

No direct discussions or negotiations took place between participants from the Eyjafjörður region and the ATLANTAL-group (Magnússon, 1993).

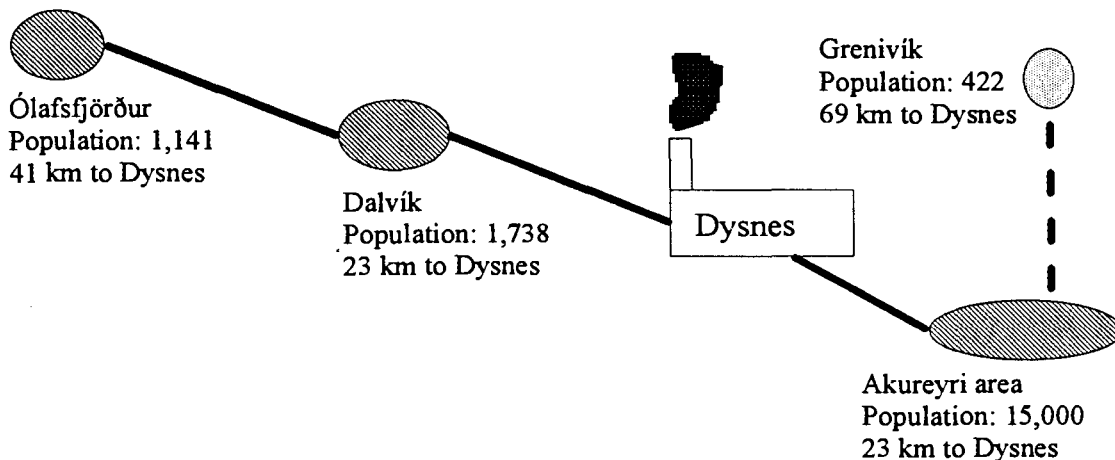


Figure 5.5. Population Centers in the Eyjafjörður Region and Possible Labour Pool for an Aluminum Smelter Located at Dysnes.

Source: Adapted from Byggðastofnun (1990a), pp. 9.

Reykjanes Region

After other sites in Reykjanes region had been eliminated because of cost, Keilisnes became the optimum site in the region. Keilisnes, or in particular the Reykjanes region (see Figure 5.6), was the location that the government was least interested in locating the new smelter because it would not be in harmony with existing regional development policies. However, Keilisnes was still the cheapest option for both parties (see Table 5.3) and in

October 1990 the ATLANTAL-group declared that it had chosen Keilisnes as a location to build the new smelter. One of the main reason was that the other two locations had too many unforeseen obstacles in the way (Iðnaðarráðneytið, 1990). It would be difficult to provide labour in Reyðarfjörður while pollution would threaten other activities in the fjord. Dysnes was eliminated because it was a more expensive location, because of the possibility of drift-ice closing the harbour, and the ATLANTAL-group did not feel as welcome there (Nordal, 1994) because of protests by farmers.

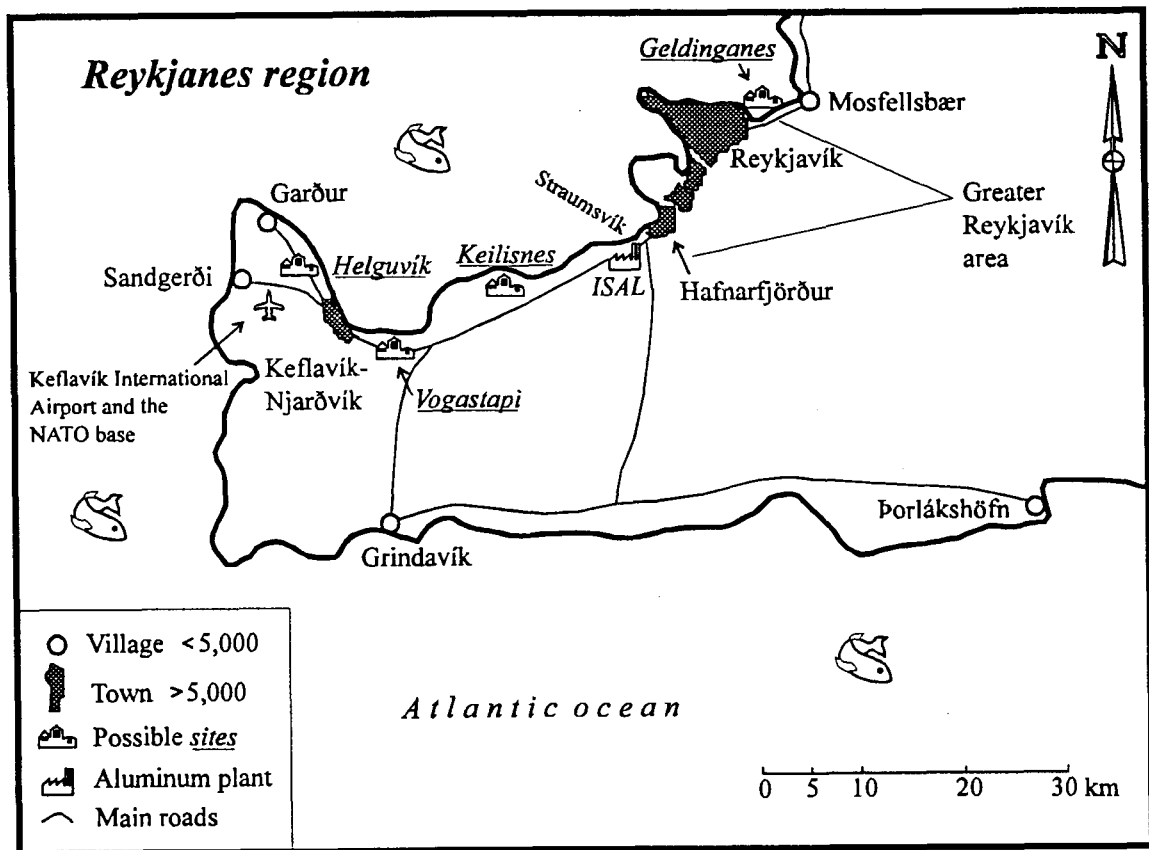


Figure 5.6. Reykjanes Region and Possible Sites for Power Intensive Industry. Source. Adapted from Staðarvalsnefnd um iðnrekstur (1986).

Numerous reasons have been mentioned why the smelter will be located in the Reykjanes region such as providing labour, costs, and pollution control equipment. There are also indications that Reykjanes region had been a corporate preference because of its

closeness to all kinds of amenities, it is not far from Keflavík International Airport, and access to necessary services is best provided by locating in Reykjanes region as it is in close proximity to Iceland's largest population centers (Figure 5.7). In addition, a poll, conducted by the Institute of Social Sciences at the University of Iceland in 1990, showed that 51.1% of the nation was in favour of locating the new smelter at Keilisnes. The poll also showed that 67.7% were in favour of building a new aluminum smelter in Iceland (Félagsvísindastofnun, 1990). However, the decision was also criticized especially from a regional development perspective. Many argued that by locating the smelter close to the Greater Reykjavík area it would lead to mass movement of people (looking for work) to the South-West where more than onehalf of the population already lives (Figure 5.1 and 5.7). Such a location would increase regional differences within the country. Moreover, critics argued that the reason why Keilisnes was an economically cheaper location was not to require that the same pollution control equipment would be installed there. If pollution control equipment were to be installed, it would no longer be a cheaper option and the possibility of another location had been an alternative (Morgunblaðið, 1990b). According to Nordal (1994) the cost of pollution control equipment was not the only issue but Keilisnes is in a much lesser risk of environmental damages than other possible locations, winds blow toward the ocean and the site is in the Reykjanes lava were there is little vegetation. He argued that the ATLANTAL-group would probably be required to establish the same pollution control equipment wherever the smelter would be built.

The location decision was a big step towards the reality that a new aluminum smelter would be built in Iceland. In May 1990 Jón Sigurðsson (Minister of Industry) argued that the location decision was the most important step and a clear sign that the ATLANTAL-group had full intention of building a new aluminum smelter in Iceland (Sigurðsson, 1990).

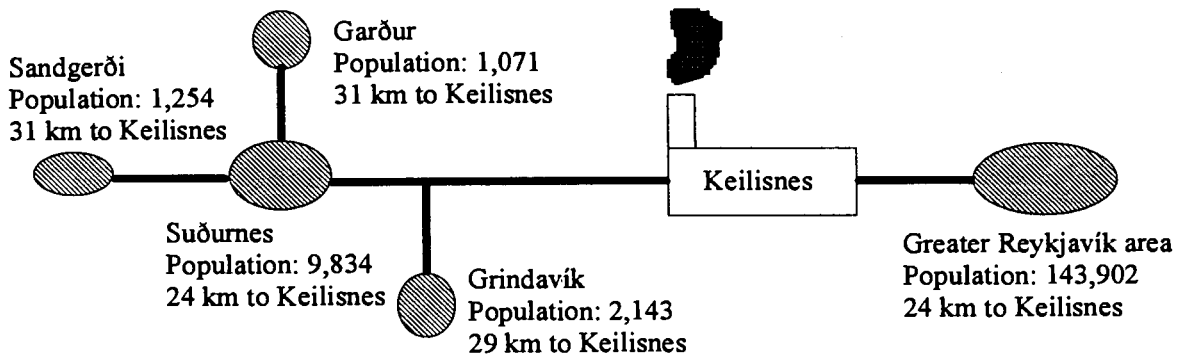


Figure 5.3. Population Centers in the Reykjanes Region and Possible Labour Pool for an Aluminum Smelter Located at Keilisnes.

Source: Adapted from Byggðastofnun (1990b), pp. 3.

Power: Price and Supply

During the summer of 1984 the Icelandic government started building a new Hydro-electric plant at Blanda, at least partly to prepare to provide new power intensive industries with energy. A little later the government put together a long term plan which indicated the order in which power plants would be built. Two plans were made, plan 210 includes a new 210,000 ton aluminum smelter and plan 0 which does not include an aluminum smelter (Alþingi, 1990). Construction of the Blanda power plant was a part of both plans and in 1991 construction of Blanda power plant was completed (Iðnaðarráðneytið, 1991a). Though the Blanda power plant is not big enough to provide a new aluminum smelter with energy it is the first step. Moreover, when negotiations with the ATLANTAL-group began, the price rather than the supply, of electricity was not a major concern.

In the negotiations the government emphasized that net income from electricity sales would finance the construction and operating costs of power plants, that the electricity price would be in direct connection to aluminum price, and that the smelter would get a rebate on the electricity price during the first years of operation. The

ATLANTAL-group mostly agreed to these conditions and in 1990 the two parties reached an understanding in principle on the following contract issues:

- (a) The power price will be calculated as a certain percentage of aluminum price with an initial period of discounts and a floor and cap for the years 1994 through 1996.
- (b) The power supply will be for approximately 3000 Gwh per year, with 90% delivered as firm power.
- (c) The obligations of the Company will include an obligation to take or pay for 90% of the firm power during any 10 consecutive years.
- (d) The contract will contain a fairness clause.
- (e) Certain of the terms and conditions for power delivery with delivery starting in 1994.
- (f) The power contract period will be for 25 years with the Company having the option to extend the contract period by two additional five year periods.

The power contract, when finalized, is subject to board approvals. (Icelandic government and the ATLANTAL group, 1990).

One of the main reasons why the Icelandic negotiators emphasized that the price of power would be calculated as a certain percentage of aluminum price was to guarantee that one party is not making too much profit nor losing too much (Nordal, 1994). They also pointed out that aluminum prices are forecasted to rise and that the price of power would rise at the same time. This argument was criticized and according to Gestsson (1991) the average price of aluminum from 1960-69 was US\$ 1,822¹ per ton, during the 1970s it was US\$ 1,818¹, in the 1980s it was US\$ 1,648¹ and during 1990 the price was US\$ 200 lower than the decade before. There is nothing that indicates that this trend will change (Gestsson, 1991).

Critics also used a different approach to criticize the power agreement. The National Power Company is Iceland's richest company. During 1990 the company's profit was 3% or 714 million Icelandic krónur but ISAL's profit at the same time was 44% or 1,755 million Icelandic krónur. Using these figures for comparison it is obvious that ISAL

¹ Numbers have been adjusted for inflation.

is getting the power too cheap and has been getting it too cheap since the smelter was built (Júliússon, 1991). Now the government is negotiating another agreement to build another aluminum smelter, and again making the same mistakes, selling the energy too cheap (Júliússon, 1991; Gestsson, 1991). The government does not agree with this view and Nordal (1994) argues that Iceland has gotten adequate revenues from electricity sales to ISAL.

Taxation

Two ideas were put forward concerning taxation of the smelter. The ATLANTAL-group emphasized the idea of paying a fixed tax on each produced ton of aluminum. The government, on the other hand, argued that the smelter would pay taxes just as other firms pay taxes according to Icelandic taxation laws, but it could have a few exemptions, because of its size and specialization (Alþingi, 1990). The Icelandic taxation system has been going through rapid changes during the last few years which are supposed to simplify the system and make it more comparable to other Western countries. Thus the Icelandic negotiation committee saw no reason why Icelandic laws should not be used when taxing the proposed smelter (Sigurðsson, 1990; 1994). The real debate is the actual level of taxes.

In this regard, whatever the final decision, the ATLANTAL-group wants all taxes to be stated in the final agreement and that the government will not be able to add new taxes. In particular, the ATLANTAL-group has required a so-called 'non discrimination clause' in the final agreement (Alþingi, 1990).

In October 1990 the two parties reached an understanding that in principle the ATLANTAL companies will generally be taxed pursuant to Icelandic laws, but other principles of taxation will be applicable (for further details, see appendix 2, article 2.2) (Icelandic government and the Atlantic group, 1990).

Import Duties

Both parties have agreed that the smelter will be a tolling smelter, which means that the firm will not own the alumina nor the aluminum it produces and does therefore not have to pay import duties. The proposed smelter will collect a certain production fee per produced ton of primary aluminum. (Alþingi, 1990).

Legal Issues

Both parties have agreed that the smelter will operate pursuant to Icelandic laws. The government has emphasized that all conflicts should be resolved by Icelandic courts, but the ATLANTAL-group has argued that major conflicts should be solved by an international court of arbitration, which would use Icelandic laws. The group points out that Iceland and all three home countries of the ATLANTAL companies are participants of the ICSID (International Center for Settlement of Investment Disputes) in Washington, which solves international financial conflicts and could therefore solve disputes that could rise between the proposed smelter and the government (Alþingi, 1990).

The Icelandic government emphasized that it has been changing laws and regulations that affect MNCs. These new regulations are internationally comparable and the Icelandic justice system is therefore well prepared to solve international disputes (Sigurðsson, 1994). During the negotiations the ATLANTAL-group agreed to this, so Icelandic laws will govern the agreements and disputes will generally be settled pursuant to Icelandic law by Icelandic courts or alternatively by arbitration pursuant to Icelandic law (Icelandic Government and the ATLANTAL group, 1990).

Duration of the Agreement

The government wanted the duration of the agreement to be no longer than 25 years, and that there would be no obligations after that. The ATLANTAL-group wants a

longer agreement. A final resolution had not been reached regarding the duration of the agreement when formal negotiations ended in 1991 but according to ideas regarding the power agreement, it is likely that the contract period would be 25 years and the ATLANTAL-group will have the option to extend the contract period by two additional five year periods.

The Status of the Negotiations, 1991-1994

In November 1990 the two parties decided that both the Master Agreement and the Power Agreement should be signed no later than February 1991 (Iðnaðarráðneytið, 1991a). However, between November 1990 and February 1991 there was a delay in the negotiations. First the ATLANTAL-group delayed the negotiations to finish agreements within their own companies and then the Gulf War started. The two parties met again in February 1991 for an overview of the negotiations and the parties decided to finish all agreements before spring 1991 (Iðnaðarráðneytið, 1991a). At that meeting it became evident that the Gulf War would affect the financing of the project, in September 1990 total investment for the project was estimated to be US\$ 1 billion, and that it would be necessary to delay the negotiations for another 6-10 months. Still the group had no intention of dropping the project but it was clear that start-up would never be before early 1995.

In August 1991 the two parties reached an agreement about all major issues concerning the Master Agreement and the ATLANTAL companies were optimistic that they could finish agreements with banks and other financial institutions, to provide capital for the project, before March 1992 and would then be able to sign a Master Agreement (Iðnaðarráðneytið, 1991b).

The two parties met again in November 1991 and at that meeting it became clear that the project had to be postponed longer. The reason was that the ATLANTAL-group could not raise the capital needed for the project. In August 1991 it was a general belief that the price of aluminum had reached the lowest it could get. Economists forecasted that the world economy would improve during the latter half of 1991. That did not happen and between August and November aluminum price dropped further (see Figure 5.8).



Figure 5.8. Development of Aluminum Prices at the London Metal Exchange (three month average price) 1988-1993.

Source: Adapted from Pálsson (1993), pp. 4.

One explanation for this development is that Eastern European countries were selling their inventory of aluminum, which they had kept in the case of warfare. Now the Cold War was over and these countries needed foreign capital, especially the countries of former Soviet Union. One way of getting capital was to sell aluminum supplies (see Figure 5.9) (Iðnaðarráðneytið, 1991b). At the same time these countries increased their production of aluminum. As can be seen by comparing Figure 5.8 to 5.9, there is a clear connection between the price of aluminum and exports from former Soviet Union countries. This meant that many aluminum companies decided to cut production and even some closed. No financial institutions were interested in providing capital to build a new aluminum smelter in Iceland while these conditions were dominant (Iðnaðarráðneytið, 1991b).

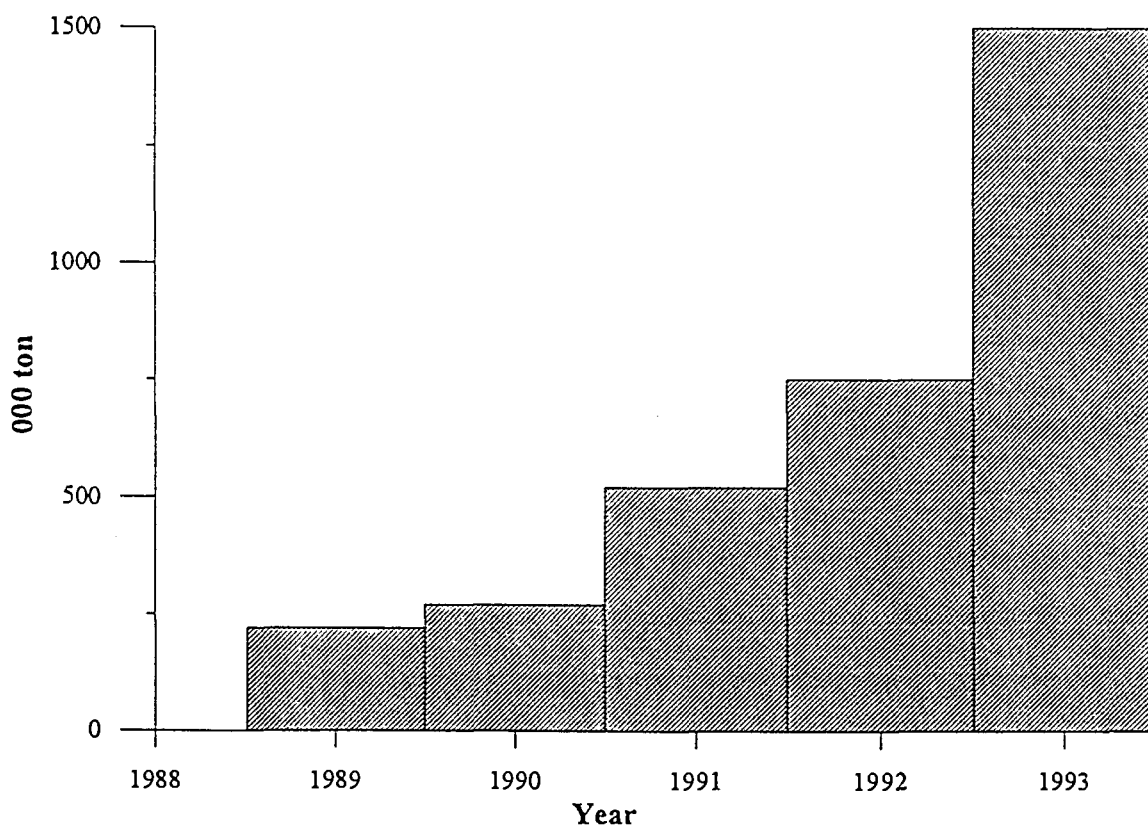


Figure 5.9. Aluminum Exports from Former Soviet Union Countries to Western Countries 1989-1993.

Source: Adapted from Pálsson (1993), pp. 4.

Participants argued that these circumstances were unusual and probably would not last long. The ATLANTAL-group argued that the future of the aluminum industry was bright and that circumstances in Iceland for aluminum industry are one of the best. The group emphasized their intention to build a aluminum smelter as soon as the world economy would get more stable and the price of aluminum on the world market increases. Discussions between the two parties have continued and as soon as circumstances change the ATLANTAL project may well be given the go-ahead (Iðnaðarráðneytið, 1991b; Evans, 1993).

Delay in the ATLANTAL Project - Reflection on Timing

The negotiations with the ATLANTAL-group were very time consuming. They began in 1987 and ended in 1991, though informal discussions are still ongoing. So why has the smelter not been erected? Most issues that needed resolution in the negotiations were complimentary to both actors but other reasons affected the negotiations and prevented the signing of a Master Agreement.

During the late 1980s there was a change in government. The new government did not have as much interest in erecting a new aluminum smelter as their predecessors. They argued that there were better ways to utilize the energy resource than inviting powerful MNCs to locate in Iceland, and the negotiations were delayed over a 10-14 month period. Some argue that if this delay had not come into effect an aluminum smelter would have been fully built at Keilisnes in 1994. Another factor is that the Minister of Industry, Jón Sigurðsson 1988-1993, has been criticized for taking the smelter on a 'carousel' ride around the country. It should be noted that Jón Sigurðsson was one of the biggest supporters of the new aluminum project. However, although he stayed on as a Minister of Industry despite the change in government in the late 1980s he could not pursue the

project during that time. He was so convinced in the late 1980s that Alusuisse would enlarge ISAL that he promised to locate the next smelter in a different region, other than Reykjanes, and he gave every location a hint that the smelter could be located there. This not only made the Icelandic public confused but also the contracting party and this led to protests from the people, including the protest by farmers in the Eyjafjörður region which made the group feel unwelcome.

The nature of the business cycle is also important in explaining the delay. Krumme (1981) identifies the importance of timing in the bargaining process. He mostly focuses on the procrastination cost for each actor and how it can affect whether a business relationship can be forged or not. Decision-making to erect a new aluminum smelter has become subject to the business cycle (Nordal, 1994). Investment decisions are not taken except during a short period of time during the upswing of the business cycle and/or during fluctuations in the world market price of aluminum. Figure 5.10 shows a model of the business cycle and when the bargaining process must take place and investments decisions have to be taken. Optimum timing for both the negotiations and the final decision is an important factor, to enable both actors to reach a complimentary agreement. This could indicate that if the Icelandic government had pursued to reach an agreement as soon as possible during the negotiations with the ATLANTAL-group, an agreement could have been reached in 1988-1989 when aluminum prices were rising and there were signs that the rise could continue in the near future (see Figure 3.2 and 5.8).

There are some indications that the global economy reached the bottom of these fluctuations at the end of 1993. For example, the U.S. economy has been improving during the first half of 1994. Another indicator, which is more important to the aluminum industry, is that aluminum prices have risen roughly US\$ 500 per ton during the first six months of 1994. The reason is that at the end of 1993 all major producers of aluminum, including Russia, reached an agreement to cut production to force up prices

(Morgunblaðið, 1994a; 1994b). This could imply that negotiations with the ATLANTAL-group could resume within a few years. In this respect, although a preliminary agreement with the group had been reached in 1991 it will be necessary to start negotiations again because some parts of the agreement will need updating, for example cost estimates and providing power to the proposed smelter.

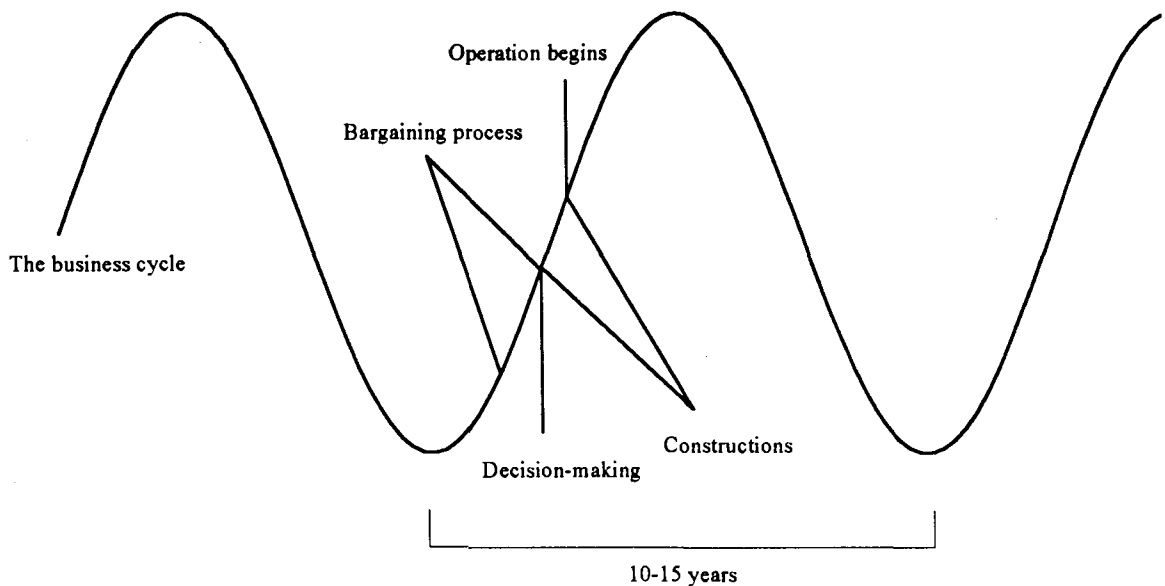


Figure 5.10. A Model of the Business Cycle and the Optimum Timing of the Bargaining Process and Decision-making.

Figure 5.11 shows how future developments can evolve between the Icelandic government and the ATLANTAL-group, by applying the model shown in figure 5.10. It has been argued above that at the end of 1993 the world economy and price of aluminum started to rise and here it is forecasted that this trend will continue. There are no indications that the demand for aluminum will decrease in the future, rather the opposite. Evans (1993) has implied that, at least Alumax, has no intention of dropping the project, and the Icelandic government is also eager to close the deal and begin construction.

Figure 5.11 assumes that the bargaining process will be shorter than it was before. Iceland is better prepared today than it was 5 years ago to reach an agreement in a short period of time for two main reasons; first, an agreement was reached in 1991 regarding the most important issues and that agreement will (only) need updating; and second, the government can supply a new aluminum smelter with energy at shorter notice because there is a larger surplus of energy since the Blanda power plant is now in operation.

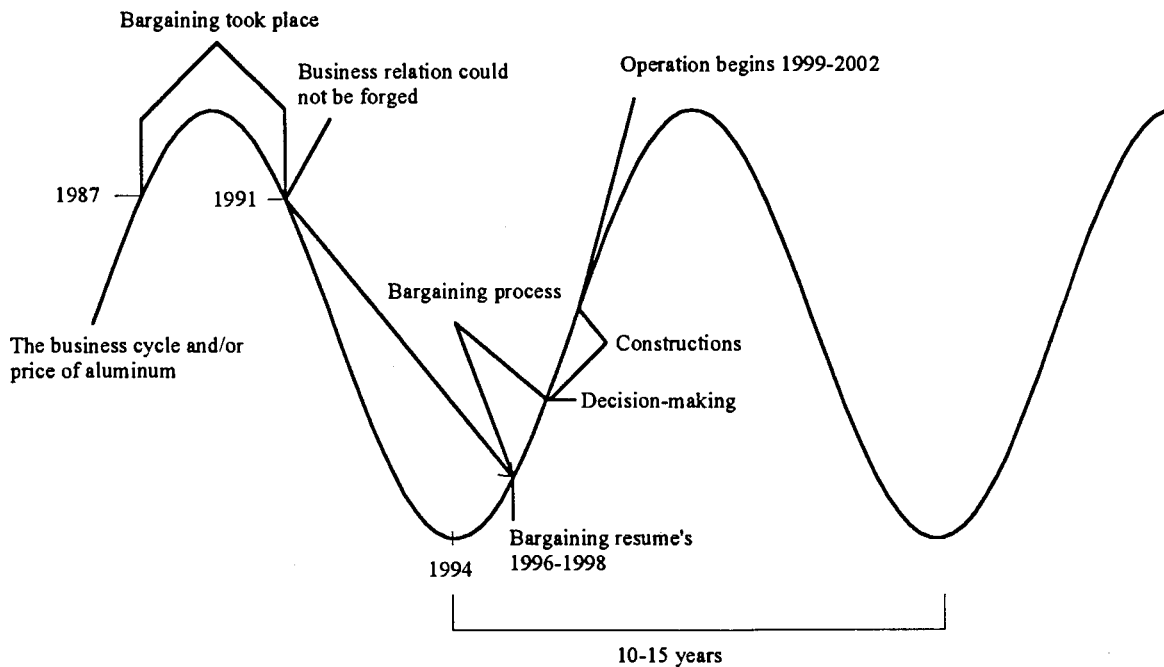


Figure 5.11. The Bargaining Process between the ATLANTAL-Group and the Icelandic Government 1987-1991, and the Possibility of Forging a Business Relationship in the Future.

The model, of optimum timing (Figure 5.10) can also be applied to explain other negotiations, such as the negotiations between the Icelandic government and Alusuisse (1961-1966) outlined in chapter 4. Those negotiations were ongoing in the 'post-war era'

which was known for its stable economic growth. It was fortunate, however, that the negotiations were not delayed and that the operation of ISAL began in 1969 because if the start-up or the negotiations had been delayed for a few years, for one reason or another, the turbulent economic times of the early 1970s (oil crisis) could have altered the negotiation situation. The situation could have become conflicting and the two parties would not have been able to forge a business relationship. These turbulent times affected the power agreement and it rendered obsolete during the early 1970s, originally the price of power was to remain unchanged for 15 years. This implies that the negotiations with Alusuisse during the 1960s were ongoing at the optimum time for both parties, and that is one of the reason why the parties reached a negotiable situation.

CHAPTER VI CONCLUSION

The aim of this concluding chapter is to assess the research question set out in chapter one, that is, 'To compare the different bargaining processes and to assess how the spin-offs of the first bargaining process affected the second'. In addition, some comments on the framework adopted in this thesis will be offered.

The Bargaining Framework

In this thesis the bargaining framework introduced in Chapter 2 has been applied to examine bargaining processes between the Icelandic government and aluminum MNCs. The intention was to examine the negotiations and interpret industrial location as a result of location conditions created by the bargaining processes.

The structure of bargaining emphasizes the bargaining power and ability of participating actors. The concept of bargaining power is not easy to interpret and the literature examining bargaining power overlaps and is contradictory. Nevertheless, this thesis has demonstrated the validity of interpreting industrial location as a bargaining process. Certainly, the power of the aluminum MNCs in the negotiations with the Icelandic government can be recognized. The Icelandic government has changed laws, for example taxation laws, to simplify the entry process for MNCs, aluminum MNCs do not have to pay import duties, they are offered lower electricity price than other firms in Iceland, and in the second case study the Icelandic government had to accept the ATLANTAL-group's location choice. In spite of these considerations, Nordal (1994) argues that Iceland had, and still has, probably a little better bargaining position when negotiating with the ATLANTAL-group than when the government negotiated with

Alusuisse 30 years ago. He argues that valuable experience, learning, and spin-offs, from the last three decades, have been gained. In addition, he argues that the development of power production is also an important factor regarding the government's bargaining situation. The Blanda power plant is now operating and it would take a shorter time to provide a new aluminum smelter with energy now than few years ago.

As Chapter 3 outlines, the aluminum industry needs some specific location conditions, such as cheap energy, so that operation can be economically justified. Iceland is not the only country in the world that can offer aluminum smelters favourable location conditions and since the country began focusing on attracting aluminum MNCs, during the 1960s, the country has faced fierce competition from other countries which offer similar conditions, such as Norway and Canada.

The first bargaining process examined in this thesis (Chapter 4) is a little simpler than the second one (Chapter 5). In the negotiations between Alusuisse and the Icelandic government all issues were negotiable and a Master Agreement was signed. The second case, that is the negotiations between the ATLANTAL-group and the Icelandic government all issues were, also, negotiable. However, a final agreement could not be signed. During the negotiations the two parties reached a preliminary agreement but due to external reasons, namely turbulence in the global economy and fluctuations in aluminum prices, it was impossible to sign a final agreement. In chapter 5 the importance of timing is introduced. Contreras and Gregersen's (1975) framework does not consider time as a major factor in the bargaining process but as has been shown by the model of optimum timing (figure 5.10) it is an important factor and can even be the deciding factor whether an investment takes place or not. Indeed, the bargaining process is often very time consuming and economical changes in the world can happen with a short notice and alter the negotiation situation.

In the framework of the bargaining process the importance of minimum requirements is described. According to Contreras and Gregersen (1975) the outcome of the bargaining process depends on these minimum requirements. This view is not entirely the case in either negotiations examined in this thesis. Alusuisse did put forward minimum requirements at the beginning of the negotiations with the Icelandic government in 1961 but as the negotiations evolved these requirements were changed. The same applies to the second case where neither the Icelandic government nor the ATLANTAL-group appeared to put forward any specific requirements. Contreras and Gregersen's framework can also be criticized as it does not assume for other participants in the negotiations. In both case studies in this thesis other participants play an important role, especially the World Bank in the first case study. Financial institutions were not the only other participants, regional or local governments and/or opposition parties, in the parliament, affect the outcome directly and should be included in the framework of the bargaining process.

However, the bargaining framework does explain two important things; first, how location conditions are created through the bargaining process and ultimately where aluminum MNCs locate; and second, it determines the international competitiveness of a country's aluminum industry. Through negotiations the Icelandic government has created one of the most favourable location conditions for a new aluminum smelter in the world. Alumax's president and CEO Born (1994) continues:

"...when we see that the increase in demand (for aluminum) has risen high enough, we will resume with our plan to construct a new smelter at Keilisnes which is without a doubt our first choice as a location for a new smelter." (Born, 1994).

The Case Studies Compared: Bargaining, Spin-offs and Power

Evidently during the negotiation with Alusuisse 1961-1966 the prospects of MNCs was first debated in Iceland. It became a fierce debate which focused on the impact that a MNC would have on a recently developed economy and the impact it would have on the future economic structure and even independence of a small island nation. This debate, the experience of the negotiations with Alusuisse, and then later the operation of ISAL aluminum smelter, obviously affected the more recent negotiations with the ATLANTAL-group.

The experience of the ISAL smelter has been good. Since operation began in 1969 the relationship between the smelter and all participating interest groups, such as labour, government and the local government, has been good and most people seem to agree that the agreement made in 1966 and the revisions that followed was a good contract for the nation. Therefore it is not surprising that the government emphasized expansion of the aluminum industry. The experience and the learning process from the first negotiations is a valuable asset for the government when preparing for another bargaining process. It should be noted that learning and experience is not only important for the government, MNCs are also better prepared because they have also experiences from past projects which they can use to strengthen their bargaining situation. It should be noted that not everybody agrees that the Master Agreement with Alusuisse was a good deal and as long as a government participates in negotiations with MNCs the critics of the government will always argue that the government made a bad deal by arguing, for example, that electricity price is too low, taxes are too low, and the government did not require 'state of the art' pollution control equipment.

Nordal (1994) argues that though learning has been a very important factor concerning future investments in the country it has not increased Iceland's bargaining

power, except a little. He points out that a country's bargaining power results from competition with other countries. During the last 25 years Iceland's competition has mostly been coming from Canada and Norway. What these countries offer MNCs, price of power, taxation, environmental regulation, costs, labour, and other important issues, is what Iceland can get. These countries, and specially Canada, Canada has been known for its foreign investment policies, set the standards which others have to follow. The competition is as harsh today as it was during the last three decades, though it is not coming from Canada any more as other countries for example Venezuela and Russia (or Siberia) have become important. The country's bargaining power will still be based in offering cheap and environmentally accepted energy and a low risk location in the form of stable economic and political environment. It can therefore be argued that Iceland is in a better bargaining situation now than when negotiations with Alusuisse began. This better bargaining position is a result of the learning process and the experience from the ISAL project. However, as Kobrin (1987) (Figure 2.5) explains, relative bargaining power can shift between the HC and MNC over time. There is a possibility that the ATLANTAL companies have gained bargaining power during the delay of the ATLANTAL project because during the period 1991-1994 aluminum MNCs have closed smelters and/or reduced production, so the possibility exists that some regions could have considerable amount of surplus energy which they are prepared to sell for a low price.

Future Research Questions

This thesis is an in-depth research of the bargaining process between the government and aluminum MNCs. However, in a work such as this it is impossible to address every relevant issue and, as such, certain issues remain undressed.

First, there is the question of the actual economical impact of foreign direct investment in Iceland. Foreign investment entry barriers to protect resources are still in an effect, especially in protecting the fishing industry from foreign investment. Recent changes in Europe may make it impossible to keep these barriers and as Europe grows into one unit, the EU, it will be difficult for a small island to stand outside. If Iceland joins the EU the country will lose, in part, its management power over the fishing industry. It will be difficult to measure the impact, not only economic but also social and political, if the country joins the EU. This, however, will probably be unclear until after negotiations and bargaining with the EU.

Second, there is the issue of bargaining power. According to Nordal (1994) the bargaining power, of a nation, is a result of competition between countries but as argued in chapter 2, bargaining power is a controversial issue that is very difficult to measure. However, is there anything that the government can do to strengthen its bargaining power and increase its bargaining ability?

Finally, there is the question of the future of power intensive industries in the country. The most recent phenomenon concerning further utilization of the energy resource is exporting energy through a cable directly to Europe. Today, there is ongoing research on whether it is possible, technologically and economically, to do this. If this is possible how would that affect Iceland's economy? This has been criticized because by doing this the country would be exporting jobs abroad. Nordal (1994) argues that the nation would not lose its attractiveness as a location for power intensive industry, because energy prices in Europe must be at least 10-15 mills higher per KWh than in Iceland before this is possible. This means that MNCs will still want to locate in Iceland because the country will still hold its advantages, that is being able to provide cheap energy and a low risk location and at the same time create jobs in Iceland. Another issue that has been criticized regarding this development is that it would be very difficult for such a small

economy to provide capital for construction of many power plants simultaneously so that the project can be economically justified. Project of this magnitude would also have a huge impact on the environment and it is likely that environmental groups and others would oppose to such development.

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Appendix 1

Memorandum between the Icelandic Government, Alusuisse and the World Bank.

Memorandum of meetings between representatives of the Icelandic Government, Alusuisse and the World Bank, held in Zürich from December 15 to 17, 1964. The following points were discussed, it being understood that the positions taken by the representatives of Alusuisse and the Icelandic Government are subject to the approval of the Board of Alusuisse and of the Icelandic Authorities.

Part 1

General understandings

1. Introduction

A single potline aluminum smelter with an annual output capacity of approximately 30.000 ton of virgin metal will be constructed at Straumsvík in the Hafnarfjordur area and put into operation not later than the permanent delivery date for power. A sufficient supply of power will be provided for operation of the smelter, that is, 55 MW of continuous power, from the prospective Búrfell power plant and interconnected power plants.

2. Price of power

The price of electricity to the smelter to be a basic amount of 0.25 US cents per KWh for the first fifteen full years of operation, with no change for the ensuing ten years of operation other than for an adjustment of variable costs for electricity in relation to changes incurred in cost of labour and operating supplies.

It is envisaged that during the first ten years the price of power will be 0.30 US cents per KWh, with a corresponding reduction in applicable taxes (as to which see paragraph 4 below).

3. Guaranteed Minimum Annual Amount

The power sales to the smelter company will be under a "take or pay" contract, in which the smelter company will be obligated to pay for a minimum of 450 Gwh per annum irrespective of use, subject only to force majeure as may be defined and the effects thereof.

4. Taxes

a) During the first 25 full years of operation taxes due by the smelter company shall be as follows:

(1) For the first fifteen full years of operation a fixed amount of US\$ 20 per metric ton of metal shipped. This fixed amount to increase by US\$ 7 per metric ton for every one cent per lb by which the world market price shall increase beyond 27 cents/lb. Fractions pro rata.

(2) After fifteen full years of operation the tax per metric ton of metal shipped shall increase to US\$ 35 subject to the effects of a change in world market price as per sub-paragraph (1).

It is specifically envisaged that as long as the price of power is 0.30 US cents per KWh (see paragraph 2 above), the tax per ton of metal will be \$ 7.50 less.

b) The problem of exempting the proposed aluminum smelter from any and all customs duties, taxes, fees and other charges levied on capital goods and raw materials, supplies and products entering Iceland or leaving Iceland, is thought to be best achieved by establishing, through Act of Parliament, an industrial freeport extending over the whole plant area.

c) Apart from the tax to be levied on the smelter operation according to sub-paragraph a) above, the smelting company shall not be liable to pay any taxes, State, municipal or other, which are or may be imposed in Iceland except such levies as are

(1) in the nature of social security charges or fringe benefits to labour, such as the contribution to the State Unemployment Fund, the similar contribution to the State, Housing Fund and accident insurance premiums as are paid by other Icelandic employers, or

(2) are in the nature of services rendered to the smelter company.

Alusuisse shall at all times be exempt from taxation in Iceland in connection with the smelter company, and its possible winding up, and it shall at no times be deemed to have a permanent establishment in Iceland.

d) Registration fees and other expenditures connected with the incorporation of the smelter company shall be kept at a reasonable level. Alusuisse would not expect such expenditures to exceed 2.2‰ (two and two tenths permille of the paid-up share capital).

5. Guarantees by Alusuisse

Alusuisse will guarantee

- a) the annual minimum payment referred to in paragraph 3
- b) other payment obligations of the smelter company to the Icelandic Government and the Power Company
- c) construction of smelter by escrow deposit or other satisfactory technique.

6. Miscellaneous

- a) The cost of the smelter site shall be reasonable whether it be a purchase price or a yearly rental.
- b) The Government shall grant, free of charge, a concession for sinking water wells at a suitable place on or near the plant site.
- c) The Government shall charge harbour fees directly related to the financial and operating charges involved taking into account harbour movements for third parties.
- d) The Government shall grant normal credit facilities to employees of the smelter company (other than Alusuisse personnel) desiring to construct or purchase a house. If it proves necessary, at a later stage, to implement a larger scale housing program the smelter company will not be required to provide adequate infrastructure such as roads, water mains, sewers, electricity, and so forth.
- e) In order to avoid incurrence of problems arising from possible foreign exchange control regulations, it is assumed that payments for metal received are limited to what is required to meet operating expenses in Iceland including Icelandic tax liabilities and that therefore, they do not include capital charges and profits. The smelter company shall at all times have at its disposal in Iceland reasonable liquid funds to meet its current obligations.

7. Scope of Contracts

It is the intention that the scope of the contract be limited to the proper activities of the smelter company. In this connection and in line with the practice generally followed in other Alusuisse reduction plants the production of the smelter shall include alloyed or unalloyed remelt ingots, rolling and extrusion ingots, wire bars, continuous casting of strip, rod and slugs and in general all products starting from liquid metal out of the smelter's cast house. The smelter activities will not include fabricated products such as hot and cold rolled sheet, extrusions and forgings. The Icelandic representatives will seek technical advice on this matter and inform Alusuisse of their position.

Part II

Major Issues To Be Resolved

Both parties, the representatives of Iceland and of Alusuisse, agree on necessity of having clear provisions regarding the expansion of the smelter and the duration of the contractual arrangements.

1. Duration of Contracts

Alusuisse expects the agreement between the parties to have a duration of 50 years subject to extension each time the parties agree on installing additional plant capacity.

In respect of the second period of 25 years of operation of the initial 30.000 ton stage Alusuisse expects to be granted an option for an extension of the power contract and of the tax convention on terms and conditions which will enable the smelter company to continue operations on an economic basis.

2. Expansion of Smelter

Alusuisse expects being able to start operation of a second 30.000 ton potline approximately three years after completion of the first 30.000 ton potline. Alusuisse is prepared to notify the Icelandic Government of its final decision regarding a firm commitment for an additional block of 55 MW no later than 24 months after start-up of the first 30.000 ton potline.

Alusuisse desires the Icelandic Government to grant an option to contract for such additional block of 55 MW on terms and conditions in every respect identical to those applicable for the initial 30.000 ton potline.

Beyond the 60.000 ton stage Alusuisse is prepared to consider carefully the erection of a second aluminum reduction plant in Iceland to be located in the general area of Akureyri.

The Icelandic representatives propose instead of such option, to give Alusuisse a letter of intent regarding the expansion and its terms and conditions.

(Alusuisse, 1964c, pp. 1-6).

Appendix 2

Preliminary agreement between the Icelandic government and the ATLANTAL-group

During the period from June to October 1990 the two groups met frequently to negotiate important issues, for example taxation, price of power, etc. These negotiations lead to a memorandum of agreement between the Icelandic government and the ATLANTAL-group signed on October 4, 1990, and is as follows:

- Whereas the Parties signed a Declaration of Intent to Conclude Negotiations on the ATLANTAL Project on March 13, 1990 in Reykjavík; and
- Whereas the Parties signed a Protocol on the Progress of Negotiations on the ATLANTAL Smelter Project, dated June 28, 1990; and
- Whereas the Government intends to present to the Parliament this autumn a Bill of Law on an Enabling Act on the ATLANTAL project; and
- Whereas the Parties intend to proceed with further work relating to the ATLANTAL project leading to the appropriate board approvals set out in the Declaration of Intent and the Protocol; and
- Whereas the Parties have continued their negotiations on the ATLANTAL smelter subsequent to the Declaration of Intent and the Protocol and are now in a position to resolve certain major issues relating to the ATLANTAL project;

NOW IT IS HEREBY AGREED AND DECLARED AS FOLLOWS:

ARTICLE 1. CONDUCT OF NEGOTIATIONS.

The Parties confirm that the negotiations on a new aluminium smelter in Iceland ("the ATLANTAL Smelter") have proceeded in a satisfactory manner.

ARTICLE 2. UNDERSTANDING IN PRINCIPLE ON MATTERS RELATING TO THE MASTER AGREEMENT.

2.1. The Parties have reached understanding in principle on the following contract issues relating to the Master Agreement:

- (a) General legal structure of the project, in particular the share holding in ATLANTAL Ltd. ('the Company') through Holding Companies and the objects and operations of the ATLANTAL Companies.

- (b) Organization of the ATLANTAL Companies under the Icelandic Companies Act as to be further provided in an Enabling Act, the equity of the Company, citizenship and rules related to board members of the Company.
- (c) Establishment of an Advisory Committee.
- (d) Provisions governing transfer of shares in the ATLANTAL Companies and the effect of such transfers, the vesting of security interests on shares related to project financing.
- (e) Basis of operation, particularly the Company being operated on tolling basis, and the basis for reimbursement by the Holding Companies of operating costs of the Company.
- (f) That the procedure for the granting of the Environmental Operating License will be in accordance with Icelandic Law.
- (g) The training, employment and hiring of Icelandic personnel and the use of Icelandic materials and services.
- (h) The Government's option to purchase a 5% portion of the Company's production for further processing in Iceland.
- (i) Granting of rights regarding working capital and foreign exchange.
- (j) Icelandic law will govern the agreements and disputes will be generally settled under Icelandic law by Icelandic courts or alternatively by arbitration pursuant to Icelandic law.
- (k) The term of the agreement will be 25 years from the effective date with two options to extend contract terms.

2.2. The Parties have reached understanding in principle that the ATLANTAL Companies will generally be taxed pursuant to Icelandic law and that the following principles of taxation will be applicable:

- (a) In order to avoid double taxation of the ATLANTAL Companies in Iceland, resulting from the corporate structure, the Company will be exempt from income tax and the Holding Companies will be exempt from turnover tax.
- (b) An income tax rate of 30% will be paid by the Holding Companies. The income tax will be based on deemed profit pursuant to an agreed method of calculation, but excluding certain deductions.
- (c) Deductions for income tax calculation include, inter alia, the cost of alumina and a fixed overhead rate of 4% of deemed revenue.
- (d) A turnover tax of 0,77% will be paid by the Company on its turnover.
- (e) A property tax will be paid at a rate of 0,75% and a property tax base of 160 MUSD with certain discounts for the first few years. The agreed value of property will be converted into Icelandic krónur on the average exchange rate in October 1990 indexed to the building index for October 1990.
- (f) Double taxation of the ATLANTAL Companies will be governed by principles of existing international conventions and, in their absence, by the Nordic Convention on Avoidance of Double Taxation.
- (g) Exemptions will be provided from import, export and excise duties for construction, maintenance and operating material, equipment and supplies, importation of raw materials, export of metal and used materials.
- (h) Exemptions from VAT will be provided for electric power, main imported raw materials and the cost reimbursement.

- (i) Stamp duties will be 0,15 per cent. Shares and documents relating to refinancing shall be exempt from stamp duties.
- (j) The principles of reviewing tax arrangements will be provided for.
- (k) Principles of Accounting will be provided for in the Master Agreement allowing among other things for depreciation of assets in full.
- (l) Disputes relating to taxation shall be settled before Icelandic courts and can only be referred to arbitration if they are of principal importance to the performance of rights and obligations of the Parties to the Master Agreement.

2.3. Working drafts of the Master Agreement generally reflecting the understanding set out in Sections 2.1. and 2.2. above have been circulated among the Parties.

ARTICLE 3.

UNDERSTANDING IN PRINCIPLE ON MATTERS RELATING TO THE POWER CONTRACT.

3.1. The ATLANTAL companies and the National Power Company are carrying out negotiations on a power contract for the ATLANTAL project. The negotiations are proceeding and progressing in a satisfactory manner. Understanding in principle has been reached on certain major issues related to the Power Contract as set out in Annex 1 hereto.

3.2. Working drafts of the Power contract have been exchanged between the Parties.

ARTICLE 4.

ENVIRONMENTAL AFFAIRS - LICENSES.

4.1. The ATLANTAL smelter will be built utilizing state of the art technology for the production of primary aluminium, the cast house operations and for environmental protection.

4.2. Following discussions in June of this year between representatives of the Ministry of the Environment and the ATLANTAL group, the group have submitted an application on an environmental operating license. Understanding has been reached in principle on the following issues relating to the procedure and legal framework there of:

- (a) The application will be processed according to Icelandic law and regulations.
- (b) The license will be issued and maintained for a period equal to the term and any extended term of the Master Agreement.
- (c) The license may only be revised or modified (at intervals to be agreed upon) if,
 - i) As a consequence of global environmental conventions new devices, measures or equipment to control air, water or solid waste emissions, effluent or discharges have generally been imposed and implemented in OECD countries on primary aluminium smelters designed at approximately the same time as the ATLANTAL smelter and that incorporate similar design and technology as the ATLANTAL smelter; and

- ii) New devices, measures or equipment are required by Icelandic law; and
 - iii) Local conditions at Keilisnes require that the new emission controls be implemented.
- (d) Implementation at the ATLANTAL smelter of any license modification will be phased in over a reasonable time frame and shall take into account the financial conditions relating to such implementation in OECD countries. The smelter shall in every respect be accorded treatment under Icelandic law, regulations and administrative practices no less favorable than that accorded in like situations to other Icelandic enterprises.

4.3. Concurrent with or prior to the closing date for signing of the agreements entered into on the ATLANTAL project, an Environmental Operating License, and Industrial License, a Commercial License and a Building Permit for the project will have been issued.

ARTICLE 5. SITE AND HARBOUR AGREEMENT.

The ATLANTAL Smelter will be constructed at Keilisnes on Vatnsleysustrond and will have an initial rated capacity of approximately 200.000 mtpy. Negotiations with the respective Municipalities will be continued in order to complete a smelter site and harbour agreement as set out in Annex 2 hereto.

ARTICLE 6. OTHER BASIC AGREEMENTS ON THE PROJECT.

The ATLANTAL group have been negotiating agreements concerning the establishment, organization and operation of the ATLANTAL Companies and will also have to obtain off-balance sheet Project Financing on terms acceptable to the individual firm.

ARTICLE 7. FURTHER WORK.

The Parties will proceed with their negotiations on all outstanding issues and on all other preparations, such as those referred to in the Declaration of Intent and the Protocol. The ATLANTAL group reiterate their intent to present individually the overall project to their respective parent company boards for consideration and decision according to the time schedule established therein.

ANNEX 1. UNDERSTANDINGS IN PRINCIPLE ON THE POWER CONTRACT.

Understanding in principle has been reached on the following contract issues in the Power Contract to be entered into for the ATLANTAL Project between the National Power Company and the Company:

- (a) The power price which will be calculated as a certain percentage of aluminium price with an initial period of discounts and a floor and cap for the years 1994 through 1996.

- (b) The power supply will be for approximately 3000 GWh per year, with 90% delivered as firm power.
- (c) The obligations of the Company will include an obligation to take or pay for 90% of the firm power during any 10 consecutive years.
- (d) The contract will contain a fairness clause.
- (e) Certain of the terms and conditions for power delivery with delivery starting in 1994.
- (f) The power contract period will be for 25 years with the Company having the option to extend the contract period by two additional five year periods.

The power contract, when finalized, is subject to board approvals.

ANNEX 2. UNDERSTANDING IN PRINCIPLE ON HARBOUR AND SMELTER SITE AGREEMENT.

Understanding has been reached in principle on the following basic issues relating to the Smelter Site and Harbour Agreement:

- (a) The Company will have the option to purchase or lease the necessary site at Keilisnes for a smelter with a capacity of approximately 400.000 metric ton per year as well as the necessary site for the harbour connected with the smelter.
- (b) The Company will have the option to build and operate the harbour, with the Municipalities having secondary right of usage for other purposes.
- (c) The Municipalities of the Sudurnes Region or the Municipality of Vatnsleysustrandarhreppur, as the case may be, will provide services such as water supply, waste disposal etc. as requested with prices established on cost basis.

Signed in Reykjavík on October 4, 1990.

For the Government of Iceland:

By: Jon Sigurðsson

For The Icelandic Negotiating Committee:

By: Johannes Nordal

For the Municipalities of the Sudurnes Region:

By: Oddur Einarsson

For the Municipality of Vatnsleysustrandarhreppur:

By: Jon Gunnarsson

For Alumax Inc.:

By: Robert R. Goble

For Gränges AB:

By: Ulf Bohlin

For Hoogovens Aluminium BV:
By: Hans G. D. van der Ros

(Icelandic Government and the ATLANTAL group, 1990 pp. 5-10).