



Finding market opportunities in



SOUTH KOREA









Foreword

Korea and Norway enjoy close bilateral economic and trade relations. Korea is at present Norway's second largest trading partner in Asia. Trade with Korea has increased considerably over the last few years, and the importance of our co-operation continues to grow.

Until recently contacts were mainly linked to shipping and shipbuilding. These sectors are still the most important, but we are now entering into a new phase in our cooperation. Norwegian companies have invested or are considering possible investment in Korea. We also witness enhanced cooperation in technological fields, fisheries and seafood.

Last year, Norway and Korea established a bilateral economic consultation committee. The first meeting of the committee took place in Oslo in June 2000. At the same time the Federation of Korean Industries and the Confederation of Norwegian Business and Industry reinvigorated their cooperation through the Korean-Norwegian Economic Cooperation Committee (KNECC). In March 2001 Norway and Korea intend to sign an agreement on cooperation in fisheries a most promising sector for mutually beneficial cooperation.

The Norwegian Govcrnment has actively supported economic and cultural cooperation between our two countries and we are looking forward to further strengthening our economic, trade and cultural cooperation. Cultural cooperation is important for promoting understanding and cooperation between countries. Oslo University has started courses in the Korean language and Hankuk University of Foreign Studies, Seoul, teaches Norwegian.

Korea and Norway are both committed to democracy, human rights and the market economy. We have much in common, especially in the economic field. We both see our future based on a knowledge-driven economy and international trade liberalisation. We share interest in international peace and security in North-east Asia and the world. All Norwegians admire President Kim Daejung's active commitment to democracy and human rights and they were very pleased that he was awarded the Nobel Peace Prize last year in recognition of his work in these fields and for his efforts to promote peaceful reconciliation with North Korea.

Norway participated in the Korean War with a field hospital. Our friendship dates back to that time and to our medical cooperation after the war. Norway has resumed her membership in the United Nations Command.

I rest confident that our traditional cooperation will be further strengthened and expanded as we move forward in The New Millennium.

International Business has selected an interesting and most promising country for their study in 2001.



Thorolf Raa Norwegian Ambassador to Korea

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The Embassy of the Republic of Korea, Norway.

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Economic Support

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Statens Nærings- og Distriktsutviklings Fond (SND) The Research Council of Norway (Forskningsrådet) Nordic Project Fund (Nopef) The Nordic Industrial Fund (Nordisk industrifond)

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and timely decision to focus on Korea this year. We recently celebrated our 41st anni-

I am delighted that the renowned

student project led by International

Business have made the appropriate

Park Kyung-tai Ambassador of The Republic of Korea in Norway versary of establishing official diplomatic relations between Norway and Korea and after four decades of friendship, a new chapter is opening in the Norway-Korea cooperation. The first Joint Economic Committee Meeting, headed

by the Norwegian Minister of Trade Grete Knudsen and the Korean Minister of Trade Han Duck-soo respectively, was held in Oslo in June 2000.

Korea and Norway share a bright common future due to our history, new technology, natural endowments and values. We believe that there are ample opportunities to promote bilateral economic cooperation in areas such as shipbuilding, information technology and even in the field of environment and petrochemicals. And with our recent economic reform and recovery, Korea is being transformed into a new economy.

With Korean dynamism, I am confident that Korea is one of the most exciting economic opportunities in the world today.



Grete Knudsen Minister of Trade and

Industry

Through the Strategic Plan for Asia, the Norwegian government actively supports the strengthening of economic relations between Norway and Asia. After two years with economic downturn and turmoil, there are now strong signs of recovery in most of the region, and South Korea is leading the recovery by an impressive growth of ten percent last year.

After steady increase of our exports to Asia throughout the 1990s, Asia has

surpassed North America as Norway's second largest regional export market, and South Korea has for many years been among Norway's leading trading partners in Asia. Shipping related activities have been the foundation of the business relationship between South Korea and Norway. However, we are now beginning to see that Norwegian companies are looking to Korea for opportunities also in other sectors. A forum for economic consultations at government level, referred to as the Joint Economic Committee, was established last year. The choice of South Korea as the theme for this year's International Business project reflects the growing economic relations between Norway and South Korea.

The Norwegian Trade Council opened its office in Seoul in 1979. This was the result of the growing interest among Norwegian exporters of ships' gear to utilize the potential of the expanding Korean shipbuilding industry. Norwegian promotional activities in Korea in the 1990s spread to the building materials and to the automotive parts sectors.



Thin (, Illichur Theis S. Ulriksen Regional Director

Over the past 5 years, the Norwegian Trade Council has urged Norwegian exporters to take a closer look at the Korean fish market based on the increasing imports of fish in the country. This year Korea was put on the priority list of the Norwegian Fish Export Council (EFF). An extensive promotional campaign is now being planned in cooperation with our organization's office in Seoul. Our office will also conduct a market survey of the construction materials market within the year.

To conclude, I will like to emphasize that the Norwegian Trade Council looks at South Korea with great enthusiasm and optimism. We consider our long presence in the market as a contribution to what has been achieved by Norwegian exporters so far - and hope that the future will bring even better results.

About International Business

International Business (IB) is an annual project carried out by students attending the Norwegian University of Science and Technology (NTNU), the Norwegian School of Economics and Business Administration (NHH) and the Norwegian School of Management (BI). The main purpose of the project is to study potential markets for international business ventures, and support Norwegian enterprises entering these markets. Since its beginning in 1984, IB has visited all continents. Every year, with the support from the Norwegian Trade Council, IB selects a foreign emerging market to focus on.

Events and developments beyond our borders are essential to a small country like Norway. Globalisation pulls foreign markets and the opportunities they offer closer to us. To take advantage of these opportunities, information and knowledge is essential. IB's primary goal is to provide information on all the areas that are important to enterprises wanting to set up business or invest in a foreign market. IB also develops the participating students' international awareness and skills, and is a forum for contact with the business sector.

International Business is an independent student organisation, and is fully responsible for the content of this report.



Høyere grads studier i kombinasjon med jobb

NHH har flere studietilbud i Oslo for deg som ønsker videreutdanning på høyere grads nivå. Studiene arrangeres som intensive samlinger som gjør det mulig å kombinere studier med jobb. Teoretisk kunnskap kombinert med deltakernes egne erfaringer danner grunnlaget for erfaringsbasert læring og gir større kunnskap og bredere perspektiver. Deltakerne følger hverandre gjennom hele programmet og får gode muligheter for erfaringsutveksling, samarbeid og nettverksbygging.

MBA I ELEKTRONISK HANDEL (MBA in Global eManagement)

internasjonalt program i samarbeid med fem internasjonale business schools. Globalt teamarbeid, internasjonale samlinger og studieinnhold med fokus på hvordan individer og bedrifter kan opptre effektivt i den nye digitale økonomien.
Søknadsfrist 15. mai 2001

MBA I OFFENTLIG ØKONOMI OG Ledelse

(MBA in Public Economics and Management) – ledelse, markedstilpasning, fristilling og kunderetting av offentlige bedrifter og etater. Hvordan kan offentlig sektor best ivareta sin rolle som eier, regulator og tjenestetilbyder? Søknadsfrist 1. juni 2002

MBA I ØKONOMISK STYRING OG Ledelse

(MBA in Cost and Performance Mangement) – for nåværende og fremtidige ledere i privat og offentlig virksomhet. Økonomisk styring i et bredt perspektiv der ledelse, moderne verktøy og ny forskning står sentralt. Søknadsfrist 1. juni 2001

MBA I STRATEGISK LEDELSE (MBA in Strategic Management)

ledelsesutfordringer i en nasjonal og global sammenheng. Neste program igangsettes 2002.
Søknadsfrist 1. desember 2001

мтм

(Master in Technology Management)

 - i samarbeid med NTNU. Studiet kombinerer kunnskap om utvikling og ledelse av teknologi med det nyeste av tenkning innenfor strategi og organisasjonsledelse. Studiesteder Trondheim, Bergen og MIT, Massachusetts, USA.
 Søknadsfrist 1. oktober 2001

AUTORISERT FINANSANALYTIKER-STUDIUM

(AFA-studiet)

 - i samarbeid med Norske Finansanalytikeres forening. Gir autorisasjon som finansanalytiker og tittelen Certified European Financial Analyst.

Nærmere opplysninger om studiene og andre etter- og videreutdanningsprogram fås ved henvendelse til NHH, seksjon for etter og videreutdanning, tlf 55 95 96 00, e-post: etterutdanning@nhh.no, eller våre hjemmesider: www.nhh.no/etterutdanning.



In this section you will find an introduction to the Republic of Korea, usually referred to as South Korea. We believe that knowledge about the political, economic, social, cultural and technological development of a country is vital in order to understand its business climate. Hopefully, reading this chapter will bring you a little bit closer.









The Korean Sunshine Policy

By Professor Dr Moon Chung-in

In 2000, South Korea's president Kim Dae-jung was awarded the Noble Peace Prize for his lifelong work for democracy and human rights in Asia, particularly for peace and reconciliation between the two Koreas. Kim's active policy of co-operation with North Korea is widely spoken of as the "sunshine policy". The term originates form Aesop's fable about the traveller who in a strong north wind drew his cloak ever more closely about him, only to have to take it off in the end because of the warmth of the sun. Professor Dr Moon is a Dean at the Graduate School of International Studies, Department of Political Science, Yonsei University, and one of the architects behind the sunshine policy. The following article is an abstract form his speech given at the Rafto Prize Seminar "The Two Koreas: Sunshine Policy, Democracy and Human Rights" held in Bergen, November 2000.

The Korean peninsula has long been considered the last relic of the Cold War era, where protracted military tension has outweighed prospects for peace and stability. Defying the global trend of progress toward post-Cold War order, both Koreas have engaged in the vicious circle of suspicion, distrust, and mutual negation, often flaring up in military clashes. Perpetual insecurity and fear of war have haunted the Korean people.

Technically speaking, North and South Korea are still in a state of war, and it would be virtually unthinkable for the South Korean leader to pay a visit to the heart of the enemy's territory. However that is exactly what happened in June 2000. At the first historic North-South Korean summit, which was held in Pyongyang, President Kim Dae-jung and Chairman Kim Jong-il produced the 15 June Joint-Declaration, the basic document guiding peaceful co-existence and national unification on the Korean peninsula.

No doubt, the summit meeting and the 15 June declaration are a product partly of the Kim Dae-jung government's sunshine policy, a proactive policy to induce incremental and voluntary changes in North Korea for peace, opening, and reforms through a patient pursuit of reconciliation, exchanges, and co-operation. The sunshine policy goes beyond simple engagement. It comprises several components such as military deterrence, international collaboration, and domestic consensus. Nevertheless, its objective is crystal clear: to lay the foundation for peaceful Korean unification by stopping the vicious cycle of negative and hostile actions and reactions.

Kim Dae-jung initially used the analogy of sunshine in order to persuade the American government to pursue a soft-landing policy in dealing with North Korea. On 30 September 1994, Kim Dae-jung, who was then a defeated presidential candidate, gave a speech at the Heritage Foundation in Washington, D.C. While praising Jimmy Carter's visit to North Korea and the subsequent defusing of the North Korean nuclear crisis through negotiations with Kim II-sung, Kim noted that "America must be patient and stick to the 'sunshine policy' which has proved to be the only effective way to deal with isolated countries like North Korea." Citing a well-known Aesop's fable on 'wind and sunshine,' Kim argued that sunshine is more effective than strong wind in inducing North Korea to come out of isolation and confrontation.

When Kim was elected president, the sunshine policy became the official North Korea policy of the South Korean government. In a speech delivered at the School of Oriental and African Studies, London University, 4 April 1998, Kim described the policy as follows: "The Republic is now able to push a North Korean policy with selfconfidence arising from firm public support. I have been steadfast in advocating what I call a 'sunshine policy' which seeks to lead North Korea down a path toward peace, reform and openness through reconciliation, interaction and co-operation with the South. As President, I will carry out such ideas step by step."

The summit talk has entailed a stunning breakthrough in inter-Korean relations. The two Koreas have now entered a brave new world of reconciliation, exchanges, and cooperation. Although de jure unification is still far away, peaceful co-existence and de facto unification appear to be near. By all accounts, the summit talk was a dazzling success. It has shown that North Korea is not an eccentric rogue state to be contained, but a normal, calculating state that deserves political space for dialogue and negotiation.

However, there are still numerous obstacles to peaceful co-existence and Korean reunification. Leadership in both Koreas must not only avoid the politicisation of inter-Korean issues for domestic political purposes, but also overcome domestic division and opposition. Improved

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inter-Korean relations cannot be envisaged without pacifying domestic forces and forging a viable national consensus. Reunification cannot be achieved without first achieving peace. Keeping this in mind, both Koreas should make every effort to turn spectres of war into rays of peace and to transform division into reunification with patience, prudence, and inter-subjective understanding.

The Professor Thorolf Rafto Foudation for Human Rights

Kim Dae Jung was awarded the Rafto Prize 2000 for his untiring fight for democracy and human rights. His politics of reform in South Korea together with his policy of conciliation and involvement in the situation in North Korea, better known as "sunshine policy", render hope for a peaceful and democratic development with respect for fundamental human rights on the entire Korean Peninsula. Kim Dae Jung is a visionary political leader who converts his ideas concerning democracy and human rights on the entire Korean Peninsula.

The papers from the Rafto Seminar 2000 will be published in November 2001. Address: Menneskerettighetenes plass 1, N-5007 BERGEN, NORWAY

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Politics

POLITICAL SYSTEM

CONSTITUTION

The National Assembly approved South Korea's new constitution in October 1987, replacing the constitution of 1980. It was the first constitution to be revised and adopted by both the opposition and the ruling party. The new constitution changed the election of the president from indirect election to a direct election, and changed the president's term from seven to five years. Reflecting the past influence of the armed forces on South Korea's political life, the constitution stipulates that the armed forces maintain "political neutrality".

NATIONAL ASSEMBLY

The National Assembly consists of at least 200 members. Today there are 273 members, where five-sixths of the seats are won by popular first-past-the-post elections. The remaining seats are distributed among the parties winning five or more seats, based on the national vote. The elected members serve for four years. Since the presidential term is five years it is possible that a president will be under different political control from the legislature.

THE PRESIDENT AND THE CABINET

The President performs his executive functions through the Cabinet. The Cabinet consists of 15 to 30 members, and is presided over by the President, who is solely responsible for deciding all important government policies. The President selects the Cabinet members upon recommendation by the Prime Minister. In addition to the State Council, the President has two presidential agencies under his direct control to formulate and carry out national policies: The Board of Audit and Inspection, and the National Intelligence Service. The Cabinet members do not need to be members of the National Assembly or to be approved by it, but they cannot hold positions in the armed forces. They have the right to lead and supervise their administrative ministries and deliberate major state affairs. Cabinet members can act on behalf of the President but only in separate cases when they have been given this authorisation. They have the right to appear at the National Assembly and express their opinions. Members of the Cabinet are collectively and individually responsible only to the President. The Prime Minister nominally heads the Cabinet.

THE PRIME MINISTER

The Prime Minister is appointed by the President, and approved by the National Assembly. As the principal exe-cutive assistant to the President, the Prime Minister supervises the administrative ministries and, under direction from the President, co-ordinates government policy. The Prime Minister can attend meetings in the National Assembly, and has the power to issue decrees in his own name. The Prime Minister can also recommend the President to appoint or dismiss members of the Cabinet.

LOCAL GOVERNMENT

Korea only had its local elections in the early 1990s, and elections are held every four years. Today there are 16 provincial-level governments, and 235 lower-level local governments (municipal governments), including 72 city governments, 94 county governments, and 69 city district governments within the provincial-level cities like Seoul and Pusan. The 16 provincial-level governments consist of the seven largest cities in South Korea and nine provinces. Provincial governments basically serve as an intermediary between the central and municipal governments. Thus, their administrative systems resemble smaller versions of the central government's system. Municipal governments deliver services to the residents through an administrative district system. Each municipal government has several districts that serve as field offices for handling the needs of their constituents. District offices are engaged mainly in routine and simple administrative and social service functions.

FOREIGN POLICY

The Korean peninsular is divided at the 38th parallel, and its relationship to the communist North influences South Korea's foreign policy. No peace treaty has ever been signed between the two countries, so at the present moment, technically they are still at war. Historically South Korea has tight bonds to the US because of security reasons, and approximately 37 000 US soldiers are stationed in the country. The tense situation after the Korean War, and the following heavy military spending has made the peninsular one of the most militarised areas in the world. South Korea's foreign policy has evolved since the late 1980s, from an almost non-existent regional foreign policy, to strong efforts to improve relations with neighbouring countries. President Kim Dae-jung has worked actively to establish better ties between the Asian countries. The goal is to prevent future economic crises and decrease the gap between the rich and poor countries in the region. South Korea is a founding member of the Asia-Pacific Economic Co-operation (APEC), and the country has diplomatic relations with more than 170 countries. and a broad network of trading relationships. Economic development and trade have been strong factors in Korean foreign policy in the last years, and the country aspires to increase its regional and global role. South Korea became a part of OECD in 1996, and has therefore eased up on trade sanctions and the protectionist trade policy of the past. South Korea is situated between three major forces in world politics. China, Japan and Russia have all tried to influence South Korea in different ways. This has made South Korea rather protectionistic, but this has changed in the last few years. The end of the Cold War and the opening of China have improved the two countries' trade and political relationship. Today South Korea has stabile ties to China, and trade between the two countries is growing. South Korea has previously experienced a high degree of tension towards Japan, but after normalising the relationship in 1965, the two countries have evolved with strong focus on mutually beneficial economic activity. In later years the two countries have also extended their cultural ties and Japan and the South Korea are co-hosting the 2002 World Soccer Championships.

POLITICAL FIGURES

HISTORIC PERSPECTIVE

From the election of the first so-called democratic president in 1948, won by civilian Ree Syngman, the ruling parties have always had a political stronghold through their majority, while opposition parties have had little influence. The two following presidents, Park Chung-hee (1961-79) and Chung Doo-hwan (1980-88), seized power with strong military support. Up until 1988, the power of the government and National Assembly was limited, due to the strong political influence exerted by the armed forces who tended to view the opposition as being disloyal to the regime. Therefore oppositional parties could not safely challenge the constitutional basis on which the government was based, at least not until the mid-1980s. Roh Tae-won (1989-93) was a military nominee of his pre-decessor, but he was elected president in 1988 in a relatively fair and free election. Visible signs of the military losing its stronghold came in 1992, when civilian

Kim Young-sam was elected president, in again a relatively clean election. It was a political milestone in South Korean history, and marked the decline of a military regime. The last presidential election in 1997, won by Kim Dae-jung, was historic, as it was the first time since the country's founding that a peaceful transfer of power by an elected president to a successful opposition candidate took place. It was also a milestone because it was the most peaceful, most open and least expensive election campaigns in South Korea's history. The election confirmed the near end of political influence from the armed forces. Reflecting the past influence of the armed forces on South Korea's political life, the constitution stipulates that they are to maintain "political neutrality"



MAIN POLITICAL FIGURES

• Kim Dae-jung, whose power base is in the Cholla region in the south-west, where he commands 90% of the votes. Also leader of the MDP.

• Lee Han-dong is Prime Minister and leader of the rightwing ULD. He was a member of the GNP until early 2000 when he defected to ULD.

• Lee Hun-jai is finance and economy minister and former head of the Financial Supervisory Commission, where he won respect and popularity for his efforts in reforming South Korea's financial sector.

• Lee Hoi-chang is former Prime Minister and head of the Board of Audit and Inspection. He leads the conservative GNP and is also a strong candidate for the 2002 elections. • Rhee In-je is a former governor of Kyonggi province. He ran for presidency in 97, but is also a nomination candidate for MDP in the 2002 presidential elections. This is due to his role in helping the MDP pick up votes in the ULD's Chungchong area for the April 2000 National Assembly election.

• Kim Jong-pil was Prime Minister during the two first years of Kim's presidency, and was also the brains behind Park's coup in 61 and founder of the feared Korean Central Intelligence Agency. He is honorary chairman of the ULD, which he founded.

POLITICAL FORCES

POLITICAL PARTIES

The problem of South Korean opposition parties has been a tendency to split over issues of personality rather than principle. The political landscape has long been drawn along regional divides. There is a high degree of regional antagonism, and there is a fine line between the different political ideologies. Currently, there is not much sign of intra-party democracy emerging; so-called "parties" remain little more than groupings of factions loyal to a man or region. At the prospect of an election, the usual opportunist splits and realignments will resume. A political party in South Korea has up until now never usually lasted more than three to four years. When Kim Dae-jung returned from exile in 1985, he and Kim Young-sam, the leader of the extra-parliament opposition at that time, were unable to work together. The 1987 election of Roh Tae-woo on a minority vote was a consequence of the splitting of an opposition vote between Kim Dae-jung and Kim Young-sam. This led to an unexpected realignment in 1990, when Kim Young-sam crossed the floor to merge his party with the ruling Democratic Justice Party (DJP). This new right and centreright party, called the Democratric Liberal Party (DLP), boosted by other small conservative parties, held a power grip. Kim Dae-jung's faction was left as the only and heavily outnumbered opposition party in the National Assembly. With the parliamentary elections in April 1992, the new governing party barely retained its majority with the support of independents. After a brief retirement, Kim Dae-jung returned to politics in 1995 with a new party, the left-leaning National Congress for New Politics (NCNP). During 1993, the factions that made up the DLP were becoming increasingly strained, due to the tension between the old guard associated with the military regime of the 1980s, and reformers around Kim Young-sam. Kim Young-sam's need to mend relations with the right wing of the party, led him to prosecute both Roh Tae-woo and Chun Doo-hwan on corruption

charges. This move led to the DLP being renamed the New Korea Party (NKP) in 1995. After the National Assembly election of April 1996, the NKP was able to secure a majority and the party was renamed the Grand National Party (GNP) in the run-up to the 1997 presidential elections. However, the new name and merger did nothing to prevent the party's decreasing popularity, due to corruption scandals involving Kim Young-sam and the country's growing economic problems. Also Rhee In-je's decision to leave the ruling party and run for president on his own and thus splitting the conservative vote, was one of the main reasons for the GNP's defeat in the 1997 elections.

After his election, Kim Dae-jung's NCNP and its coalition partner, the ULD, held a minority seat in the National Assembly. Due to defection of GNP members to the government however, the coalition were able to attain a small majority. In February 2000, the ULD left the coalition. However, some senior ULD members still remain in their cabinet posts. To this date, Mr Kim's plans for splitting the GNP for the benefit of his own party, the newly named Millennium Democratic Party (MDP), has failed. The perseverance of the GNP is due largely to regional antagonism benefiting the party. GNP has maintained a stronghold in the south-eastern Kyongsang provinces, and especially in the two largest cities, Pusan and Ulsan. The government's corporate restructuring has had a severe impact on the two industrial centres, resulting in strong resentment towards the ruling party, and thus increasing the opposition's popularity in that area. The MDP on the other hand, has its power base in the Cholla regions in the south-west.

POLITICAL ISSUES

The issues and controversies that preside in the political landscape have changed over the years. In the 1980s, the opposition-centred on the New Democratic Party, tended to focus on politically narrow issues, such as the constitution, control of the media and trade-union rights. They had few reservations about the government's broad development strategy or its reliance on private enterprise. Today, other issues have been put on the agenda; the government coalition led by President Kim are focusing on pushing through political reforms to end corruption that has long prevailed in the Korean political and economic environment. Furthermore, the government is looking for ways to increase transparency and consistency in the economic policies and in the corporate structure. The restructuring process has resulted in increased unemployment, which the government is trying to combat by giving economic aid, as well as focusing on the welfare of the people and economic stability.

As a result of the 1997 economic crisis and IMF bailout, the government is also tightening its grip on government spending requirements. Furthermore, the ruling party (MDP) with President Kim paving the way, is concentrating its resources on North-South relations, resulting in dissatisfaction from the opposition, claiming that the government is downplaying important intra-Korean political issues. President Kim, going into his fourth year of presidency, continues to meet resistance from the opposition. As a minority ruling party, the MDP fails to gather support from the opposition on important political bills. Among them is a bill to privatise the state-owned Korea Electric Power Company (KEPCO) and also completing the financial reforms initiated by the ruling party. President Kim plans to re-establish a government information office (the National Information Agency), where opposition claims that it is a move by the ruling party to tame the press in order to realign political power. The GNP wants a clause added to an anti-corruption law that will appoint a special prosecutor that can examine cases involving influential politicians. The future power struggle will focus on issues that are important to the voters in the different regions, as the 2002 elections are drawing nearer. President Kim must also face intra-party conflicts, due to his promises of revising the constitution to replace the presidential system with a parliamentary one.

The President made this promise to the ULD at the start of the coalition. The reforms would give more power to

the office of the Prime Minister. That is a promise he has yet to initiate. In the meantime, the President's power seems only to be growing.

POLITICAL LANDSCAPE

- The Millennium Democratic Party (MDP), with 115 seats in the National Assembly, is the governing party. It is led by President Kim Dae-jung.
- The United Liberal Democrats (ULD), with 17 seats in the National Assembly, give strong support to the MDP.
- The Grand National Party (GNP) is the largest single party in the National Assembly, with 133 seats, and is the main opposition party. It is led by Lee Hoi-chang.
- Independents and others hold the balance, but are likely to support the government.
- Democratic People's Party (DPP) with 2 seats in the National Assembly (formed by defectors from the GNP)
- Democratic Justice Party (DJP) with 125 seats in the National Assembly.

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Economy

THE EAST ASIA MIRACLE

In the 1993 World Bank report "The East Asia Miracle", the development of the South Korean economy for the past three decades was described as nothing less than miraculous. Accompanied by Hong Kong, Singapore, and Taiwan, Korea managed to sustain average annual growth rates of output per person well in excess of 6 % in the period from 1960 to 1990, and the countries were named the "East Asian Tigers" because of their powerful and, to some, intimidating economic performance. In just 30 years, Korea managed to transform itself from a warravaged society into the world's 11th largest economy. While the average resident of a non-Asian country in 1990 was 72 times richer than his parents were in 1960, the corresponding figure for the average Korean is no less than 638 %. [Sarel 1997]

MIRACULOUS GROWTH?

The spectacular growth of these economies amazed the economics profession, and a torrent of books and articles have attempted to explain the phenomenon. However, economic growth being a truly complex process, there are large differences of opinion and the debate has yet to see its conclusion. The "miracle theories" presented by the World Bank rested on research showing that productivity improvements accounted for as much of 30 % of total growth in the tiger economies. The Bank sees this

CHAEBOL: THE KOREAN CONGLOMERATE

The Korean chaebol are highly centralised, familybased, industrial and business conglomerates. As a parallel to the Japanese keiretsu, the first Korean conglomerates were founded in the 1920s and 1930s when the country was under Japanese colonial rule. Japan planned Korea's economic development according to its own market needs, and set up a series of companies that were privately owned and run, but strictly controlled by the central government.

After his 1961 take-over, President Park Chung-hee reinforced the chaebol system. A few specially selected companies were nurtured by the state and encouraged to tailor their growth and production targets to meet government objectives. Accordingly, the tremendous growth of the chaebol was closely tied to Koreas' export-promotion policies. The conglomerates outstanding productivity growth as a result of the marketoriented, and particularly export-oriented policies of these countries. [WB 1993].

More recent research presented by Krugman, Young and others, claims that, rather than productivity, it is factor accumulation that has been the most important element in propelling these economies' development. In a study presented in 1993 Young was able to trace nearly all of the growth in the tiger economies to accumulation of physical and human capital, drawing their productivity growth ratings "from the top of Mount Olympus down to the plains of Thessaly". Young claimed that for the period of 1966-90, productivity growth in manufacturing varied from a low negative 1 % in Singapore to a respectable but not miraculous 3 % in Korea. The "miracle" to explain, according to these economists, is no longer the growth in itself, but how Asian countries managed to invest at such a sustained and high level. [Young 1994][Krugman 1994]

GROWTH IN SOUTH KOREA

FAVOURABLE INITIAL CONDITIONS AND DOMESTIC CAPITAL ACCUMULATION

Despite of their differences, virtually all accounts of South Korea's growth place emphasis on the role of favourable socio-economic conditions. While the South Korea of the early 1960s was still quite poor, the countrys social

derived high profits from the sale of goods to a protected domestic consumer market and foreign markets opened up by an aggressive mercantile strategy. As a result, they rapidly expanded into multinational corporations. During the period from 1985 (after recovering form the 1970's oil price shocks) to 1997, the statechaebol combine appeared to be unstoppable in international markets. The deep pockets of commercial banks, that were extremely responsive to government wishes, provided the basis for the chaebol to carve out market shares in Europe, Asia, and North America, and Hyundai, Daewoo, Samsung and Lucky Goldstar became international symbols of the Korean success story. However, the chaebol-led industrialisation resulted in an extremely oligopolistic structure of the Korean economy. Capital and economically profitable activities were concentrated in the hands of a limited number of conglomerates and families.

Source: [NUS]

indicators placed it among the ranks of countries with several times it sincome level. For example, primary school enrolment in South Korea was virtually 100 %, while the norm for countries at their income level was about 60 %. [Adelman and Morris]

GOVERNMENT INTERVENTIONS AND EXPORT-LED GROWTH

The South Korean state has played an active interventionist role in the development of the country's economy. In post-war Korea, an institutional framework for high-speed industrialisation was developed as a close working relationship between the state and the private sector. The state picked winners, provided them with subsidised credit through a government-directed banking system, and protected them from foreign competition in domestic markets.

The Park regime, which came to power in 1961, introduced a new, outward-looking policy. Breaking with the protectionist import-substitution strategy of the 1950s, the new government pursued comprehensive export promotion. Exporters were provided with extensive direct export subsidies and other incentives, including tax exemption, and export loans with preferential interest rates. In 1964 the government devalued the domestic currency by almost 100 % against the US dollar, further eliminating the bias against export industries. [Lee 1993] Export-oriented industrialisation led to rapid growth and series of structural changes. During the 1962-73 period, the real value of total exports increased by 30 % per annum. Consequently, the share of exports in GNP soared from 6.0 % in 1962 to 30 % in 1973. This remarkable growth of export was accompanied by a change in export structure. The share of industrial products in total exports increased dramatically from 27 % in 1962 to 86 % in 1973.

In the early 1970s, the Korean economy was hit hard by price increases in oil and the following world recession, and export growth slowed. The government was concerned with the country's decline in competitiveness in the world market, and started promoting new strategic export industries and import substitution of intermediate inputs and capital goods. As a consequence, massive investment programmes to promote heavy and chemical industries such as shipbuilding, steel and petrochemicals were introduced. The share of heavy and chemical industry products in total exports rose from 21.3 % in 1972 to 34.7 % in 1978. [Lee 1993]

Another consequence of these large-scale investment projects, was the development of an increasing excesses of capacity in these industries. Since government investments relied heavily on foreign borrowing there was also a persistent deficit in current account with external debt growing rapidly throughout the 1970s.

LIBERALISATION AND INDIRECT GUIDANCE

The year 1980 marked a local crisis in the Korean economy. The second oil shock and a disastrous crop failure hit the frail, recovering economy. The problem was exacerbated by political and social instability following the assassination of President Park in October 1979. For the first time since 1957, Korea faced a negative GDP growth rate of -2.7 %, and the inflation rate soared to 22.4 %. [Lee 1993] The new government, under the leadership of President Chun Doo-hwan, started a wide range of policies directed toward market liberalisation. The strategy of direct government intervention was altered towards one of indirect guidance. All subsidised policy loans were reduced and eventually eliminated under the financial market liberalisation programme. The Ministry of Finance reduced its tight control over the commercial banks, foreign investment was partly deregulated and import liberalisation accelerated. It did not take long for Korea's economy to benefit from these policy reforms. In 1981, the economy bounced back from its contraction the year before to record 6.6 % growth, and the current account deficit shrank USD 0.7 bn, to USD 4.6 bn, helped by a USD 3.5 bn increase in commodity exports. This progress continued throughout the rest of the decade. Real GNP growth from 1982 through 1988 averaged 10.5 %. The trade account turned to surplus in 1986. During this period the economy generated about 2.8 million new jobs, and the unemployment ratio sank to an unprecedented level of 2.5 %.

WHAT MADE KOREA VULNERABLE TO THE FINANCIAL CRISIS IN 1997?

The underlying cause of the crisis lies in certain characteristics of the Korean economic system, which had clearly achieved tremendous success during the 35 years prior to the crisis. While it promoted rapid growth in the past, certain aspects were less suited to face the more competitive open economy and more integrated product and capital markets of the 1990s. Specifically, the system encouraged excessive risk-taking and insufficient attention to credit and exchange rate risks. These characteristics reflected two factors. First, market institutions and principles were not sufficiently developed. For example, Korea lacked an effective corporate governance system to guide investment decisions by the chaebol, as well as independent financial institutions to ensure that capital was allocated efficiently. Second, there was insufficient prudential regulation. Instead, a "too big to fail" mentality created a serious moral hazard, for both the financial and corporate sectors, while at the same time investment decisions seemed to respond more to the objective of growing in size than assuring adequate profitability.

KOREA'S STRUCTURAL WEAKNESSES PRIOR TO THE CRISIS

A number of important structural weaknesses made Korea vulnerable to the financial turbulence sweeping through Asia during 1997. Among them, the following are likely to have been particularly important:

- The corporate sector was characterised by low levels of profitability and high levels of debt, reflecting the tendency of the business conglomerates to diversify into capital-intensive industries using short-term bank loans.
- The Korean financial system, already in a weak condition and operating inefficiently, was further weakened by a string of major corporate bankruptcies in 1997.
- The lack of proper prudential supervision allowed an excessive build-up of short-term foreign debt – far exceeding Korea's foreign exchange reserves – following a partial liberalisation of the capital account.
- Excessive debt and low returns, leading to a wave of corporate failures.
- A very weak financial sector and a very high level of short-term foreign debt.

THE FINANCIAL CRISIS

Liberalisation and growth continued into the 1990s. In 1996, Korea was accepted as a member of the OECD, and agreed to remove specific restrictions on the movement of capital and invisible operations. The Asian financial crisis (in Korea often referred to as the IMF crisis) started in Thailand on 2 July 1997, with the 20 % devaluation of the bath, and rapidly spread to the other South East Asian economies. In October it had started spreading north, and the speculative pressure against the Hong Kong dollar, The Taiwan (China) dollar and the Korean won (KRW) intensified. The South Korean financial system had been under strain since early 1997, when a chain of corporate defaults exposed a shortage of liquidity in the market. Cash-flow problems facing several large corporations resulted in an increase in the proportion of nonperforming loans held by commercial banks. In late August 1997, the government announced plans to help finance any troubled financial institution that submitted a self-rescue plan. At that time total aid was estimated at USD 3.9 bn; bad loans held by the financial sector had reached USD 29 bn. In late October, external financing conditions deteriorate significantly and the KRW fell sharply. By early December the KRW had depreciated by more than 20 % against the USD and usable foreign exchange reserves were dramatically drained. On 4 December, South Korea and the IMF agreed to a USD 58 bn loan package, the IMF's largest rescue plan to date. [IMF 1999]

THE POLICY RESPONSE TO THE CRISIS

The immediate objective of the government of the newlyelected President Kim Dae-jung was to put a halt to the financial crisis and the slide of the currency. To this end Korea initially adopted very tight macroeconomic policies to restore stability in the financial and exchange markets. However, the broad range of structural reforms announced and initiated by the government to establish a more market-oriented economy appeared to play a key role in the early recovery, by building up confidence. The financial system, the corporate sector and the labour market were included in the programme, along with a comprehensive review of existing regulations. Together, they constitute one of the most far-reaching efforts of structural reform ever implemented in an OECD country. The ceiling on total foreign shareholdings in individual companies was abolished May 1998 and foreign investors are now allowed to acquire 100 % of a company without approval by the board, except in some "strategic" business lines substantially reduced in number since the end of 1997. In addition, to encourage inflows of FDI the

government also streamlined the administrative process by establishing a one-stop shop and expanded the scope and generosity of tax incentives available to foreign firms.



ENHANCING TRANSPARENCY

Transparency is at the core of good governance as it allows shareholders and creditors to monitor management and to prevent managers and controlling shareholders from taking actions in their own interest at the expense of that of the company. The key element of the government's drive for increased transparency is the introduction of mandatory combined financial statements for the largest chaebol starting in 1999 and quarterly reporting as of 2000. The combined statements will include disclosure of intra-company transactions and individual affiliate information, as well as segmented reporting. The amendment of the Financial Accounting Standards Act in December 1998 brings Korean practices closer to international accounting standards. In addition, listed companies with assets of more than KRW 100 bn are now required to appoint a full-time statutory auditor.

IMPROVING THE CAPITAL STRUCTURE OF FIRMS

The top five groups agreed with the government and their creditor banks in December 1998 to reduce their debt-to-equity ratio to below 200 % by the end of 1999. The top five groups were able to reduce their debt-to-equity ratios substantially from 470 % at the end of 1997 to 302 % in mid-1999, somewhat ahead of the interim target. Most of the decline was due to new rights issues. Companies that fail to achieve the 200 % objective risk being refused additional loans from the banks, which, moreover, may call in existing loans.

INCREASING LABOUR MARKET FLEXIBILITY

Increased labour market flexibility has been essential to the progress in corporate restructuring. Prior to the crisis, the scope for layoffs was limited by judicial rulings, which tended to be favourable to workers. As the new government identified labour market flexibility as a key element in corporate restructuring, the labour law was revised in February 1998 to allow firms to shed labour for managerial reasons, including M&As. Labour market flexibility was also enhanced by the decision to allow the employment of temporary workers, known as "dispatched workers" in Korea, for up to two years in 26 occupations and the easing of regulations on private job placement agencies. Along with measures to improve the functioning of the labour market, a more promising approach is to continue promoting a rapid expansion of Korea's limited social safety net to deal with the threefold rise in unemployment. The expansion of the social safety net has been an important factor in the early economic recovery.

REVIEW OF GOVERNMENT REGULATION

The new government also targeted regulatory reform as a key element in the shift to a more market-oriented economic system. The Regulatory Reform Committee was given the task of reviewing the approximately 11 000 regulations in existence in early 1998. The review was to be based on five principles:

- Eliminating, in principle, all anti-competitive economic regulations
- Improving the efficiency of social regulation in such areas as environment, health and safety
- · Shifting from ex ante control to ex post management
- · Basing regulation on adequate legal authority
- · Benchmarking of global standards

Priorities were given to: foreign exchange and transaction regulations to encourage foreign investment; industrial and land use regulations to liberalise business activities; business regulations to promote competition; and reform of procedures and regulations related to the daily life of citizens.

In less than one year, the Committee has met its ambitious target of halving the number of regulations on the statute books. In addition, it has reformed two-fifths of the regulations that remained. The effect of this item-by-item approach on the costs and benefits of regulation is difficult to measure, but a 50 % reduction in a short time period appears to have resulted in real and significant changes.

THE ECONOMIC RECOVERY IN 1999

In the wake of the crisis, Korea adopted tight monetary and fiscal policies in an attempt to stabilise the exchange rate. The economic impact of the crisis and of these policies was severe. In the first half of 1998, private consumption fell 11 %, imports 26 % and investment in machinery and equipment 42 %. The number of unemployed tripled from half a million prior to the crisis to 1.5 million in 1998, while wages declined. Despite the severity of the recession, the government's commitment to reform never wavered. The Korean economy has achieved an early and strong recovery from this severe recession.



Korea's progress in introducing the wide range of structural reforms appears to have had a significant impact in restoring the confidence that was lost during the crisis at the end of 1997. Increased confidence is reflected in several positive developments. First, inflows of foreign direct investment (FDI) have soared in the past two years. In 1998, they rose 27 % to a record USD 8.9 bn and a further 85 % in the first ten months of 1999. Second, direct investment has been accompanied with inflows into the Korean stock market. Third, the upgrading of Korea's credit rating to investment grade by three major agencies symbolised a recovery in both domestic and foreign investors in Korea's economy. Thus, progress in structural reforms encouraged capital inflows that boosted foreign exchange reserves and helped the exchange rate recover.

Interest rates have been sharply reduced. After peaking at more than 30 % at the end of 1997, the overnight interest rate was kept above 20 % through April 1998 in an effort to stabilise the exchange rate. But with the exchange rate having recovered to around KRW 1 400 to the USD, reducing interest rates became the priority of the central bank. Since the beginning of 1999, the overnight rate has been kept below 5 %. The easing of monetary policy was accompanied by supportive fiscal policy as government expenditures increased to address the problems created by the crisis. In particular, spending to assist the unemployed played a key role in sustaining domestic demand.

The contribution of fiscal policy in attenuating the decline in output and maintaining social cohesion has been thus fundamental to Korea's recovery from the crisis. A final factor promoting the recovery has been favourable external conditions. In particular, the appreciation of the Japanese yen in the fall of 1998 had a beneficial impact, given the competition between Japanese and Korean products in many markets.

SUSTAINING THE RECOVERY

The fiscal consolidation process was scheduled to begin in 2000 in line with the objective of balancing the central government budget by 2004. It is true that the financial position of Korea's government remains relatively sound. It is one of only three OECD countries in which the government is a net creditor, reflecting the legacy of sound fiscal policies. However, Korea has experienced a sharp rise in gross central debt -- from 11 - 19 % of GDP during the years 1998-99. In addition, government-guaranteed debt has soared as a result of the financial restructuring programme. Given the impact of the demographic transition, which will boost the cost of the public pension system, and the uncertain but large costs of the eventual economic integration with North Korea, stabilising government debt should become an important objective.



Sustaining recovery will depend largely on the strength of final private demand. Looking ahead, as the recovery carries on, the central bank is trying to ensure that inflation does not slip back to the 5 % average annual rate recorded in the years to 1997. Sustaining the recovery is necessary to completely overcome the negative effects of the crisis. In particular, there are signs of a worsening of income distribution and the labour force participation rate of women has fallen significantly.

ENHANCING KOREA'S LONG-TERM GROWTH POTENTIAL

As Korea's future growth will increasingly depend on new sources of total factor productivity growth, establishing market principles and institutions will be essential to improving the allocation of resources and raising the gains in output per unit of input. In this regard, improvements in the financial system and in the corporate governance framework to emphasise profitability and efficiency appear to be important.

PRINCIPLES TO GUIDE REFORM

Korea now faces the hard task of putting the new system into practice through changing behaviour. This will take time as new human capital is developed. For example, banks are no longer able to rely on guarantees but will need time to develop skills in the area of credit risk analysis. And in the corporate sector capital management skills will have to develop. Three principles would appear to be important in putting the new market-oriented system into practice. First, it appears important to encourage competition. Second, further increasing transparency is essential. The third, and most difficult principle, is to reverse the legacy of government intervention in the __economy.



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IMPORTANT POLICY EVENTS AFTER THE CRISES

December 1997:

The KRW is allowed to trade freely. The domestic bond market is opened fully to foreign investors. The government closes nine merchant banks. South Korea negotiates a bail-out package of nearly USD 60 bn with the IMF and other bilateral and multilateral lenders. As a condition of receiving the funds, the government has to agree to pursue tight fiscal and monetary policies and undertake a programme of farreaching economic liberalisation. The Bank of Korea (BOK) Law is revised, giving the central bank more independence.

February 1998:

The National Assembly passes the revised Labour Standard Law, which makes it easier to lay workers off. Bankruptcy laws are revised to accelerate the exit of insolvent firms.

March 1998:

International bankers agree to roll over USD 18 bn of short-term debt owed by South Korean banks into medium- and long-term debt.

April 1998:

The government issues its first sovereign bond worth USD 4 bn. Chaebol are forbidden to issue new guarantees of subsidiaries' debts. The Financial Supervisory Commission (FSC) is launched. The revised BOK Law becomes effective.

May 1998:

Restrictions on mergers and acquisitions by foreign investors are abolished. The ceiling on foreign ownership of most listed companies is abolished.

July 1998:

Five non-viable banks are liquidated and their assets are transferred to five other healthy banks. International standards for defining non-performing loans are adopted.

September 1998:

The government loosens fiscal and monetary policy in an attempt to stimulate domestic demand. This has the blessing of the IMF. The Big Deal business swaps are announced.

November 1998:

The Foreign Investment Promotion Act is enacted. Restrictions on foreign direct investment now remain on only 31 out of 1 148 sectors.

January 1999:

Consolidated financial statements become mandatory. The Financial Supervisory Service (FSS), the executive body of the FSC, is launched. The Medium-term Fiscal Plan, which aims to balance the budget by 2006, is announced.

March 1999:

The trading of government bonds starts on the Korea Stock Exchange.

April 1999:

The first phase of the complete deregulation of foreignexchange transactions is implemented. The final stage will take place by end-2000. The Korea Futures Exchange opens in Pusan.

May 1999:

The government sells part of its stake in Korea Telecom to overseas investors for USD 2.5 bn.

August 1999:

The government places the Daewoo Group under a debt-rescheduling accord and orders it to restructure.

February 2000:

The BOK raises the overnight call rate by 25 basis points to 5 %, becoming the first country hit by the 1997 regional crisis to tighten monetary policy.

April 2000:

The creditors of Samsung Motors agree to let Renault of France take a 70 % stake in the firm, allowing Renault to become the first foreign company to own a South Korean car manufacturer.

June 2000:

The Ford Motor Company of the US is chosen as the preferred bidder for the bankrupt Daewoo Motor company.

October 2000:

General Motors Corp. announced that the GM-Fiat consortium has agreed with creditors of Daewoo Motor to discuss the acquisition of its passenger car division and related operations after the Ford Motor Company pullout in September.

January 2001

Hyundai Engineering & Construction and Hyundai Electronics saved from bankruptcy. Corporate bonds were issued by the Korea Development Bank.

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Society and Culture

HISTORY

The Korean people have an enormous amount of pride in their history, culture and arts. The influences on their culture goes back more than 5 000 years. According to the written history of Korea, the earliest state was founded by Tangun, the mythical progenitor of the Korean people. This tribal state, called Ancient Choson, terminated around 100 B.C. with advent of the "Three kingdoms", Shilla, Paekche and Koguryo. Three kingdoms were followed in the 7th century by the Unified Shilla in the south and Parhae which succeeded Koguryo in the north. Thus Korea entered a brief period of two kingdoms which ended with the fall of Parhae. In the 10th century, the Koryo Dynasty gained foothold on the Korean peninsula, followed by the Yi Dynasty in the 14th century, which ruled until 1910 when the Japanese invaded Korea. After the liberation in 1945 American forces occupied the south of Korea as Soviet forces took hold of the North. By mid-1949 most of the American and Soviet troops had withdrawn from the peninsula. Two important factors then led to the Korean war: With help from China and the Soviet Union, North Korea had created an effective military organization and was much better equipped than the South. Secondly there was a strong sentiment to unite the peninsula, and the U.S. Secretary of State, Mr Acheson, publicly stated that the Korean peninsula was out of the U.S. perimeter of defence. The North Korean army crossed the 38th parallel on 25 June 1950. An armistice was agreed upon in July 1953, but no peace treaty has ever been signed. Beginning in 1962 Korea launched a series of five-year economic development plans. As a result, Korea emerged as one of the industrial leaders among developing countries.

PEOPLE

POPULATION

At the end of 1999, the population of South Korea was estimated to be 46.85 million with a registered density of 471.5 persons per square kilometre. A notable trend in the population structure is that it is getting increasingly older. The 1999 statistics showed that 38.4 % of the total population was under 25. The number of people of productive age, 15 and above, rose from 33 872 000 in 1994 to 36 655 817 in 1999. Another distinct but unwelcome phenomenon is the continuing migration of rural residents to cities, resulting in heavy population concentrations. Currently, one out of every four Koreans lives in Seoul. The urban population increased to 86.4 % by 1999, up from 74.4 % in 1990. To cope with the growing urban problems caused by such an imbalance, the Government initiated a long-term manpower development plan. The plan aims at dispersing population to provincial areas through the relocation of economic activities and balanced land development. The latest figures now show a decrease in population in Seoul.

Minority groups are almost non-existent in Korea, apart from some 13 640 Chinese who are mostly long-term residents in the capital area. Today Korea is thought to be one of the most homogeneous states in the world.

FAMILY RELATIONSHIPS

Traditionally, Koreans are proud of their good relationship among family members. They think that respect for the elderly is the most noble attribute of Korean society. Elderly people give advice to the younger generation, and the younger people submit to the elder's wise advice. Korean families are often called a "small society." They feel a strong responsibility about bringing their home as a part of the social educational centre. Although the idea of individualism and economic growth brings family division, most Koreans do not forget that the family is the most important group for themselves as well as for the country. There are still many extended Korean families who live with three generations. Firstborn sons are often obliged to take care of their parents. These traditions are mainly derived from Confucianism.

LANGUAGE

Korean is spoken by between 50 and 60 million people world-wide, predominantly in North and South Korea, as well as among immigrant communities in Japan, China and Russia. The classification of the Korean language is still under debate, but it is considered to be a member of the Korean-Japanese branch of the Altaic language family. The written language is called Hangul, and it has a phonetic alphabet that makes it much easier for Westerners to learn than Chinese or Japanese. Some Korean consonants are midway between two English ones in sound, so P and B, K and G, T and D, and to some extent CH and J are used interchangeably when spelling in English. The vowels U and OO are also interchangeable.



RELIGION

The most notable among many features which make Korean culture unique and distinguished is its complexity, arising from the combined influences of Shamanism, ancestral worship, Buddhism, Confucianism and Taoism. Freedom of religion is guaranteed by the Korean Constitution.

Buddhism: Buddhism reached Korea in the 4th century, and flourished in the Koryo Period. Today, about 48 % of Koreans believe in Buddhism.

Protestantism: It was brought to Korea in 1885. Today approximately 37 % are believed to be Protestants with that number set to increase further.

Catholicism: The surge of Christian mission activitiy reached Korea in the 17th century when copies of Catholic missionary Matteo Ricci's works in Chinese were brought from Beijing. About 12 % of Koreans are Catholics.

Confucianism: It was brought to Korea in A.D. 4 and proclaimed as a National Religion in the Choson Dynasty. Koreans have maintained the custom, habits and thought patterns derived from Confucian teachings, although only 1 % consider Confucianism as their main religion.

Shamanism: Spirit worship or nature worship is Korea's oldest belief. This system of belief persists in Korea today, but less than 2 % are considered being shamans.

ARTS AND MUSIC

Korean people traditionally adapted to and found meaning in the order of nature. Wanting to teach the hidden meanings of nature to their children and believing them as law and order in their daily lives, they created beautiful



and diverse patterns. These patterns can be found almost everywhere you look in Korea, from the Taegeuk in the national flag to the animal designs on chopsticks in restaurants. Many symbols are similar to the Chinese characters for luck, fortune, longevity, and fertility.

Traditional Korean art symbolises the

importance of being in harmony and balance with nature one has to look closely to find human beings in Korean paintings; they blend in with the nature that is the main focus of the painting.

Koreans have always had a deep love for music and dance. Traditional Korean music is comprised of court and folk music. Court music is slow, solemn and complex. The dances that go with this type of music are stately and highly stylised. Folk music, in contrast, is usually fast and lively, with vigorous dancing. Singers go through years of training to cultivate a distinctive sound of their own. Musical performances can be a memorable part of any visit to Korea. Traditional Korean dance is divided into three main types: court, folk and religious.





The colourful national costume hanbok is often worn during national holidays and festive occasions. The designs and colours of the various forms represent the rich culture and society of traditional Korea.



THE FLAG

The Korean national flag, Taegeukgi, is a symbol of peace, unification, creation, light and eternity. The Taegeukgi has a taegeuk, or um-yang, circle in the centre and three bars at each corner. The taegeuk circle (an ancient symbol of the universe) represents the great cosmic forces that oppose each other yet achieve perfect harmony and balance. The three bars in the corners represent the ideas of opposition and balance. The white background symbolizes the purity, harmony and peace-loving character of the Korean people. 1882, Park Yong-Hyo used the Taegeukgi for the first time and it was selected as the national flag in 1883.

FOOD

The basic Korean meal is simple, consisting of rice, meat or fish soup, chicken, seaweed, kimchi and other vegetables. Kimchi represents Korea's best known food and is served up as a side dish or as the principal component of any Korean meal. The dish basically consists of grated or chopped vegetables mixed with various other ingredients - notably chilli, garlic and ginger - and left to ferment in earthenware pots. There are more than 200 types of kimchi, and the one served at a meal will vary according to region, season, and may differ according to the other dishes on the menu.

EDUCATION

There is an old saying in Korea: "One should not step even on the shadow of one's teacher". This proverb relays the degree of respect traditionally accorded to teachers and the importance of education. This is also reflected in the literacy rate which has reached 96 %.

The school system in Korea consists of 4 levels: Elementary school (grades 1 to 6), middle school (grades 7 to 9), high school (grades 10 to 12) and junior college, college and university. Compulsory education starts at age 6. Kindergartens provide pre-school education aiming at creating an appropriate environment for the nurturing and development of children. [KOIS2000]

Private schools are very common, especially at the higher levels of education. The competition is tough in terms of educating the best students, and elite schools have been formed as a result of this. Enthusiasm for entering a wellreputed university is very strong, because it is believed that this is the only way towards a good future (job, marriage, position, etc.). The status achieved through attending the best schools has created a high degree of discipline and pressure even at elementary school level. It is common practice for the parents to give expensive gifts, and even money, to their children's teacher, in order to make it easier for them to get accepted at the "right" university. [DNV2000]

The nineties and the following years are expected to advance education by realising quality education and educational welfare. Particular concerns are the pursuit of qualitative, rather than quantitative, growth of education, and the fulfilment of high public demands for education through extending compulsory education, popularising secondary education, and increasing opportunities for higher education. The future directions for educational policies based on the intrinsic goal of Korean education are: accomplishment of sound personality, pursuit of excellence, realisation of equality, and enhancement of hope for a better future. [MOE2000]

BUSINESS CULTURE

MEETING AND GREETING

When first meeting a Korean in a business setting, exchanging business cards is vitally important. This should be done most carefully - always give and receive cards with both hands and take a few seconds to study the card you receive. This is considered polite and respectful.

Never hand a Korean person a business card with a Japanese translation of your name and corporate position, as it is considered highly insulting. Japan occupied Korea from 1910-45, and your card may be interpreted as a reference to this period.

The bow is the traditional Korean greeting, though it is often accompanied by a handshake among men. To show respect when shaking hands, support your right forearm with your left.

NAMES AND TITLES

In Korean names, the family name comes first, followed by the two-part given name. Example: Lee Dong Sung. Lee is the family name, Dong the generational name and Sung the individual's name. It is considered very impolite to address a Korean by his or her given name. Address Koreans using professional or courtesy titles and family names unless specifically invited by your Korean hosts or colleagues to do otherwise.

BODY LANGUAGE

- Koreans consider it distasteful to be touched by some one who is not a relative or close friend. Avoid hugging, back-slapping and a hand on the shoulder.
 Touching of older people and people of the opposite sex is particularly inappropriate.
- Pointing with your index finger is considered impolite.
- Always pass and receive objects with your right hand, preferably supported by the left hand at the wrist or forearm, or with two hands.

EATING AND DRINKING MANNERS

- Always allow your host to seat you. The seat of honour is the seat looking at the entrance. If you are given the seat of honour, it is polite to protest slightly.
- Koreans do not like to talk a lot while eating; periods of silence during a meal are common and appreciated.
 The meal usually precedes socialising at a dinner party.
- Pour tea, alcohol and soy sauce in your neighbour's cup, glass or dish. Allow them to do the same for you. To refuse is an insult.
- Koreans are used to drinking large quantities of alcohol at business dinners. Be prepared to deliver a solo singing performance while drinking.



TIPPING

Wherever you see a "No Tipping" sign, do not tip. Koreans generally find tipping offensive. Still, a service charge of 10 % is always included in the bill at westernstyle hotels and restaurants.

GIFTS

Gift-giving is very common in Korea. Wrap your gift nicely, preferably in bright colours. Allow the host to present his or her gift first, and do not unwrap it in the presence of the giver.

Appreciated gifts: Liquor, fruit, desk accessories, items from France or Italy (which confer status), regional arts and crafts from your home country.

Do not give: Expensive gifts (Koreans will feel obligated to reciprocate with a gift of equal value), knives or scissors (they signify "cutting off" a relationship), green headwear, gifts or cards with red writing (denotes death), or gifts in sets of four (denotes death).

CRIME AND CORRUPTION

Crime levels are relatively low in Korea with corruption attracting most attention from the outside world. Although corruption is not as big a problem in Korea as in many Asian countries, both local and expatriate residents in the country have become much more critical of the level of graft that exists. To the extent that there is corruption in Korea, its economic cost has probably been larger than elsewhere in Asia – if only because Korea has more to lose due to its bigger economic size and more sophisticated level of industrialisation. Corruption has certainly not been the only cause of the systematic deficiencies that have manifested themselves during the ongoing economic crisis, but it has been a major one and tends to intensify other deficiencies like a weak banking system. There is reason to hope that corruption will be reduced as a result of the government's reform programme. To the extent that corruption was considered an intractable, almost institutional part of the old system, that status quo has now been upset. Government bureaucrats, bankers, and company managers are all coming under closer scrutiny. Just as corruption in the military has been reduced by the democratisation of the country's political system, corruption in the private and public sectors should be reduced by the systemic changes that are part of the ongoing economic reform programme. [ASINT99]

HINTS ON BEHAVIOUR

 Remember that men are first in Korea. Address an audience as "gentlemen and ladies". Men go through doors first and walk ahead of women. Women help men with their coats.



- Expect people to push and shove in crowds. This is not considered impolite. People generally do not form lines. Be aggressive in a line or you will never get anywhere.
- Show great respect for the elderly hold doors, give them your seat, stand when they enter a room. Recognise that elderly men are the most important figures in Korea.
- Expect Koreans to ask personal questions. This is viewed as showing a polite interest in your life. An honest answer is not required.
- Never upset Koreans or cause them to lose self-esteem by embarrassing them in any way. Kibun is a feeling of comfort and peace of mind, and it is very important to Koreans to maintain their kibun. Violating this sense of harmony is bad form. For instance do not criticise Koreans in front of their colleagues.
- Do not expect Koreans to admit that they do not know the answer to a question. They may give you a wrong answer or the answer they think you would like to hear, either to make you feel good or to save face.
- Building trust is vital to establishing a successful relationship. This requires patience. Success depends on socialising: Koreans prefer to do business with people they know. A reference is also important in order to gain an appointment.

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Technology

IMPORT & EXPORT

South Korea's major exports consists of electronics, textiles, ships, automobiles, steel, computers, clothing, fish and footwear. Major imports consists of crude oil, food, machinery and transportation equipment, chemicals and chemical products, base metals and articles.

COMMUNICATIONS

As for South Korea's economy, the use of communications technology has seen a phenomenal growth over the last three decades. The full appreciation of communications in modern society came to awareness in the early 1980s, successful political strategies and aggressive suppliers have brought South Korea from being amongst the less developed countries in the area, to one in the top of the class.

BROADCASTING

Radio-, television- and satellite broadcasting are well developed. 121 television stations and 850 repeater stations (1999 est.) effectively cover every corner of South Korea. Electronics are produced in large scale in South Korea, and you will find one or more televisions in most homes. More than 200 radio broadcasting stations provide excellent AM and FM coverage. The fear of a slow cultural degeneration due to western influence from satellite TV, led to a political wish for national satellite broadcasting. Today South Korea has 4 satellites (3 intelsats and 1 inmarsat) mainly used for broadcasting and telecommunications.

TELECOMMUNICATION

Wired and wireless telephone services are excellent, the number of cellular phone subscribers surpassed the number of wired telecom subscribers in 1997. In 1986 South Korea developed its own electronic switching system, this system (TDX-1) was successfully integrated, and has been exported to 17 countries. Since 1993 ISDN has been commercially available, introduced in 11 major cities. Today 58.9 % of the total switching systems in South Korea are fully digital.

The telecommunications market today can roughly be categorised into three classes: full competition, limited competition and monopoly control. The domestic fixed-line telecommunication market is solely controlled by Korean Telecom (KT). International calls are provided by KT and DACOM (the DATA Communications Corporation) in duopolistic competition. 5 providers of cellular phone services compete under few government regulations. According to the Ministry of Information and Communication (MIC), Korean Telecom is scheduled to be fully privatised by 2002. Since the end of 1995, the old analogue mobile service was replaced by the second-generation mobile phone system. Code division multiple access (CDMA) technology was chosen, and it was rapidly integrated giving full nation-wide coverage. The main reason for the extremely rapid growth in cellular phone subscribers is the fact that no less than 5 large consortiums provided exactly the same services and could only compete on price. This redundancy led to a very unhealthy competition for the providers, none of which have been able to pay down their investments until late 2000. This unhealthy competition would perhaps have kept on had it not been for a government act passed in early 2000 regulating the subsidising of cell phones, this also lead to a small decrease in the number of mobile phones.



INTERNET

In only a few years, according to MIC, the Internet has become indispensable for many Koreans. In 1999 there were approximately 8.5 million PCs in South Korea, and in August 2000 the number of Internet users reached approximately 16.4 millions (35 % penetration rate). Almost 3 million households have broadband Internet connections, broadband being either cable-modem (37 %) or xDSL (63 %) [MIC Jan 2001]. Since ADSL was introduced last year, dial up connections (analogue modem and ISDN) have become almost extinct.

According to korea.internet.com MIC officially announced on 12 February 2001 that the South Korean broadband backbone was completed 5 years ahead of schedule. The high-speed backbone includes nearly 22 000 km of optical fibre, and interconnects 144 major areas of South Korea. In 3rd quarter 2000 there were 80 Internet service providers (ISPs). The IT sector made out 10.7 % of the GDP in 1999, contributing with 40 % of the growth in the GDP the same year.



ENERGY SITUATION

OIL

South Korea has no domestic reserves and petroleum accounted for 52.2 % of primary energy consumption in 2000. South Korea is therefore highly dependent on importing crude oil [MOCIE].

South Korea consumed approximately 2.0 million barrels a day in 1999. There is a tendency that the petroleum-share of total energy consumption has declined in recent years. However, the total energy consumption is being predicted to increase significantly over the next twenty years. Korea is the sixth largest oil consumer and fourth largest crude oil importer in the world.

The South Korean dependency of imported crude oil has made it necessary to secure and diversify the supply. This is being managed by the Korean National Oil Co-operation (KNOC), which keeps the strategic stocks at a 60-days supply-level, and also by pursuing equity stakes in oil and gas exploration and production around the world. Amongst others in a production field in the North Sea. KNOC also is promoting the possibility of inter-Korean joint exploration and development of possible offshore oil deposits in North Korean waters, and has held talks with Taurus Petroleum of Sweden and Soco International of Britain, which hold North Korean offshore concessions, and Hyundai, about possible co-operation [EIA2000]. Korea has 455 km of pipeline for petroleum products, but additionally a parallel for petroleum, oil and lubricants (POL) are being completed.

LNG

The total consumption of liquefied natural gas in South Korea is imported, and the South Korean import of LNG were estimated to 489 billion cubic feet in 1998. This makes South Korea the second largest importer of natural gas in the world. Import goes through Korea Gas Company (Kogas), a state-owned monopoly founded in 1986. Approximately half the import goes to electricity production and the other half is used for residential heating. In 2000, natural gas comprised 9.8 % of South Korea's primary energy consumption.

The South Korean government is in the process of privatising Kogas.

Domestic production of gas consists of the ongoing completion of KNOC's project, Tonghae-1. From 2002 this field will supply the domestic gas market with about 2 % of the demand. It is estimated to contain 200 Bcf of gas. Enron and SK Corporation are going to build extended gas distribution in five cities, and at the same time visions of a pipeline from Eastern Siberia through China and North Korea are being investigated.

COAL

Coal supplies about 19 % of South Korea's total energy requirements. The scarce domestic resources are used for heating, and the import is mostly bituminous coal supplies (steam coal for power plants and industrial boilers and metallurgical coal for steelmaking). Korean Electric Power Corporation (KEPCO) has invested in several Australian coal mines.

ELECTRICITY

South Korea uses a combination of thermal, nuclear, and hydroelectric capacity to meet its demand for electric power. Total power generation capacity was 46 GigaWatts as of the end of 2000, according to figures published by KEPCO. The South Korean government estimates that its electricity demand will rise by 4.3 % per year through 2015 [EIA2000].

In September 1998, KEPCO officially dedicated its Ulchin Number 3 nuclear reactor and launched the construction of Ulchin Nuclear Power Plants Numbers 5 and 6. Ulchin Number 3 has a generating capacity of 1 GW and is the first nuclear power plant built completely with Korean technology from design to construction. The Number 4 Ulchin nuclear plant was completed in late 1999, and Numbers 5 and 6 are targeted to be completed in 2004 and 2005.

ENVIRONMENTAL ISSUES

While South Korea is not a party to the Kyoto Protocol on greenhouse gas emissions, and does not intend to become one, its future plans emphasise the development of more nuclear power plants to reduce growth in carbon emissi-

Energy overview

- **Oil consumption (1999E):** 2.0 million barrels per day (bbl/d);
- all imported Crude oil refining capacity (1/1/00):
- 2.5 million bbl/d Natural gas consumption (1998E): 489 billion cubic feet (bcf)--all LNG
- **Recoverable coal reserves (12/31/96):** 90 million short tons (Mmst)
- Coal production (1998E): 4.8 Mmst
- Coal consumption (1998E): 62.5 Mmst
- **Electric generation capacity (1/1/98E):** 43.7 gigawatts
- **Electricity generation (1998E):** 221.3 billion kilowatt hours

Source: [EIA00]

ons. A dozen additional nuclear plants are planned before 2015.

For years, South Korea was one of Asia's fastest growing, most successful economies. This rapid industrialisation and growth in income, however, has had environmental impacts. Car ownership, for example, has increased significantly and contributes to the annual release of an estimated 1.6 million metric tonnes of pollutants. Transboundary pollution is also a concern in the region and has led to the formation of a joint commission of environmental ministers from South Korea, China and Japan to tackle the problem.

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> Mona-Lisa would just be a girl's name

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In order to do business in any foreign country, there are a number of factors to consider regarding both the legal- and general business environment. In the following section we will give a brief description of the South Korean legal framework, including investment incentives, taxation, exchange control, types of business entities etc. We will also discuss the business environment, including the financial market, labour market and cultural differences related to business formation. In addition we will present the different support facilities available for Norwegian enterprises in South Korea. When reading this chapter it is important to bear in mind that South Korea is in the middle of a restructuring process affecting practically every part of the economy, and laws and regulations are constantly changing. More information is easily accessible on the Internet or by contacting the institutions referred to in the articles.







PART 2 FRAMEWORK FOR DOING BUSINESS



Setting up Business in Korea

Volvo's purchase of Samsung's construction equipment division February 1998 for USD 572 m was one of the first big takeovers after the financial crisis 1997. Back then it was seen as a test case of the new government's commitment to attracting foreign investment. Before that Korea was generally perceived as being difficult for foreign investors. Some of the reasons for this general perception were militant trade unions and a business culture that was slow to adopt international management practices. Labour resistance is still one of the more important factors that the Korean industry has yet to overcome since it has a large impact on decisions made by foreign investors. The reasons for the heavy resistance is to a large part the social welfare system that we described earlier in the report. Volvo succeeded in cutting the workforce by 10 % through early retirement packages after initial worker resistance. Regarding the management practices the managers say progress is being made in introducing Volvo's flat management concepts into a company that was accustomed to a rigid hierarchy. The management concept is in particular appreciated among young managers.

The government regarded Volvo's investment as a success story which was an important factor attracting more than USD 8.9 bn of overseas group investments 1998. The following year foreign direct investments increased by 75.6 % to USD 15.5 bn and USD 15.7 bn last year. The estimated number for 2001 is expected to reach more than USD 15 bn under the most optimistic outlook, or else stand at around USD 13 bn, according to the Ministry of Commerce, Industry and Energy. In appreciation the government gave Volvo an award of excellence.

FOREIGN DIRECT INVESTMENTS

Since 1 February 2001 several changes have taken effect concerning foreign investments. A wider scope of foreign direct investment (FDI) and easier procedures for "foreign investment zone" (FIZ) designation are among the changes. Now foreign companies are allowed to make their investments in the form of digital contents, electronic-commerce platforms, bioengineering technology and other cutting-edge intellectual property rights with or without cash and capital commitments. This redefinement of FDI is meant to encourage foreign suppliers of technology to switch to direct investment from simple licensing deals. The broadened scope includes sharefor-share swaps to promote strategic alliances between local and foreign companies. Furthermore, conversion of depository receipts and exchangeable bonds into common shares will be treated as FDI with the same entitlements to tax incentives and profit repatriation. According to the Ministry of Commerce, Industry and Energy these changes will help reduce the cost of mergers and acquisitions involving foreign investors and speed up a shift to a more qualitative investment focus

EXCHANGE CONTROLS

The last stage in a law that required liberalisation of exchange controls started on 1 January 2001. The purpose is to fully liberalise all foreign-exchange transactions with the exception of those related to the "maintenance of international peace and public order". This policy may make Korea's foreign-exchange regime seem highly liberal. In reality, however, there are many safeguards and tax rules that make some foreign-exchange transactions even more cumbersome than before the liberalisation.

Foreign investors are advised to consult with their banks in Korea before conducting foreign-exchange activities. The reason for this is that conflicts often arise when banks misinterpret what the government is declaring. Regulations can vary widely between different banks as they apply their own guidelines.

PERMISSION

According to the Foreign Investment Promotion Act (FIPA), all foreign investors in Korea are required to report to the Ministry of Commerce, Industry & Energy (MOCIE) or to a foreign exchange bank. The Government permits most types of investment projects except those on a prohibited or restricted list. Only 1 - 2 % businesses were closed to foreign investors in 2000. Furthermore, the so-called "Negative List" is under constant review.
BUSINESS FORMATION

Depending on the purposes of the foreign investors the following form of business enterprise can be established:

- Representative / Liaison Office
- Branch
- Joint Venture
- · Subsidiary company

Other factors worth thinking about are the tax regulations and Korean government regulations, but they will be treated in the next section.

Many foreign investors begin with a simple representation in South Korea through an agent, others prefer a joint venture or a 100 % owned subsidiary.

REPRESENTATIVE OR LIAISON OFFICE

A liaison office is the lowest profile that a foreign corporation can use in Korea. A liaison office is not a legal entity and needs no formal registration except that it must report to a foreign exchange bank under the foreign exchange regulations. It is not subject to Korean corporation taxes as long as it engages only in limited activities. As a practical matter a local tax office registration for an identification number normally occurs. Operations are restricted to non-income producing activities appropriate for representation of the head office, such as inspection services for head office buying. To sell foreign products locally, a company may operate through a Korean distribution agent. A liaison office could then provide liaison services for that agent.

Agents are best located through the Korea Export Buying Offices Association. Official selling agents must be registered with the Association of Foreign Trading Agents of Korea.

BRANCH

A branch office may be opened by a foreign company by reporting to a foreign exchange bank and registering with the local district court and the tax office. If the office wishes to repatriate or remit its earnings or profits overseas in the form of exchange, it must report this to the foreign exchange bank.

When the branches are registered they generally conduct business for profit and pay taxes.

In case a branch intends to engage in certain lines of business approval by the relevant authorities should be obtained before registering a branch. Branches generally cannot conduct manufacturing activities. For finance, insurance and securities companies there are special laws and procedures for setting up a branch office.

A branch office is a common form used by foreign corporations that engage in taxable activities such as commis sion agent activities and the provision of services to affiliated companies.

JOINT VENTURE

If a foreign company decides to penetrate the Korean market through a joint venture it is advisable to consult with local advisers regarding the most appropriate form of agreements.

In a 50/50 joint venture it is common that the Korean partner takes the position of president of the company and that the foreign company takes the position of executive vice president. The more dominant partner takes the positions as chairman of the board of directors and chief executive officer. Two-thirds of equity is required by the shareholder to have total control of the company since a special resolution of shareholders' meeting requires two-thirds of the votes. The chairman of the board has the possibility to break a deadlock at the board meeting since he has a casting vote.

In principle, Korea has no local participation requirements. However, foreign direct investments in some businesses are permitted only if a joint venture with a local partner is formed or if a foreign investor owns not more than 50 % equity.

SUBSIDIARY COMPANY

This is the most common form of setting up a business in South Korea used by foreign investors.

To establish a stock corporation, articles of corporation must be drawn up and notarised. A minimum of three "promoters" is required for incorporation and the "promoter-status lasts only until the corporation is registered. After the registration the board of directors controls the company.

Shares are issued as common or preferred. Minimum capital is KRW 50 m and shares must have a par value of at least KRW 100. If there is more than one foreign investor, each investor has to invest at least KRW 25 m. After registration the company has to pay a registration tax of 0.4 % of paid-in capital and payment of an education tax equivalent to 20 % of the registration tax, before the company is permitted to operate. In metropolitan areas the registration tax is 2 %. Within 20 days of the start of business, the company must apply to the tax office for a business licence.

Since 1999 interim dividends are permitted by a resolution of directors at the directors' meeting.

A foreign firm often uses this form of establishment or a joint venture when it desires to incorporate an entity under Korean law. Those types of direct foreign investment are governed by the Foreign Investment Promotion Act (FIPA) and may potentially be eligible for special tax benefits under the Tax Incentive Limitation Law (TILL).

REGISTRATION PROCESS

An application for incorporation and registration of the company must be submitted to the district court along with the following documents:

- · Articles of incorporation
- · Document certifying actual subscription of shares
- · Application form for subscription of shares
- · Certificate of payment for shares on deposit in a bank
- Minutes of the inaugural general meeting with
 the "promoters"

- · Report on elections of directors and auditor
- · Request for directors' and auditors' investigation
- Minutes of the board of directors or shareholders meeting to elect a representative director
- Certificate of power of attorney, if proxy does the registration
- Investment licence issued by the Ministry of Finance & Economy or a bank
- Letter of acceptance prepared by each director and the auditor to be elected in the new company
- Application for registration of corporate seal if a foreign individual is named the representative director of the new company

Registration of a company normally does not take more than 7 days after submission of relevant documents.

LICENCES

Apart from the business licence the entity is required to obtain various licences in order to do business in South Korea:

Example	Licence required	Obtained from
Indent sale	Trading agency licence	Association of Foreign Trading Agents of Korea (AFTAK)
Trading	Trading licence	Korea Foreign Trade Association
Factory establishment	Factory establishment permit	26 supplementary approvals pertaining to 16 laws
Small-medium company start up	Medium and small company establishment business plan permit	26 supplementary approvals pertaining to 14 laws
Construction	Construction permit	30 supplementary approvals pertaining to 18 laws
Environmental permits	Sewage disposal Facility and/or air pollution control facility permit	7 supplementary approvals pertaining to 6 laws
Use of constructed materials	Use of constructed materials permit	12 supplementary approvals pertaining to 6 laws

Reference: KPMG, 1998

As mentioned, Korea Investment Service Centre (KISC) intends to operate as a proxy for the foreign investor obtaining the above approvals.



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CULTURAL DIFFERENCES RELATED TO THE BUSINESS FORMATION

Knowledge of the Korean culture will not guarantee success but a lack of cultural awareness could easily cause a major failure. The Korean partners say that knowledge of the Korean culture and language is imperative for success.

EQUITY SHARE AND MANAGEMENT CONTROL

According to Dr. Rosalie Tung at University of Wisconsin at Milwaukee, there are especially two themes that are central for controlling a joint venture between U.S. and Korea; equity share and management control.

Concerning the equity share the Korean partner typically desires a majority equity position in part because of Korea's previous domination by foreign powers. The operational dependence on the Korean partner in building networks, establishing relationships with consumers and suppliers and government liaison gives the Korean partner a critical role in the venture. Foreign companies usually want 51 % partly because of accounting reasons (to consolidate profit/loss statements) and partly because they want to feel that they have adequate control in managing the joint venture.

The management control issue is reflected in two areas: In cases where there is a split ownership like 51 % / 49 %, there is usually equal representation on the Board of Directors. Even if the foreign company has 51 % equity ownership, most of the decisions are made through discussions rather than through votes. Regarding staffing of senior management positions in the venture, foreign companies often feel that they have to put "their own personnel" into key positions. One of the reasons is that they are restrictive in transferring technology and a second reason is that foreign companies worry that the Korean partner will combine the joint venture's activities with that of the business group in terms of financing and personnel.

The Koreans on the other hand want to control the Board of Directors for two different reasons: National issues and their belief that that the Korean business environment is unique, possessing better knowledge and understanding of how to run and manage an operation in their own country.

MOTIVATING DEVICES

Profit may not be the most important objective or motivator for the Korean partner. It may happen that the Korean partner is more concerned with issues such as market share and growth. The consequences for a foreign investor often becomes that he must be prepared to work intensively for a period of time. Alternative motivating devices are often of an ego fulfilment nature such as status, position title, office size, company car, chauffeur and corporate credit card.

KEYS TO SUCCESS

One of the main reasons for a Korean partner to enter a joint venture with a foreign company is to get access to advanced technology. Therefore the foreign partner constantly has to maintain a technological lead over their Korean counterparts.

Personal relationships are still a fundamental tool to gain success in Korea. To be able to build and nurture a solid personal relationship the foreign partner has to be very patient. In Korea, relationships are formed on the basis of blood (includes members of immediate family or extended family), school ties or geography, such as coming from the same clan or village. Personal relationships are one of the most important barriers to foreign entrance into the Korean market, even though the importance is decreasing.

In Korean society, the written contract is considered an organic document which can change as conditions evolve.

Another part of the Korean business culture worth bearing in mind is that gifts are quite commonplace and not interpreted as bribery which can be the case in western business culture.

Most difficult markets in Asia



Foreign companies can have a disadvantage in recruiting local nationals in Korea. This depends on the fact that relationships formed through former school ties play an integral part in staffing. If a foreign investor is unable to recruit someone from Seoul National University, for example, he will not have the desired ties with people in the government, etc. Since there is social stigma attached to employment in a foreign company a common Korean view is that foreign companies often have a shorter commitment than the Korean alternative and therefore is a riskier alternative. Glenn Darwin, Senior Vice president at the Hongkong and Shanghai Banking Corporation Limited (HSBC), shared his view concerning the Koreans as employees. He felt a strong desire from Korean women to work for a Global company like HSBC. The reason for this, he meant, was the more international business culture that promotes equality between genders, giving female employees the same opportunities. Furthermore, the manager has to motivate the employee more in the

beginning, showing that creativity is allowed and appreciated. Once the Korean employee understands this difference he/she often becomes a superior employee. Typical for the Korean worker is that he/she feels that he/she owes loyalty to the person for whom he/she works. Hence, attributes of the Korean employee's boss play an important role in recruitment.

ANALYSIS OF BARRIERS IN ASIAN MARKETS FOR EUROPEAN COMPANIES

- Deviations from European business culture
- Grade of protectionism
- · Grade of governmental ownership
- Difficulties in building the necessary network with relations

Source: Insead Paris, Euroasia Center, 1996



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The Legal Framework

South Korea's foreign investment laws are initially designed to encourage the inflow of foreign capital and technology. Ever since the IMF's programme started in late 1997, the Korean economy has been confronted with difficulties and has relied heavily on foreign capital for critical financial resources. Despite this, related laws and regulations were passed at the same time to protect domestic industries and to regulate the outflow of foreign currency.

As South Korea's economy has changed significantly over the past decades, its laws have been amended many times to reflect those changes. Doing business in South Korea forces one to keep in mind the flexibility the government has when it comes to tax legislation.

In this part of the report we will have a closer look at the Korean system of taxation and incentives to foreign investment, in addition to comments on labour relations.

TAXATION

The Ministry of Finance and Economy (MOFE) is responsible for tax administration through its Tax Bureau and the Office of National Tax Administration (NTA). South Korea's system of taxation has been developed quickly to keep pace with the economy and has become quite complex. The different taxes can be grouped in two main categories; national taxes and local taxes. The rest of the chapter will exclusively stick to the national level.

CORPORATE TAXATION

The development of the corporation tax has to a great extent been influenced by the corporate income tax system of the United States.

TAXABLE ENTITIES

A corporation can be organised in a number of ways to take advantage of the Korean market. The Korean Corporation Tax Law distinguishes between two main categories of taxable corporate entities:

I) Domestic Corporations include corporations established under Korean law and corporations having their head office in South Korea. Foreign investments such as joint venture companies (JV) and wholly owned subsidiaries are considered as domestic corporations, and are required to pay corporation tax on their entire income from both domestic and foreign sources.

II) Foreign Corporations are taxed only on income from sources in South Korea. A Korean branch of a foreign corporation is a foreign corporation for tax purposes.



Under the Foreign Investment Promotion Act (FIPA) and the Tax Exemption and Reduction Control Law a number of tax incentives are available to certain foreign investors.

FOREIGN INVESTMENT PROMOTION ACT (FIPA)

The FIPA is the basic law concerning foreign investment and offers incentives to foreign corporations. The law regulates foreign equity investment, foreign loans, technology inducement, licensing, tax incentives, repatriation of capital and remittance of dividends. Some other laws concerning foreign investors are the Foreign Exchange Control Law, the Customs Law and various tax laws.

The minimum foreign investment amount is currently KRW 50 m. When two or more foreign investors are involved in a project, each investor must invest no less than KRW 25 m.

TAX INCENTIVES

The Tax Exemption and Reduction Control Law provides a number of tax incentives designed to encourage certain types of business activities. The following corporations are

some of those which may be entitled to such tax benefits under this law [KPMG98]:

- SMEs (small and medium-sized enterprises) engaged in manufacturing, mining, construction, transportation, fishery, architectural engineering, technical inspection/ testing services or in the development of computer systems and software.
- Corporations operating overseas businesses or having overseas investments
- Corporations moving from major cities to provincial areas
- Corporations investing in: Facilities for increasing productivity, Energy-saving facilities, Anti-pollution facilities, Mine safety facilities, Medical services, Farming and fishing villages

The tax incentives are of the following types [KPMG98]:

- · Tax credit for investment
- · Tax-free reserves
- Tax-exemption of income
- Reduced corporation tax

A taxpayer receiving tax incentives under the Tax Exemption and Reduction Control Law is required to pay a minimum tax if the aggregate incentive amount exceeds the actual assessment after the incentives

VALUE ADDED TAX (VAT)

The VAT is 10 % and levied on the value of goods and services supplied in South Korea and on the value of goods imported.

Some goods and services, such as those provided by utilities, professionals, social welfare and financial institutions are tax-exempt. Goods for export, services rendered outside South Korea and goods and services earning foreign currency are zero-rated.

TAXATIONS OF INDIVIDUALS

Korean citizens and expatriates, staying for more than 12 months, are subject to tax on all their income, from both within and outside South Korea. A foreigner is taxed only on income derived in South Korea.

LABOUR RELATIONS

South Korea offers potential foreign investors a very hardworking labour force. English speaking personnel are available in most fields. Agriculture, forestry and fisheries account for 12 % of the country's almost 20 million

Individual tax rates

Taxable income (Million KRW)	Individual income tax %	Resident tax %	Resident tax %
Up to 10	10	1	11
10—40	20	2	22
40—80	30	3	33
Over 80	40	4	44
Source: Ministry of Fina	nce and Economy		

workers, while mining, and manufacturing industries account for 20 %. Women constitute about 40 % of the work force. [MOL2000]

Due to the Korean government's desire to encourage direct foreign investment, there are no significant impediments to employing foreigners. However, the cost of maintaining expatriates in South Korea is relatively high.

THE LABOUR STANDARDS ACT

The Labour Standards Act (LSA) is the basic legislation governing working conditions in South Korea. The act establishes among other minimum employable age, which is 15, and lays down rules on working time and special compensations.

South Korea has one of the longest workweeks in the world; although the hours worked vary according to the type of business. In practice, the workweek generally extends over six days.

Formally, the Korean labour laws limit the workday to eight hours and set the standard workweek at 44 hours, with hours worked in excess of 44 hours giving rise to overtime. Under the terms of a labour-management contract the workweek may be as long as 56 hours, which particularly occurs in export-related industries. A further extension of work hours requires prior approval of the Ministry of Labour.

Regular employees are entitled to 12 working days of vacations annually. Employees who have perfect attendance earn an additional ten-day paid holiday every year, while 90 % attendance entitles an employee to eight days leave. Women are generally given two months of paid leave for maternity.

EMPLOYMENT

The Korean employment structure is following the trend of many other industrialised countries, where the percentage of those employed in the agriculture-related and industrial sectors is decreasing while the percentage of those employed in the service and high-tech industries is increasing.

In the 1990s the unemployment rate remained in the 2 % range until 1997, when it started rising considerably with the economic downturn. Unemployment peaked in February 1999 when it reached 8.6 % [BOK01]. The rate for December 2000 was 4.1 % and it is expected to rise in 2001 due to the second stage restructuring in the corporate and financial sectors. [KISC01], [Korean Herald, 03.02.2001]

As part of efforts to create jobs for the unemployed amid the deepening economic downturn, the government will inject 45 % of the budget for public projects in the first quarter, the Ministry of Labour announced in February. [koliaf01]. Companies conducting layoffs will be encouraged to introduce outplacement service programmes, such as job training, to promote the seift re-employment of



workers that are let go. In addition, the government will support companies that minimise job cuts through shortening work time and carrying out temporary retirement programs.

EMPLOYMENT OF FOREIGN WORKERS IN SOUTH KOREA

The Immigration Control Law regulates the employment of foreigners in South Korea. Only specialists and technical experts whose positions cannot be filled by Korean nationals are allowed legal employment. Foreign people with simple skills are, in principle, prohibited from employment in South Korea. For foreign people with simple skills, the training system of domestic companies investing overseas and the industrial training system of the Korean government are available.

WAGES AND SALARIES

The depreciation of the won in late 1997 has made South Koreas labour costs more competitive. In 1998 and 1999 many companies held wages steady and reduced compensation in light of the economic crisis. The trend is expected to continue in 2001. Historically, the highest paying industries have been utilities, financial, construction and service, and the lowest paid major industry has been textile manufacturing. The approximate monthly wages of industrial workers are KRW 1 m for unskilled or semiskilled and KRW 1.8 m for skilled. Middle management salaries in the Seoul area range from about KRW 22 m to KRW 50 m annually. Upper management personnel are compensated at rates comparable to those of the Western Europe and the United States. Western compensations, such as stock options, are not common, but beginning to develop.

The relationship between the employer and employees is very paternal in South Korea. Employers often provide many non-taxable benefits, such as transportation, lunches, housing loans as well as wedding gifts and funeral expenses. Senior executives obtain further fringe benefits.

UNIONS

Korean labour law is strict and enumerates the rights of workers and their employers. As a general rule, the European system of conciliation, rather than confrontation, is observed, as labour and management are encouraged to work out their difficulties through discussion. Labour unions represent a potential force in South Korea, and the union activity is expected to increase in the future. Foreign companies can contact the Ministry of Labour for assistance in resolving disputes if the need should arise.

RETIREMENT

The normal retirement age is 55, although it may be extended in the future. Exceptions are common in familyowned businesses and with senior management.

The national Pension Scheme was implemented in January 1988. Participation is mandatory for employers with 5 or more employees. The current contribution rate is 9 % of an employee gross salary, with 3 % contributed by the employer.

INSURANCE

One of the Korean government's priorities in the social welfare field is to extend social insurance programmes to cover more of the employed. Meanwhile, the burden of the welfare, health and safety of workers rests largely with their companies.

Employers with five or more employees must participate in the governments health insurance programs and

provide a medical examination for all employees at the time of hiring and at least once a year thereafter. Employers must also subscribe to industrial accident compensation insurance through the Ministry of Labour. In addition, employers with five or more employees are required to comply with the Employment Insurance Act (EIA). The EIA consists of three major programmes: Unemployment allowance, employment stability programme and vocational ability development programme.

WORK AND RESIDENCE PERMITS

People planning to reside in South Korea must apply for an entry visa and working permit from a Korean embassy or consular office three months prior to arrival.

After arriving in South Korea, individuals have 90 days to apply for their residence certificate at the local immigration office. Certificates are usually valid for one to two years and must be renewed before expiration.

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Support Facilities



THE EMBASSY AND CONSULATE THE ROYAL NORWEGIAN EMBASSY, KOREA

The Royal Norwegian Embassy in Korea is situated in Seoul. The Embassy maintains and nourishes the official contacts between the Norwegian and Korean governments, and keeps the home authorities informed about the political and economic situation in Korea. In addition to the political work, the Embassy promotes economic and cultural co-operation between the two countries and supports Norwegian and Korean business communities and citizens in various ways. The Norwegian Trade Council has an office integrated in the embassy.

The Norwegian Embassy serves as a hub of Norwegian business interests in Korea, our secondmost important trading partner in Asia after Japan. The different forms of economic, trade, and cultural activities in Korea are being co-ordinated by the Norwegian Ambassador in co-operation with the Norwegian Trade Council, the Norwegian Seafood Export Council and the Norwegian Tourist Board, and with the Norwegian Business Council (representatives of Norwegian companies) in Korea. The Embassy has made great efforts in creating a team spirit among the members of the Norwegian community in Korea. These efforts have been successful; the community is eager to support joint activities and assist new entrants. They work together promoting a more systematic, co-ordinated longterm programme for increased trade and economic cooperation between Norway and Korea. The work is based on closer collaboration between trade and industry, and the government authorities. This is being done based on three pillars:

- · Political dialogue
- Trade and economic co-operation
- Culture and information activities

The Embassy takes active part in promoting visits to and from Korea at political level. In connection with such visits, close consultations are held with trade and industry. Bilateral agreements regarding economic consultations and fisheries, have been or will be concluded between Norway and Korea. The follow up of these agreements will be done in co-operation with the business community. Besides, the Embassy aims at facilitating a company's search for new partners, customers, technology, and market opportunities by creating networks. The Embassy is also a proper arena for Norwegian companies to interact with the Korean Government or other Korean contacts.

ROYAL NORWEGIAN CONSULATE, KOREA

The Royal Norwegian Consulate is situated in Pusan. The prevailing Norwegian consul Tore Jacobsen, is an honorary consul, which means that he executes his consular duties in addition to being employed in a company (Det Norske Veritas). His main responsibility is to assist Norwegians in Korea, both in private and commercial matters and to promote the commercial relationship between Norway and Korea. Thus, the consul has formal relations with the local government in Pusan.

THE EMBASSY OF THE REPUBLIC OF KOREA, NORWAY.

The Korean Embassy in Oslo is mainly engaged in bilateral governmental negotiations with Norway. The Korea Trade Center (KOTRA) mainly handles business affairs. However, the Embassy will also assist Norwegian businesspeople on request. Examples of services are providing of commercial information about Korea, help Norwegians finding Korean business partners for regarding sale or purchase of Norwegian/Korean products, and providing information on about the investment situation in Korea.

NATIONAL RESOURCE CENTRES

NORWEGIAN TRADE COUNCIL

The Norwegian Trade Council (NTC) is the national resource centre for private enterprises and the authorities in the fields of exports and internationalisation. The NTC consultancy services assist Norwegian Companies in finding market opportunities and enhance their competitiveness and profitability abroad. In co-operation with the Norwegian Ministry of Foreign Affairs, Norwegian Embassies and Consulates, the NTC network covers important markets all over the world. Today NTC has more than 40 offices abroad. The NTC office in South Korea is located at the Norwegian Embassy in Seoul, and has three employees in addition to one trainee from Norway.

The NTC assists customers through the entire export and internationalisation process, acting as a strategic adviser, door opener and problem-solver. Years of experience from working with Norwegian companies and monitoring market conditions have made the NTC staff excellent consultants for both new and well-established players on the market.

Some of the services offered by NTC:

- · Market size, trend and competitor analysis
- · Market evaluation, market surveillance and monitoring
- · Market plan development
- · Distributor and partner search
- · Establishment of subsidiaries
- Acquisitions
- Office rent
- Recruitment
- · Legal and economic assistance
- · Seminars, conferences and presentations
- · Long-term follow up
- General market information; customs, terms of delivery and payment, trade statistics
- · Guidance of experienced exporters

NTC also organises trade delegations, exhibitions, and campaigns to promote Norway and Norwegian trade and industry towards foreign companies and business environments. For participating companies, this is an excellent opportunity to make important contacts.

INTERNATIONAL TRADE FAIRS

Each year preparations are made for joint participation in 30 - 40 trade fairs. This is done in close co-operation with the participating companies and includes press initiatives, invitations, customer events and market information prior to the fair.

Norway Trade, Shipping and Industries Day (NTSID) is a seminar including presentation by individual Norwegian companies arranged in Seoul every second year. The next one will take place in December 2003. NTSID is arranged by the Embassy in Seoul in collaboration with the NTC and Norwegian companies.

KOREA TRADE-INVESTMENT PROMOTION AGENCY

The Korea Trade-Investment Promotion Agency (KOTRA) is a non-profit governmental organisation established to promote overseas trade and attract investments to Korea. In addition to serve Korean firms and individuals who need services in either promoting trade or attracting investment from overseas, KOTRA assists foreign firms wishing to trade with Korean companies and invest in Korea. KOTRA has more than 100 Korea Trade Centres (KTC) all over the world.

The organisation offers services such as:

- · Trade information
- · Business matchmaking
- · Market research services
- Trade missions
- Exhibitions
- Regional research
- Trade library
- · Promotion of technology transfer

THE KOREA INVESTMENT SERVICE CENTRE (KISC)

KISC is an authorised investment promotion organisation within KOTRA. KISC is a contact point for any foreign investor considering a location in Korea

EXPORT FINANCING AND INSURANCE

In most cases regarding international business ventures, Norwegian companies will be in need of loans to finance their projects. To reduce the credit risk in transactions with foreign partners, Norwegian exporters and investors are able to secure their interests through guarantees and insurances.

THE NORWEGIAN GUARANTEE INSTITUTE FOR EXPORT CREDITS (GIEK)

GIEK is the central Norwegian government agency responsible for furnishing guarantees and insurance of export credits and international investments. GIEK is today an important player in the Norwegian market for short-term customer credit insurance, primarily servicing exporters who are unable to secure satisfactory offers on the private market. The guarantees may encompass a single transaction or a series of transactions and cover commercial risks, i.e. bankruptcy on the part of the debtor or non-payment for other reasons, as well as political risk, i.e. war, expropriation and actions by the public authorities, which prevent payment.

EKSPORTFINANS ASA

Eksportfinans offers a wide range of financial schemes for both small and larger companies. All loans must be secured by a guarantee, either from GIEK or from Norwegian or international banks. Norwegian exports of capital goods may be financed through government-supported

loans or strictly commercial loans. International investments are financed on commercial terms only. The support schemes are handled by Eksportfinans on behalf of the Norwegian Ministry of Trade and Industry, and the loans are offered on a line with international regulations set by the OECD.

Commercial loans are tailored to the company's finance needs regarding:

- · Exported goods and services
- Plants located in Norway with export production
- Accounts outstanding
- Domestic contracts competing with foreign contracts

ECONOMIC SUPPORT THROUGH FUNDS

Norwegian companies also enjoy the possibilities of financing for international business- and research projects through funds.

STATENS NÆRINGS- OG DISTRIKTSUTVIKLINGS FOND (SND)

The SND is the Norwegian government's most important financial tool in Norwegian business development. It is in SND's interest to promote innovation, business development and turnaround operations for Norwegian businesses. SND combines competence and funding and offers low risk loans, venture capital loans, grants and guarantees.

THE RESEARCH COUNCIL OF NORWAY (FORSKNINGSRÅDET)

This government institution supports independent research programmes and projects, strategic programmes at research institutes, and Norwegian participation in international research programmes. The research council is also a co-ordinator, initiating networks and promoting co-operation between research and development (R&D) institutions, ministries, business and industry, public agencies and enterprises, other sources of funding, and users of research.

NORDIC PROJECT FUND (NOPEF)

Nopef grants favourable loans to Nordic companies for making feasibility studies in project export deals or when establishing in new markets. The project must be located outside the European Union (EU) and European Free Trade Association (EFTA) countries. A loan can cover up to 50 % of the budgeted expenses of a feasibility study. Nopef's loans are interest free and can be converted into a grant if the project fails.

THE NORDIC INDUSTRIAL FUND (NORDISK INDUSTRIFOND)

The Nordic Industrial Fund is the collaborative body for the Nordic countries in industrial research and development (R&D). The fund seeks to stimulate, initiate and finance R&D in Nordic industry. It also promotes innovation, strengthens competitiveness and encourages internationalisation.

KOREAN - NORWEGIAN FORUMS

Official relationships regarding bilateral connections between Korea and Norway are mainly concentrated in two forums, the Korean-Norwegian Economic Co-operation Committee (KNECC) and the new Joint Economic committee.

THE KOREAN - NORWEGIAN ECONOMIC COOPERATION COMMITTEE

This collaboration between the Confederation of Norwegian Business and Industry (NHO) and their sister organisation in Korea; The Federation of Korean Industries (FKI) aims to increase economic relationships between Norway and Korea. KNECC is today an important arena, where both Norwegian and Korean businesses may take an active part and discuss related matters of interest. Primarily the committee's function has been to build and structure a network between Norwegian and South Korean industries.

THE JOINT ECONOMIC COMMITTEE

This new bilateral, government levelled consulting mechanism was established in October 1999, due to the increasing economic relations between Norway and South Korea. The intentions of the committee are to keep a regular dialogue and strengthen the economic bonds between our two countries. Primarily senior officials from the Ministry of Trade and Industry (NHD) and the Ministry of Foreign Affairs (UD) participate, but representatives from the industries will be invited when required.

MARITIME FORUMS

The export of marine equipment to South Korea is regarded as a very valuable contribution to the South Korean shipbuilding industry. Norwegian maritime exporters therefore enjoy excellent opportunities in this market. During the years some maritime forums have been established to help exporters share their expertise and skills, and help them compete in the global market.

NORWEGIAN MARITIME EXPORTERS (NME)

NME is one of the world's leading associations of marine equipment suppliers. The association has over 140 major Norwegian manufacturers who hold an 8 - 10 % international market share in the marine equipment industry. **NME is divided into 3 areas of competence:**

- Ship Equipment (NME/S)
- Fish Equipment (NME/F)
- Aquaculture Technology (NME/A)

NME strives to build and operate networks that contribute to greater expertise in the areas relevant to customer and suppliers, helping them to assess market opportunities and enhance their ability to compete in the global market.

Every second year NME arranges the ships-gear's exhibition KORMARINE in Pusan. The next one is to be held 30 October – 3 November 2001.

INTSOK

INTSOK (the Norwegian Oil and Gas Partners) works with the partner companies, helping them to assess market opportunities and enhance their ability to compete globally. INTSOK also assist them in developing their international relationships through close networks with both domestic and foreign government agencies. Through INTSOK Norwegian industry has the possibility to share its expertise and skills at workshops and seminars attended by clients and international business partners.



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Banking and Finance

FINANCIAL WATCHDOGS

South Korea has two main financial supervisors. Established in April 1998, the Financial Supervisory Commission (FSC) oversees restructuring of financial services companies and the family-controlled conglomerates, more often known as chaebols. The second body, the Financial Supervisory Service (FSS) was set up January 1999 by integrating four supervising agencies. The FSC is supposed to be main policymaker and regulator of the financial industry, while the FSS ensures enforcement and helps building a sound financial system. However the lines between the two bodies remain blurred, and senior officials have called for each organisation to be given a clear mandate.

The FSS has recently been under fire for its alleged involvement in a string of loan scandals. Now the government has set up a task force to reform the regulator. Changes mean that senior officials must disclose their personal assets, including shares and bonds. They will also be banned from working for financial institutions for at least two years after leaving the FSS.

The government is planning to revamp the function and structure of the country's supervisory service. On option is to separate the FSS from the FSC, with the FSS focusing on inspection of financial institutions. Another is to consolidate the two agencies into one single body. So far a clash of cultures has hampered the organisational restructuring of the FSS. A shortage of specialists with skills to inspect financial services firms is another hurdle. The problem with recruiting has been exacerbated by government plans to cut jobs at the FSS. So far it is clear that the FSS will be forced to entrust some of its duties to related agencies who previously had no jurisdiction, such as the Bank of Korea and the Korea Deposit Insurance Corporation. It remains to be seen if the two giant supervising bodies become more efficient or more accountable.

INFORMATION FROM LISTED COMPANIES

Every listed company is required to file their annual, semi-annual and quarterly reports with the FSC and other securities related institutions. The FSC/FSS periodically disclose information on listed companies through computer networks for general public use. This information will soon be available in English.

FINANCIAL CRIMINALITY

A number of laws and regulations on financial criminality have been implemented and revised during the past ten years. The FSC says control over financial transactions and protection of confidentiality and credit information, has improved. International Business has also learnt that the government is taking measures to combat corruption through membership of the international organisation Financial Task Force on Money Laundering (FATF). The aim is to root out illegal money transactions at home through international co-operation. Two new bills on punishment of those committing financial criminality are under legislation process in the National Assembly.

THE BANKING SECTOR HISTORY

The decision to push ahead with financial restructuring has led to the close-down of a vast number of non-viable and insolvent banks in the last couple of years. Five commercial banks, twenty-one merchant banks, six securities companies and 12 insurance companies exited the market as of the end of November 2000. Furthermore, 11 banks merged to form five successor banks. As a result, the total number of banks has been reduced from 33 to 22. For many decades the high growth rate in the Korean economy was fuelled by a financial sector being insured by the government. Nationalised banks invested heavily into a small selection of sectors, thus becoming highly dependent on their success. The government in effect formed a risk partnership with large private firms. This state-led financial resource allocation, combined with intense export market orientation, made Korea's economic performance until 1990 truly exceptional. However when circumstances and conditions started to change, the system preserved itself although it became increasingly dysfunctional.

The deep financial problems many of the banks were stuck in after the currency crisis in 1997, led to rationalisation plans for those banks whose capital adequacy ratios were below guidelines and which had received injections of public funds. Up until the end of 1998, the government had raised some KRW 63 trn of public funds and injected KRW 41 trn into financial institutions for the purchase of non-performing loans, payment of deposit insurance claims and re-capitalisation. Further support of KRW 23 trn was injected during 1999, and with a small amount added during 2000, the financial support devoted to ailing banks was KRW 118 trn at the end of 2000. One major event during the last two years was the December 1999 sell-off of government shares in Korea First Bank to the US financial consortium, Newbridge Capital. The company is now holding over half of the bank's total shares. In April 2000, the government signed a contract for the provision of advice on Seoul Bank's rehabilitation with Deutsche Bank.

The government has also tried to streamline the financial system itself. For instance, ceilings on foreign ownership of domestic banks have been eased to induce foreign investments. Foreign ownership below 4 % of total stocks of a bank is now allowed without conditions. The ceiling is the same for domestic investors. Also new legislation was introduced to strengthen financial institutions' competitiveness.

South Korea's largest banks end June 2000



Reference: Financial Supervisory Service; The Banker

THE CURRENT SITUATION AND FUTURE PROSPECTS

Mr Jin Nyum, South Korea's Minister of Finance and Economy, wants to complete the reform of the country's battered financial system by February 2001. The finance ministry used to think that KRW 30 trn (USD 27 bn) would be enough. Mr Jin will recommend more, but nowhere near the KRW 60 trn that some analysts think is needed. Nearly three years after they faced collapse, Korea's banks are still in serious trouble.

Banks' loan books still look dreadful and many companies are kept afloat only by the government, which has strong-armed banks into bailing them out. If the economy slows much from its present brisk growth, many others will follow Daewoo, the second-largest chaebol, which defaulted last year. And that would of course add to the

mass of bad loans on banks' balance sheets. The government has already used some KRW 100 trn on recapitalising the banks, buying their bad debts and bailing out depositors. With some success, to be fair. A few banks have been shut down; more will go by the wayside as the government forces banks to merge. A third of employees in the financial sector have lost their jobs. Unfortunately, there is a lot more to do. At the end of August 2000, the IMF said that although Korea had now largely got over the 1997 crisis, financial institutions' balance sheets still need "a thorough clean-up". At the end of June, the 17 large commercial banks had a total of bad loans of KRW 55 trn, or 11 % of their total loans, and had made provisions against only one-third of these. Although some 50 companies qualified for state-sponsored workout schemes, not all of these have been successful: creditors have so far had to write off loans to a dozen of them. Nor are banks earning enough to put more aside against bad loans. Quite the opposite: the 17 commercial banks' average return on equity was -21.5 % in the twelve months to the end of March 2000.

The government bears a lot of blame regarding the difficult situation the Korean banks are facing. Fearful of rising unemployment, they have been unwilling to let companies go bankrupt. Financial firms were forced to support Daewoo by rolling over its bonds. To no avail: Daewoo still defaulted on some KRW 100 trn of debts. Had the banks been allowed to call in loans sooner, they might have lost less. The government also forced banks to pay investors in Daewoo's debt up to 95 % of its face value even though it was almost worthless. Due to the problems with Daewoo, investors shifted money from investment trusts into bank deposits. Individuals' financial assets rose by 26 % in the two years to the end of June 2000, to KRW 880 trn, but deposits at commercial banks more than doubled, to KRW 350 trn. With all this money moving out of investment trusts, the corporate-bond market nearly collapsed. Again, the state intervened, by forcing banks to set up a fund to buy corporate bonds, onethird of which will not pay off. They will prove particularly expensive if the economy slows down. Every percentage point drop in GDP growth increases bad loans by 0.2 percentage points, estimates Mr Jeong Yu-seong, an analyst at the Bank of Korea.

James Han, banking analyst at Jardine Fleming in Seoul, believes that good/bad bank mergers could work if the strong banks are not forced to overpay for the weak banks, and are allowed to transfer bad assets to the government. But the healthy banks appear opposed to acquiring weak banks. Their main shareholders include foreign institutions, with Goldman Sachs holding a stake in Kookmin and Germany's Allianz in Hana, which would probably not support such mergers. Analysts suggest Korea should focus on creating big strong banks that can compete with international rivals, by promoting mergers among the good banks.

The Korean government will place non viable banks Hanvit, Peace, Kwangju, Cheju and Kyongnam under one holding company some time this year, together with weak merchant banks Yeongnam Merchant Banking, Korea Merchant Banking, Central Banking and H&S Investment Bank. Starting February 2001 the institutions' branch offices will be reshuffled and integration will be nearly completed by the end of 2001. The plan aims to minimise the side effects of combining the insolvent institutions and is a stark departure from previous plans to preserve each bank's standing as an affiliate. Their official statement for the future banking industry is to have approximately five large internationally competitive Korean banks.

THE FINANCIAL SECTOR

The financial markets were badly hit by the financial crisis in 1997, and have since then struggled to regain their momentum. One of four major ongoing reforms is the financial reform. President Kim Dae-jung is willing to take the necessary steps to a competitive financial system, including the promotion of open bond, equity and insurance markets and a Western-style investment banking structure. The majority of Koreans support moderate financial reforms. Despite strong support President Kim will be unable to force the chaebol or the International Monetary Fund (IMF) and World Bank to agree with his proposals. He faces political pressures from opposite sides. The chaebol want to solve the liquidity problem and revert to the pre-crisis financial system while the IMF, World Bank and Korean technocrats support deep institutional reforms. The longer reforms wait, the more dissidence will grow. Delaying reform entrenches positions on all sides, decreasing societal support for any reform.

Bond Market

Child, d'hillon woh		1997	1997	1997	1997	1
Volume of new	Government bonds	11.4	17.6	29.2	28.7	
issues	Corporate bonds	34.5	58.6	28.3	27.4	
Trading volume	Government bonds	8.8	31.3	261.8	582.7	
	Corporate bonds	94.7	247.2	268.3	272.4	
Note 1) 2000 figures are SERI estimates						

Note 2) ABS issues excluded from corp. bond figures from 1999 to 2000 Source: Korea Stock Exchange

THE BOND MARKET

The Korean corporate economy has, especially since the financial crisis in 1997, been characterised by heavy debt. A debt/equity ratio as high as 400 % has not been

uncommon in some corporate sectors. The lacking credit control, risk management and transparency must take much of the blame for this development. The high new issues of corporate bonds in 1998 to boost the economy after the crisis worsened the situation. During the last two years South Korea has been working hard to restructure the economy, and lower the debt/equity ratio. The government has been fairly successful in their task and the average debt/equity ratio has gone substantially down, but the problem is by far solved. The corporate bond market was paralysed after the collapse of the Daewoo group in 1999. This led to a credit crunch in the corporate bond market, which one still sees the aftermath from. There were controversies about how the government should handle the situation and the government tried to ease this by establishing two "bond market stabilisation funds" of KRW 10 trn each. These funds where established to save corporations unable to meet their obligations at maturity. (Fig. Bond Market)

A short review of the year 2000 shows that the three-year corporate bond (A+) began the year in double digits, but fell to under 9 %. The spread between high-grade and low-grade bonds widened and BBB- graded bonds ended the year close to 12 %. Government bonds went down from over 9 % to below 7 %. This year the Korea Institute of Finance predicts liquidity problems when a total of KRW 65.4 trn worth of corporate bonds mature. These are corporate bonds issued in 1998, and they are likely to create major problems for the corporate sector. Companies will find it difficult to roll over maturing debts because of the tight corporate bond market. The state-run Korea Development Bank and other nationalised banks plan to spend up to KRW 25 trn in 2001 on maturing corporate bonds from companies that will face problems rolling over debts. (Fig. Volume of mature corporate bonds in 2001)

It can be expected that in the near future one will see a further flight to quality trend, and therefor a wider spread between low and high graded corporate bonds and government bonds. It is expected that investors will prefer government and high quality blue chip bonds, and we can expect to see a downward trend in these bonds and thus an increase the spread between high and low graded corporate bonds. The companies cannot expect any help from the equity market, the Seoul stock market fell 52 % last year, more than any other large market in the area.

THE SECURITIES MARKET

The timetable for restructuring the Korean securities market began 1981. Foreign direct investments were then permitted through unit trusts. Foreign investors started buying stocks listed on the Korean market 1992 with minimal restrictions. Following the financial crisis 1997, all restrictions on foreign investment in the stock and bond markets and foreign exchange market were abolished. The Korea Stock Exchange (KSE) grew slowly from its inception in 1956 until the government introduced tax and financing incentives in the late 1960s to encourage recalcitrant

companies to list their shares on the exchange.

Recent developments of the securities market

• Abolishment of lunchtime breaks. The KSE introduced the change, to promote trading from office workers who are free during lunchtime, 22 May 2000.

• Prevalence of Online trading. The value of stock trading conducted via online accounted for 64.1 % in the total stock trading value October 2000.

• Revision of listing requirements. An alternative standard was introduced on 1 July 2000. The main reason was to give fast-growing small companies easy access to the capital market.

• Launch of an electronic disclosure system. An English electronic disclosure system, to help international investors understand and gain access to corporate disclosures, was introduced on 1 August 2000.

Foreign corporations planning to issue securities in the Korean securities market must register with the Financial Supervisory Commission (FSC) prior to issuance. The KSE permits both original stocks and Depository receipts (DR)s to be listed on its market.

THE KOREAN STOCK EXCHANGE

The KSE market is open from 9 a.m to 3 p.m during weekdays. Investors can submit their orders from 8 a.m, one hour before market opening. The KSE operates an after-hour session for 30 minutes from 3:10 to 3:40. During the after-hour session, investors trade securities at the closing prices of the day. The Korea Composite Stock Price Index (KOSPI) was adopted in the beginning of 1983. Currently, it is based on aggregate market value and has a base date of 4 January 1980, with a base index of 100. On 26 December 2000 the KOSPI was trading at 504, a decline from 4 January 2000 by 52.4 %. Recently the KOSDAQ securities market, otherwise known as the NASDAQ of Korea, has been gaining attention with the successive official announcements of venture business support policies by the Korean government. The major reason for its development was the strict listing requirements of the KSE. Investors in small venture businesses felt it was too difficult to recover their investments. The

KOSDAQ was established with the goal of vitalising venture business investments through securing liquidity of investment funds. The US NASDAQ market was used as a benchmark for the establishment. Today it is the primary market through which venture business procures direct financing. The KOSDAQ declined by 80.2 % during 2000

Volume of mature corporate bonds in 2001

	1Q	2Q	3Q	4 Q	Total
Total volume	15.5	12.0	14.1	23.8	65.4
Bonds issued by companies under work-out programmes	5.1	3.2	4.7	4.6	17.6
Bonds with higher than or equal to "A" credit rating	4.7	4.5	4.9	8.7	22.8
Bonds with lower than or equal to "BBB" credit rating	5.7	4.3	4.5	10.5	25.0
	Unit:	trillion v	von		
Source: Ministry of Finance and Economy					

Reasons for the bearish market

- · Imbalance between supply and demand
- · Unstable US stock markets
- Trouble in the Hyundai Group
- Piling up of unfavourable external factors such as the oil price

Foreign investors bought, and thereby, supported domestic stock prices during the first half. During the second half a slowdown of purchases by foreigners contributed to the decline.

The Korea Herald, Naeway Economic Daily, and The Samsung Economic Research Institute all have the same view of the future of the Korean stock market. They predict a bearish stock market in the first half of 2001, but they see a possibility, dependent on the restructuring for a bullish market in the second half of 2001. This is also the view of Lee Jeong-ja, Strategist at HSBC in Seoul, who said, "If the restructuring goes well, the Korean stock market will attract foreign investors."

The development of the Korean market is also influenced by:

- · The development in the restructuring of the chaboels
- The instability of the KRW/USD exchange continues. Furthermore;
- The economic situation in the USA
- If foreign investors will maintain their net buying position

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In this section we have focused on different South Korean business areas that we believe are interesting for Norwegian enterprises.

The choice of sectors is done on a basis of the size, economic importance and growth potential they represent in both countries. Accordingly, sectors such as consumer electronics and textiles, that are large in South Korea but represent limited Norwegian business opportunities, have been left out of this analysis. We have tried to give a descriptive general overview of each sector, pointing out facts that should be interesting irrespective of the type of business one wishes to establish. To a more modest extent we have also pointed to some specific market opportunities we believe Norwegian companies should be aware of.







PART 3



Energy & Environment

South Korea is a small country, and has few natural resources. Almost all of Korea's energy consumption is imported, making the country extremely vulnerable to external changes, especially in the international oil-sector. Since Korea's primary energy goal has been to increase total production during its period of rapid industrialisation, there has been little focus on the development of renewable energy sources [EIA2000]. Consequently, a major future challenge will be to increase the country's self-sufficiency in energy production, making it less dependent and thus less vulnerable to external market fluctuations. Another challenge for the government will be to establish a common conscience to promote "green thoughts", and increase its efforts to raise environmental standards. An important issue to consider will be the compatibility of industrial development versus environmental preservation.

by source Total Total 181 363 43 911 100 80 Other Nuclear 60 Hydro electricity LNG Oil 40 Bituminus Anthracite 20 1999 1000 TOE 1980 1000 TOE (MOE20

Energy consumption

ENERGY

Today, South Korea is 97.2 % dependent on imported energy sources [MOCIE]. As a resource-poor nation, with a growing demand for energy, South Korea is an important country in world energy markets. Total energy import increased by 66 % to USD 37.6 bn from 1999 to December 2000 [Rel010119].



During the period from 1980 to 1995, energy consumption increased at a rate of around 9 % annually (9.5 % in 1995). Per capita energy consumption in 1995 was 3.35 TOE, a 290 % increase compared to 1980 [MOE1998]. However, there has been a slowdown in this growth. In 2000, the energy consumption growth rate was only 6.7 %, much lower than the 9.3 % GDP growth rate. Energy consumption is projected to rise 3.9 % in 2001 [Rel010119]. The slowing energy consumption growth rates can be explained by a change in the industrial structure. Recently, energy intensive industries such as petrochemicals, and steel have not been expanding their facilities, while less energy intensive industries such as telecommunications, and bioindustries have grown rapidly.

The growth in energy demand is expected to persist in the future because of anticipated sustained economic growth. To reduce import vulnerability, South Korea has given high priority to energy conservation policies. After the global oil crisis of the 1970s, the Korean government began to implement comprehensive and aggressive energy conservation programmes, with various energy conservation and efficiency improvement policies for industry, transport, and residential sectors. In addition, the government has stepped up its efforts to build a less

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energy-intensive industrial structure. In order to establish an environmentally acceptable energy supply and demand system, South Korea is aiming at reducing the use of fossil fuels, increase the use of LNG for household heating and industrial use, and establish or expand district heating supply facilities in more residential and commercial areas.

OIL

Oil makes up the largest share of South Korea's total energy consumption, though its share has been declining in recent years. Still South Korea is the world's sixth largest oil consumer, and the fourth largest oil importer. In 2000, oil accounted for 52.2 % of total energy consumption [MOCIE]. South Korea has no domestic reserves, and has to import all of its crude oil. Today, Korea is 54 % dependent on oil, but is aiming at reducing the dependency to 50 % in 2010 [MOCIE].

South Korea's total reliance on oil imports has led to a policy of securing and diversifying the country's oil supply. South Korea imports around 75 % of its oil needs from the unstable region of the Middle East, and the supply of petroleum is thus at risk. According to the Ministry of Commerce, Industry and Energy, it is desirable to diversify the import of oil. This could be done in a collective manner in cooperation with their neighbouring countries. South Korea has both a short-term and a long-term approach to fulfilling its oil needs. In the short term, it has developed a strategic petroleum reserve, which is managed by Korea National Oil Corporation (KNOC). Strategic stocks are roughly equivalent to a 60-day supply. However, due to the rise in crude oil prices, the Korean government is considering an additional expansion of its strategic reserve beyond a supply of 60 days. In the longterm, KNOC is pursuing equity stakes in oil and gas exploration around the world. KNOC has 19 overseas exploration and production projects in 12 countries. KNOC is also promoting the possibility of inter-Korean joint exploration and development of possible offshore oil deposits in North Korean waters [EIA2000].

LIQUEFIED NATURAL GAS (LNG)

South Korea is the second largest importer of LNG worldwide, and today LNG accounts for 9.8 % of the total energy consumption in the country [MOCIE2000]. Korean LNG demand is split almost evenly between the electricity sector and the residential heating sector. South Korea's demand for natural gas increased at an annual rate of 20 % from 1987-95, and the country currently relies on

imported LNG to meet its entire need for natural gas [MOE1998]. Imports of LNG began in 1986, after the founding of the state-owned monopoly LNG importer Korea Gas Company (Kogas) [EIA2000]. The Korean government is now in the process of privatising the gas sector. The government has been making great efforts to establish gas supply systems, and has aggressively been pursuing policy measures to increase the use of gas in order to alleviate air pollution in large cities. Kogas is planning to push ahead with projects for the expansion of LNG receiving terminals. In addition to imports, South Korea will have a small amount of domestic natural gas production starting in 2002. Korea is also exploring the possibility of a gas pipeline from the Kovykta gas deposit in the Irkutsk region of Eastern Siberia. The pipeline would supply China as well as Korea, and might run through North Korea [EIA2000].

COAL

Coal supplies about 19 % of South Korea's total energy requirements [EIA2000]. Most of its coal is imported. The coal reserves in South Korea are poorer in quality than those of other countries, are less economically efficient, and have higher sulphur content. Nonetheless, as coal is the only major energy resource available in Korea, the government plans to maintain the domestic coal industry in preparation for the unification of the Korean peninsula and/or possible shocks to the global supply and demand for energy [MOE1998].

ELECTRIC POWER

South Korea uses a combination of thermal, nuclear, and hydroelectric capacity to meet its demand for electric power. Total electricity supply capacity was 46 078 kW in 2000. [Rel010203] Electricity consumption in the same year was 139 658 bn kWh, an 11.9 % increase from 1999. [Rel010203] The government estimates that South Korea's electricity demand will rise by 4.3 % per year through 2015 [EIA2000]. In 1998, nuclear power accounted for 38 % of the total power generation [MOCIE2000]. To reduce its dependence on energy imports, and to reduce growth in carbon emissions, Korea has planned to build several power plants. In 2010, it is expected that nuclear power will account for 45.5 % of the total power generation. [MOE00-2] In 2000, there were 16 nuclear power plants in commercial operation, with a total energy production of 108.9 billion kWh. This accounted for 40.9 % of the total electricity generated in the nation. [Rel010116]

NEW AND RENEWABLE ENERGY (NRE)

Since the Second Oil Crisis in 1978, the government has made efforts to develop and encourage the use of indigenous new and renewable energy. New and renewable energy resources include solar energy (solar thermal, photovoltaic power), bio-energy, wind power, small hydropower, fuel cells, coal liquefaction and gasification, ocean energy, waste energy, coal-mixed fuel, geothermal energy, and hydrogen technology. The total amount of NRE from waste energy, bioenergy, solar energy, and small hydropower was 1 900 600 TOE in 1999. Waste energy accounted for more than 90 % of those [Lee2000]. In 1999, NRE accounted for 1.05 % of the primary energy consumption [MOCIE]. It is aimed to supply 2 % of the total energy demand with new and renewable energy in 2006 [Lee2000]. In order to induce voluntary participation in renewable energy dissemination, the government provides loans with long term and low interest rate for NRE producers and facilities. The government also provides tax incentives for renewable energy investment.

PRIVATISATION OF THE ELECTRICITY SECTOR

The privatisation of a traditionally monopolistic, state managed, electricity-sector can be a complicated matter. Nevertheless, as in many other countries South Korea feels the need for restructuring and has entered a process aimed at increasing competition and profitability. Possible market opportunities for Norwegian companies include supplying equipment, knowledge and financing.

THE TRADITIONAL STRUCTURE OF THE KOREAN ELECTRICITY SECTOR

Monopoly has been the prevailing structure of the Korean electricity sector since 1961, when South Korea's three regional electric companies merged to form the national Korea Electric Company, controlling well over 90 % of total generating capacity. In 1982 the company was renamed Korea Electric Power Company (KEPCO), when the government acquired all outstanding stocks and turned it into a public enterprise under the supervision of the Ministry of Commerce Industry and Energy. In 1989, the government sold 21 % of KEPCO's common stock to the Korean public as part of a planned partial privatisation. Currently 52.2 % of the stock is controlled directly or indirectly by the government. [KEPCO0720]

At present KEPCO controls 94 % of power generation capacity, and 100 % of transmission and distribution of electric power. During the 1990s the need for restructuring emerged both as a consequence of internal forces such as the need for foreign direct investments and of the global trends in the industry. In June 1997 the Electricity Industry Restructuring Committee was established, and in December 2000 their plan for the restructuring of KEPCO was passed by the National Assembly. [KEPC00320]

RESTRUCTURING PLANS

There were three main objectives for the restructuring: Efficiency through market competition, security of power supply at lower rates, and opportunities for customer choice. The implementation was divided into four phases:

Phase 1: 1998-2000	Planning and public hearings
Phase 2: 2000-2003	Competition in generation
Phase 3: 2003-2009	Wholesale competition
Phase 4: 2009-	Retail competition

KEPCO entered the second phase of restructuring in January 2000 when plans for reorganising the power generation sector were presented. The sector has now been divided into six individual Generation Companies (GENCOs) which all deliver power to a generation pool administered by KEPCO. While eligible customers can buy electricity directly from the generation companies, KEPCO will handle most of the transmission and distribution. The GENCOs are gradually being sold off to the private market and there are opportunities also for foreign investors.

Wholesale competition will be achieved by unbundling the distribution companies from KEPCO. Regional Electricity Companies (RECs) will gradually be privatised through bid-buying competition. In the final stage the customer distribution network will be opened. Regional supply monopolies will be eliminated and every customer can choose a supplier; a GENCO or redistribution compay. Maintenance and transmission will be provided by KEPCO. [KEPCO]

The Final Structure of the Korean Electricity Market



THE ENVIRONMENT – PROBLEMS POLICIES AND ORGANISATIONS

In a recent survey announced at the 31st World Economic Forum in Davos, Switzerland, South Korea was grouped with the underdeveloped countries in terms of environment quality. Ranking 95th out of 112 countries on the Environmental Sustaining Index (ESI), the survey gave a clear indicator of Korea's future challenge in terms of environmental preservation and management. The cause of the low score was not the current environmental standard, but rather Korea's efforts to reduce environmental contamination.

As a consequence of rapid industrialisation and a narrow focus on increasing production capacity, South Korea has lagged behind on international standards for environmental management, and developed large pollution problems. There are four main areas of concern: Sustainable supply of clean water, reduction and recycling of waste, enhanced air quality in large cities, and environmentally friendly ecosystem management.

GREEN VILLAGES

To protect areas with special wild fauna and flora the Korean Government has introduced research programmes featuring green villages. The villages are supposed to be self-sufficient by alternative energy sources like wind- and solar energy. Several feasibility studies are involved, but at the moment these projects are exclusively on a research base. The programmes are also aimed to find energy options for the unelectrified periphery islands on the Korean coast. At the southern tip of the Korean peninsula, the measured annual mean wind speed is about 4 - 4.5 m/s at the height of 10 m, so the wind energy potential of this area is quite high [KIST 2001]. The climate also makes solar energy an option. The famous Cheju Island was one of the first to join a alternative energy programme, due to its strong wind energy potential. By the year 2006 the Government hopes that at least a total of 16 green village projects will be in operation.

GOVERNMENT INSTITUTIONS

The Ministry of Environment is the central organisation for environmental preservation. They form and initiate policies aimed at preserving the natural environment, and the prevention of environmental pollution and damage. The Ministry has several subsidiary organisations. The Central Environmental Dispute Settlement Commission

settles disputes over environmental pollution. The National Institute of Environmental Research supports the Ministry in formulation of environmental policies, through surveys and studies, research, tests and assessments related to environmental pollution prevention. The Environmental Officials Training Institute is a programme to educate and train environmental government officials, private sector technicians and environmental managers. As well there is the Korea Environment Institute, the Environmental Management Corporation, and the Korea Recourses Recovery and Reutilisation Corporation. The Four Environmental Management Offices are designated to each of the four major rivers in South Korea, and the four Regional Environmental Management Offices are subordinate to each the Environmental Management Offices. The structure has been established as a way of dispersing responsibility by region/water system, and facilitating co-ordination.

GOVERNMENT POLICIES

The first environmental law to come into function in Korean history, was the Pollution Prevention Act in 1963 [MOE1998]. It marked the beginning of an environmental awareness raised by the government, and was a response to the pollution problems caused by rapid industrialisation. However, the Act, which consisted of 21 articles, lacked measures and practicability in the context of pollution prevention. It was revised in 1971 to introduce emission standards and a discharging facilities permit system. In 1977, the Act was replaced by the Environmental Preservation Act, aimed at environmental pollution prevention. As a result of increasing pollution problems the Act was in 1990 divided into six laws, and each dealt with the separate sources of pollution. They were the Basic Environmental Policy Act (formed the basis of all environmental laws), the Air Quality Preservation Act, the Water Quality Preservation Act and the Noise and Vibration Control Act [MOE1998]. In 1997, the Environmental Impact Assessment Act (the EIA system) was revised, and its main features included assessment of development projects, making sure these projects kept within environmental regulations. Currently, there are 32 environmental laws under the jurisdiction of the Ministry of Environment [MOE00-1].

The future development of environmental preservation is highly dependent on the Government's ability to promote an environmental conscience, both in the public and industrial sector. The Korean Government is in the process of finalising a new policy framework called the National Vision for Environmental Policies in the 21st Century. The objective of this reform is the enhancement of the quality of water, soil and air, and by this to establish new environmental development schemes, including new environmental technologies and management techniques. Through this reform, South Korea hopes to decrease pollution levels to match international requirements, as well overcome its environmental challenges.

On the international level, South Korea is currently involved in 40 environmental agreements [MOE00-1]. The main agreements are the Climate Change Convention, Bio Diversity, Ramsa, CITES and the Ozone Protocol. The rapid industrialisation of the East Asian Countries has given rise to many common environment pollution problems, and made cooperation within the region especially important. The 4th NEASPEC (Northeast Asian Sub-Regional Program of Environmental Cooperation) was held in Moscow in 1998, resulting in the establishment of a Clearing House for Far Eastern Environmental Pollution in South Korea [MOE00-1]. The country has also signed bilateral agreements with China, Japan and Russia to carry out joint research and survey projects and hold joint commissions.

NONGOVERNMENTAL ORGANISATIONS

As consequence of increasing public awareness concerning environmental preservation, environmental NGOs have become increasingly more active in South Korea in the past decade. Their main activities include campaigns related to environmental preservation, surveys and research on environmental issues and seminars on environmental policies. Active organisations are the Korea Environmental Preservation Association and the Toxic Chemical Management Association, which were both established in accordance with the Basic Environmental Policy Act [MOE1998]. Their aim is to conduct research and inspections, develop environment-related technology and promote education and training on environmental issues. The Korea Action Federation for the Environment, the Baedal Eco-Society, and the Environment & Pollution Research Group, are NGOs related to research institutes. They conduct research on environmental policies and exchange information with both national and international organisations. There are also various civic groups, including religious groups and women's groups, who stage campaigns promoting environmental preservation, as well as regionally based environmental groups. The Private Environmental Organisations Policy Consultation Council includes both officials from the Ministry of Environment and representatives from 16 NGOs. The council functions as an advisor for the government on issues concerning pollution [MOE1998].

ENVIRONMENTAL TECHNOLOGY

The need for developing environmental technologies was recognized substantially later than the need for industrial development in most industrialised countries. In Korea environmental research had its modest beginning in the late seventies, about 20 years later than in advanced countries. Presently, the environmental technology level in Korea is about 30 - 40 % compared to average levels of the OECD (Organisation for Economic Cooperation and Development) countries [MOE00-1].

AN INCREASING DEMAND

On a world basis the environmental business market is rapidly growing, and it is expected to double its share from USD 580 bn in 2000 to USD 1022 bn in 2008 [MOE00-1]. South Korea is eager to join this race within few years and has identified environmental technology as one of the four key industrial areas to focus on in the future. At present, the environmental industry is promoted as one of the nation's new strategic export industries. Due to South Korea's own severe environmental problems, this new focus will probably gain the country in more than one way.

The Ministry of Environment launched a ten-year project plan for developing environmental engineering technology in various fields in 1992. Approximately USD 7.8 m will be invested over the ten-year period [MOE1998]. The objectives are to cope better with international trends towards tighter environmental regulations and standards, as well as to make Korea catch up with advanced countries in this area. The development of new environmental technologies in South Korea is preceding at a too slow pace, considering the time needed for the polluted environment in the country to recover.

To enter the global environment market as well as intensifying domestic efforts to resolve own environmental problems, Korea is in need of new environmental technology fast. The Koreans are well known for their eagerness to adopt new technologies from abroad, and the environmental field will probably be no exception. To develop a strong environmental industry, also in the fields of highly advanced technologies such as CO2 separation, recovery technology and monitoring systems, South Korea will have to seek expertise help from abroad.

The Government therefore provides an investor-friendly environment and other benefits to foreign companies that want to establish joint cooperation/partnership/research with Korean businesses in the environmental technology field.

WASTE MANAGEMENT AND RECYCLING

The swift rise in lifequality in the South Korean population and the rapid increase of waste generated from growing industries, have led to high national levels of waste production. The amount of domestic waste generated in Korea is comparably higher than that of advanced countries, and still growing. It is estimated that the total waste generated in Korea is comparably higher than that of advanced countries, and still growing. It is estimated that the total waste generation level in year 2001 will be 70% higher than that of 1994.



General waste sources

volume had reached 148 000 tonnes/year

The absolute volume of domestic waste is disposed in landfills. To minimise the overall waste volume, the recycling percentage of disposable goods is to be increased from 9.8 % in 1997 to 50 % in 2002 [MOE1998]. Goods that cannot be recycled will be incinerated rather than sent to landfills. Development of new landfills with treatment facilities, recycling facilities and construction of incinerators has to be achieved to meet these new demands. At the moment several construction projects for waste treatment are commenced. Nevertheless, the technology needed to run these facilities/plants effectively and make use of the waste heat (incineration)/waste gases (landfills) as potential energy sources are not yet developed thoroughly.

Recycling of disposable goods and food garbage are the major actions to be taken, to reduce the overall waste volume in the future. This strategy relies upon increased consumer contribution to waste reduction. Presently the domestic recycling industry is still at a stage of infancy,

and requires support in its development. The Government will encourage the private sector to engage in waste management in order to accelerate the efficiency of existing technology, and the development of new viable treatment technologies. Other problems are lack of consumer awareness, poor diversity in recycled products and the relatively low quality of recycled goods. The Government hopes that the expansion of the Polluter Pays Principle (a waste charge system) with a Volume Based Waste Fee System (VBWFS), green labelling of goods and extensive public awareness campaigns will boost a greener consumer pattern. To ensure the effectiveness of the implementation of the VBWFS system a Deposit-refund System will be imposed on both producers and importers of recyclable goods.

A GREEN 2002 FIFA WORLD **CHAMPIONSHIP**

The joint 2002 Soccer World Championship, hosted by South Korea and Japan, will also focus on environmental awareness through several major eco-projects. This is a unique opportunity for South Korea to present a beautiful natural environment to the world. The purpose of the projects is to create a clean and

pleasant environment in the cities where the matches will be held. In the host cities public transportation will be enforced and the buses will run on natural gas. Parks will be created around the stadiums, and green areas throughout the city will be recovered. In line with this, the water quality of city streams will be improved by the increasing improvement of wastewater/sewage treatment plants. An improvement will also be enhanced in the area of garbage collection and recycling. With these and several other



green plans Korea aims to harmonise the built and the natural environments, and to give soccer fans around the world an exciting and clean sporting event.

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Shipbuilding & Offshore

Shipbuilding in Korea is considered one of the most promising industries with its strong competitive edge both in price and quality. Though Korea has a long maritime tradition, the history of the modern Korean shipbuilding industry is relatively short with around a quarter century of full-scale operation. Even so, Korea has risen to become the No. 1 shipbuilding nation in the world, just ahead of Japan.



Source: Environmental Policy of Korea, 2000

SHIPYARDS

Korea's main shipyards are situated in the southern parts of the country. The 5 major shipbuilders - namely, Hyundai, Daewoo, Samsung, Samho and Hanjin represent about 95 % of Koreas total ship production [TSNAK00]. Ulsan Shipyard in Mipo bay, run by Hyundai Heavy Industries Co.Ltd., is the biggest ship manufacturer in the world. Koje Shipyard, run by Samsung Heavy Industries and Okpo Shipyard, run by Daewoo Shipbuilding & Marine Engineering Co.Ltd., are respectively the second and third largest in the world. Both are located at Koje Island right outside the city of Pusan. Daewoo and Samsung have approximately the same production capacity of about 35 ships a year, while Hyundai's Ulsan Shipyard can build more than 60 commercial and naval vessels per year. The three main yards have combined delivered over 1 400 ships and numerous steel constructions and offshore rigs during the years.

Abbreviations:

- FPSO Floating Production Storage and Off loader
- LNG Liquefied Natural Gas
- LPG Liquefied Petroleum Gas
- VLCC Very Large Crude Carrier
- GT Gross Tonnage
- DNV Det Norske Veritas
- IACS International Association
- of Classification Societies

THE DEVELOPMENT OF A SUCCESSFUL SHIPBUILDING INDUSTRY

Traditionally Korean shipyards have built less complicated vessels like bulk carriers. Throughout the last decades the different yards have invested heavily in R&D, and are today delivering more complicated structures like LNG/LPG ships and offshore rigs. Several shipyards also construct FPSOs, both for the record and to gain the experience. Recently, the Korean shipbuilders have also started to manufacture passenger vessels. Many consider this to be an important addition to the future prospects of the Korean shipbuilding industry.

Throughout the years, the key factor to Korea's success has been the easy supply of a cheap, highly educated and skilled workforce. Shipbuilding is a labour intensive industry, and labour costs also contributed to the shift from a European dominance to an Asian dominance. Presently, the labour costs have risen in Korea, which in many ways explain the growing Chinese shipbuilding market. Nevertheless, Korea's traditions as a coastal nation dependent on sea-borne transportation, have also been a competitive advantage.



SHIPBUILDING IN KOREA – THE FACTS

Considering the total export of goods from Korea, ship manufacturing is not dominating. In 1999, the country exported merchandise for a total of USD 143.7 bn. The share of ships represented approximately USD 7.5 bn, or 5.22 % [BK01]. Ship exports in the last five years have fluctuated around 5 % of total export, and according to analysts this will also be the trend in the future. It is also worth mentioning that shipbuilding contracts always are made in US dollars, so that bad times, i.e. weak won, will have a direct beneficial effect with US dollar income and won expenses.

The shipbuilding industry employs approximately 46 000 employees (including some 12 000 subcontractors) with an average age of 39, which is much younger than their Japanese counterparts [TSNAK00]. While Japan experiences difficulties recruiting skilled staff to their yards, Korea has no recruitment problems. This is due to fairly high salaries at the yards (about USD 25 - 30 per hour) and the perception of shipbuilding as a high status employment.



NORWEGIAN SHIPS GEAR

Norway had in 1999 the 3rd largest merchant fleet in the world (by nationality of owner, based on GT) [LLoyds00], and Norwegian ship owners were some of the first to order ships from Korean shipyards. This brought along Norwegian suppliers, after demand from the Norwegian customers. Today, Norwegian ships' gear holds a strong position in the Korean market and the Norwegian suppliers deliver just about anything from cranes to sophisticated navigation systems. Currently, several Norwegian companies are well established in Korea, with good relations to the Korean ship manufacturers.

HOW TO ENTER THE KOREAN SHIPS GEAR MARKET

The type of business enterprise, which a foreign company chooses to establish in Korea, usually depends on the product, resources and the general conditions of the company. The classical approach is to start with a simple representation through an agent and then gradually develop a more permanent establishment through a sales office, before ending up with licensed production or a joint venture company.

This part of the report will take a closer look at the different types of establishments usually chosen by Norwegian companies exporting ships' equipment to Korea, focusing on their pros and cons.

STEP 1: AGENT

Many Norwegian exporters are represented through agents in the Korean market. This form requires the least use of resources. As a consequence, it is easy to remain at this level even though it is not the most efficient way to operate in the market. Cultivation of contacts is essential to achieve a sufficient collaboration with Koreans. Therefore, it is important to choose an agent that can make a good match both on a personal level as well as when it comes to financial matters and market profile. The network-based culture also forces the agent to have a large circle of acquaintances in order to succeed for your company. The Norwegian Trade Council can provide proposals of appropriate Korean agents.

The classical approach



STEP 2:

a) Sales and Service Office, Representative Office

This type of establishment has a wide range of advantages despite the fact that it requires more involvement and investments than agents do. Even so, it represents a low commitment form. The nearness to the ships' gear market is another advantage. Since these kinds of offices only provide sales support and services, they are not considered as permanent establishments for tax purposes. This implies that their existence is not subject to the Law of foreign corporations to taxation on the sale of goods or services in Korea (KPMG, 1998). Given this background information, an increasing number of Norwegian exporters of ships' gear have established Sales and Service Offices in Korea.



b) Subcontracting and Licensed Production Pros for choosing one of these forms of establishments are the low degree of commitment (regulated through agreements) and the opportunities to improve productivity and enhance cost-efficiency.

Subcontracting is the "simplest" form for local production. This type of manufacturing is appropriate when you want to take advantage of the Korean production capacity when it comes to construction of less advanced equipment, or want to outsource only parts of production. The motive for choosing to establish licensed production is usually the lack of company resources to develop its own production branch abroad, as well as to conduct the marketing tasks. Disadvantages are the risk of losing market control, and the threat that the licensed producer can turn out to be a competitor in the long run after achieving knowledge about how to produce your merchandise. It is therefore essential to sign good contracts.

Which of these two forms you choose, should depend to some extent on whether the Koreans are able to produce the whole product or not.

STEP 3: JOINT VENTURE (JV)

A JV company is the toughest form of business enterprise, and involves several difficulties and disadvantages. The Koreans have a "hostile" attitude towards heavy establishments in the market, much due to their earlier protectionist policy.

The process is very complex, and is characterised by bureaucratic and indefinite procedures where new subtopics and permissions must be signed constantly. Consequently, establishing a JV implies high use of resources like time and capital. On the contrary, the Korean Government pursues a liberal investment policy designed to encourage an inflow of foreign capital and technology. Sadly, it might seem that there is a huge gap between words and action.

The low degree of transparency is also making it more difficult to find the right partner. It is for example almost impossible to find the real truth about the financial condition of a possible partner. Another aspect is the difficulties in penetrating the culture. In order to locate an appropriate partner the company should use sources like KOTRA, FKI (Federation of Korean Industries) and/or the Norwegian Trade Council.

HOW TO OPERATE IN THE KOREAN SHIPS' GEAR MARKET

What features are most important to Korean shipyards and their customers related to the selection of ships' gear? The price and the quality of course, but what about other features? This section deals with these questions and other areas that might be relevant for suppliers that are on the verge of entering the Korean ships' gear market.



SERVICE

The extent of how well you can provide excellent service to your customers (shipyards) is probably one of the most important keys for succeeding in this market. And in Korea, excellent service means a whole lot more than the Norwegian perception of this expression. In general it is preferable that the supplier can offer world-wide support and service. You should also have an After Service / Sales & Service branch of your company situated close to the major shipyards, and help the yards out with both technical routine service and other problems that might occur with the implementation of your ship's equipment. Generally speaking, you have to avoid any circumstances that might embarrass your Korean partners and make them "lose face" even though you did not trigger off the situation.

NETWORKING

The Korean social structure is in many ways based on networks and networking. You should be a part of the maritime network for ships' gear, or try to work your way into it. Within such a network your odds to succeed will be much greater. Nevertheless, a mistake, like bad service of a customer at the yard, will easily spread and might affect your business in a negative way. Human relations with Koreans are traditionally the door opener to the networks, and you should value personal relationships as high as the Koreans do.

MARGINS

The competitive strength of Norwegian ship equipment suppliers is quality and innovation. It is mainly impossible for Norwegians to compete on price within the domestic ships' gear market in Korea. The margins fluctuate from product to product and depend on the market competition. In general financial profit is low. On the other hand, you might compensate the low profit by products with a great need for spare parts.

HOW TO MAKE THE MAKER'S LIST

For ship equipment suppliers it is essential to be on the maker's list. Usually Norwegian shipping companies have a preference for certain Norwegian ships' gear. This should not be a pretext for doing nothing to provide good service, even though the yards have to co-operate with your company. If the yard/shipping company is not aware of your products you should visit them and introduce your merchandise. This also applies if the yard/shipping company has experienced poor conditions related to your products/services. In practice you have to gain information about new construction/building projects at an early stage. The key to obtain this kind of information is usually through networks.

For Norwegian ships' gear suppliers a "Type Approval Certificate" from one or several of the major IACS classification societies would be essential to obtain. Normally the shipyards are very good at obtaining equipment with DNV certificate for DNV classed vessels, Lloyd's certificate for Lloyd's classed vessels etc. Your product will then make it into the yards' list of internationally approved ships' gear products. Larger shipyards in Korea and other international shipbuilders use this kind of list. Given this information, the big advantage of a "Type approval Certificate" is that your ships' gear products are considered at all.

THE NEGOTIATION PROCESS

Korean shipyards are known to be well organised and have extremely talented buyers. They will push you hard

on the price! The yard buyers are also well aware of the fact that most ship equipment suppliers from Norway have travelled far, and therefore tend to be more flexible, because they do not want to return without a contract. Usually you will have to negotiate your way from a subordinate buyer to a higher ranked buyer, and they will stress the price at each stage.



TECHNICAL MEETINGS

After the bidding call from the yards, the suppliers will make a quotation for the ship's equipment together with drawings, specifications and information about the extent of the delivery. A technical meeting is then set up between the yard and the supplier. The intentions are to clarify if the offer is suitable, or if alterations are needed. The meeting will end up with a "Technical Meeting Memorandum" which both parties have to sign. In many cases the supplier will have to recalculate the price after the meeting.

PIRATE PARTS

Non-genuine spare parts for original equipment are a persistent problem in the marine industry, also in Korea. Pirate parts are bad business, not only for the end user but also for the marine equipment industry in general. At best they will result in higher running costs and potentially lead to expensive vessel downtime. Pirates operate world-wide, and no trend indicates that this problem will disappear in the immediate future.

STATUS AND FUTURE PROSPECTS OF THE NORTHEAST ASIAN SHIPBUILDING INDUSTRY

JAPAN

Because of the strong yen, over-capacity and financial problems, the year of 1999 was not at all good for Japanese shipyards. Despite the efforts to rise productivity, the strengthening of the yen made the situation worse. Japan's market share fell from 34 % to 31 % [BRS-Paris01]. The shipyards, realising they had lost competitiveness stopped to quote some types and sizes of vessels, as the Europeans have done for a long time for some standard tankers and bulk carriers. Usually Japanese yards have tried to compensate with intensive marketing and higher volumes when problems occur, but now things are changing. The Japanese Government set up a group to evaluate the future of the Japanese shipbuilding industry, and the recommendation were either that the yards had to specialise and rationalise, or that the main shipbuilders had to consolidate their work in three or four groups out of the existing seven. Such agreements, as the second suggestion, have already been announced by some of the major shipbuilding companies. The Japanese Shipbuilders' Association predicts a drop in deliveries through 2002 and 2003 if no action is taken to solve this problem.



KOREA

In the race between Korean and Japanese shipyards, for the time being, it looks like Korea might conquer. The market share of Korean shipyards rose from 14 % in 1990 to 35 % in 1999. The equivalent for Japanese yards are 22 % and 34 % respectively. [BRS-Paris01]. The reforms put forward by the Government to alter the Chaebol configuration, has lead most large Korean Chaebols to restructure and run their shipyards as independent companies

Economic conditions in 1999 were somewhat better than in 1998, enabling domestic ship owners to make contracts. Anyway, the Korean shipbuilding industry is today mainly focused on the export of ships. To sum up the situation for the Korean shipbuilding industry after the Asian crisis, the results are: increased production, lowered wages, reduced debt and mobilised the workforce and the management. The prospects are good, but the cheaper workforce in China is a possible threat, and they are picking up speed and knowledge fast.

As for now, it is still a great market for Korean yards. Korea gained 55 % of all new shipbuilding orders worldwide as of September 2000, making it the leader in the industry. Japan ranked second, accounting for 26.5 % of total orders [FGA01].

CHINA

The Chinese market share has increased from 1.4 % in 1990 to 6.8 % in 1999, and in the first half of 2000 the Chinese shipyards more than doubled their order intake compared to the previous year's figure. Presently, the majority of vessel types are container ships and bulk carriers, but as for today Chinese yards are constructing their first VLCC and FPSO. A thing to notice is that China used the economic situation in 1997-99 to gain market shares from Japan and Korea. This willingness and capability impressed the marine industry, and the forecasts for the Chinese shipyards are therefore good. The ship owners entering China want to build vessels at attractive prices, and are taking market shares from other Asian yards. In near future, the Chinese goal is to have a 10 % market share. [BRS-Paris01]

MARKET OPPORTUNITIES

Ships' gear is an already extensively developed business between Korea and Norway. Many Norwegian manufacturers are present, either through agents, sales-representatives or in co-operation with Korean companies. The general impression is that Norwegian suppliers have a good reputation. They should be aware of the Korean yards' strategy to build more complex ships in the future. For Samsung Heavy Industries the strategy is "technology in the future". They have already seen what is happening in China, and not forgotten how Korea succeeded Japan as a shipbuilding nation. At the moment, they have started small-scale operation in China, and are training a handful Chinese youngster at the Samsung Shipyard.

The world sea-borne trade has been steadily increasing, and there have been improvements in both freight rate and ship price. The old world fleet has to be renewed, and this anticipates a good level of new building demand in the future. From an environmental point of view, seaborn transportation is a more environmentally friendly way of transporting than trucking (measured in used energy per kilo transported). Within Europe especially, truck transportation has already reached very high fees and taxation levels. Given this information, the Norwegian ships' gear industry will probably compete actively in the global shipping sector for many years to come, and the Korean market will be one of the most important ones.
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Logistics & Shipping

With its total coastline of 11 542 km, South Korea is strategically located in the centre of the world's trunk routes including the North American route, the Southeast Asian route and the European route. Considering the numerous geographical advantages, the Korean government plans to promote South Korea as the logistic hub of Northeast Asia [MOMAF98]

As a major importing and exporting country, South Korea has experienced a tremendous growth in the past decades, which has had a major impact on the Korean logistics system. Increased transportation activities on domestic and international level, have caused significant strain on the logistics network. In response, the Korean Government has initiated a process of improving existing transportation facilities and implementing new construction projects to expand the transportation network.

This next part of the report will give an outline on the current status of the Korean logistics infrastructure, and also introduce the Korean Government's future plans for a superior logistics infrastructure.

DOMESTIC TRANSPORT

INTRODUCTION

The rapid growth and expansion of inland transport in South Korea, has necessitated the establishment of a comprehensive national transport plan. Article 3 of the Transportation System Efficiency Act, passed in 1999, forms the legal framework to implement this plan. [MOCT 99] The main objective is to ensure operational efficiency and expansion of the transport system. Due to its advantageous geographical location, South Korea has gained increased importance as a locus for all transport activities. Authorities have seen the need to develop and implement a systematic and comprehensive approach to improve and increase logistical efficiency in response to demand, and achieve interconnectivity and synergy among existing transport facilities. Table 1 shows the trend in domestic transport demand.

Domestic interregional freight transport demand



ROAD NETWORK

South Korea has in the past decade, experienced explosive growth in terms of road transport. The current state of the road-network is insufficient to support transport activities, resulting in traffic congestion and inefficiency, whereas transport safety also poses a serious problem. The total length of roads in South Korea has had an annual growth of 2.8 % since 1970, while the number of automobiles has increased by 17.7 % annually [MOCT 99].



Vehicle registration is expected to reach 22 m units by 2019, as a result of improved income levels, whereas registration was approximately 10 m units in 1997 [MOCT 99]. The country also has one of the highest transport fatality rates, compared to developed countries. The transport fatality rate is 19.3 % per 100 000 persons, compared to the USA (15.7 % in 1997) and the UK (6.4 % in 1996) and Japan (7.7 % in 1997) [MOCT 99]. In addition, automobiles constitute a large source of air pollutants. With the increase in traffic volume, the transport sector accounts for 50.3 % of the total air pollutant emissions. Investments in the transport sector have not to date been proportional to the increase in transport volume. As a response to the increasing demand in the sector, the authorities have launched a National Intermodal Transportation Plan for the years 2000 - 2019.

FUTURE ROAD NETWORK STRATEGIES

In accordance with the National Intermodal Transportation Plan, the purpose is to build a solid infrastructure that will promote a smooth, effective and costefficient traffic system and reduce traffic congestion. A goal is also to process mid- and long-distance traffic, distribute traffic flows in highly populated and dense areas, and to improve the connectivity of national road networks with arterial road networks. Priority will be given to the expansion of existing national roads, rather than building new ones. The ratio of four-lane roads will be increased from 24 % to more than 50 % [MOCT 99]. Roads will also be lengthened, to expand coverage of the road network.



The first phase of the implementation strategy from 2000 - 2009 will be to complete existing expansion projects and reduce congestion in traffic sensitive areas. The second phase of the implementation plan will be executed from 2010 to 2019. The goal will be to expand the arterial road networks that cover the whole nation and build a grid network. Three important goals are cost-efficiency, safety, environmentally friendly measures, as well as traffic management through advanced IT solutions. As transport sector in South Korea accounts for 22.1 % of the entire energy consumption in the country, the focus will also be on energy-conserving measures in the sector [MOCT 99]. The primary purpose of the implementation of ITS (Intelligent Transportation System), is to improve efficiency and prevent transport-related accidents. A long-term goal in relation to the possibility of reunification with North Korea, is extending five out of seven North-South axes into regions in the North. Also, roads connecting to China and Russia will be built, and the road-network will in the long-term become connected to the Asian Highway Network.

AIRPORTS

Currently, there are sixteen civil airports in South Korea, whereas three are international airports (Kimpo, Kimhae and Cheju), and thirteen are domestic airports (Kwangju, Taegu, Chongju, Ulsan, Pohang, Sachon, Kangnung, Sokcho, Yeosu, Yechon, Mokpo, Kunsan and Wonju). Due to increasing traffic demand and further growth expectations, South Korea has initiated several new airport construction projects, and is also in the process of modernising existing airports. The Inchon International Airport (see box 1), will open in 2001upon completion of its first phase, and take over most international flight activities, thereby leaving Kimpo International Airport to handle primarily domestic air transport. Two more construction projects are also under way, one in Yongdong and another in Honam, to meet the growing demand in domestic air transportation, as illustrated in Table 1.

AIRLINES

The development of civil aviation in South Korea was initiated in 1948 by the establishment of Korean National Airlines (KNA), which provided air-service between Seoul and Pusan. In 1969, the airline went through a restructuring and was privatised. It emerged as Korean Air, and expanded its network to Southeast Asia, the Middle East, the USA and Europe. In 1988, civil aviation in South Korea was given another boost by the establishment of a second carrier, Asiana Airlines. As of 1998, there are two Korean carriers and 29 foreign airlines operating international flights to and from South Korea. In the past decade South Korea has experienced an enormous growth in the airtransport sector. From 1997 to 1998, the average annual growth rate was 11.3 % for international air passengers and 13.8 % for international air freight volume [MOCT 98]. On the domestic side, South Korea experienced an 8.8 % increase in passenger transportation from 1996 to 1997, and a 10.3 % increase in cargo transport in the same time interval [MOCT 98].

In 1997, South Korea was one of the 10 largest countries in terms of air transport volume, both in terms of the tonkilometres and the passenger-kilometres. As part of its





international focus, South Korea became a member state of the International Civil Aviation Organisation (ICAO). As of June 1998, South Korea has signed bilateral air transport agreements with 73 countries, the most recent being the open-skies agreement with the USA.

PASSENGER AND FREIGHT TRANSPORTATION

The railways in Korea are owned by the Government and operated by Korea National Railroad (KNR). Over the past decade rail passengers have increased by more than 60 %, while rail facilities have remained almost unchanged in capacity. From 1986-97 the number of passengers has gone from 519 million to 833 million, while the length of operating railroads has increased by less than 1 %. The outdated rail facilities limit capacity expansion and operating speeds. In addition, it also increases safety risks. [MOCT99]

Korea suffers from the increase in logistic costs and traffic congestion. The logistic costs for Korea are KRW 58 trn, which falls under 16.5 % of GDP on the basis of 1995, and it is about twice as much as that of the USA and Japan. In the Seoul-Pusan Corridor, where 70 % of the Korean population and production are concentrated, the existing highway and railway have reached a saturated point which traffic and physical distribution will only threaten to aggravate.

To cope with the fast growing demand for passenger traffic and to be able to move more of the domestic freight transport from trucking to railway, initiatives have been taken from the Ministry of Construction & Transportation and from the Korean National Railroad. The construction of a high-speed line for passenger traffic between Seoul and Pusan is well underway. In April 2004 when the KTX (Korea Train Express) finishes Phase 1 and opens the Seoul-Chonan-Taejon-Taegu-Pusan line, it will be possible to travel from the north of the country to the south in

Transportation type Modes 1997 2004 2009 2014 2019 88.2 81.3 78.4 77.5 74.8 Domestic passenger travel Roads Rail 7.6 14.2 17 17.5 18.6 Air 4 4.3 4.4 4.8 6.3 Water 02 02 0.2 02 0.3 Domestic freight movement Roads 56.6 49.7 48.2 44.3 41.2 Rail 1 0.5 14.2 15.5 18.9 20.3 0.3 0.3 0.4 Air 01 0.3 38,1 Water 32,8 35,8 36 36,5 International passenger movement Air 9 9.7 99.7 99.8 99.6 99.7 Water 0.3 0.3 0.2 0.4 0.3 International 0.3 04 04 0.5 Air 0.3 freight movement Water 99.7 99.7 99.6 99.6 99.5 Note: Modal shares are calculated in terms of person-km and tonne-km. Intra-regional transportation is not included. Unit: % Source: MOCT

Modal shares of interregional transportation

less than 2 hours. Due to the KTX and its speed, it will actually be possible to reach most corners of South Korea within half a day of travel. The capacity of passenger transport will grow 2.8 times, going from 200 000 to 520 000 passengers per day, and the freight transport capacity will increase by up to 8.6 times, from 300 000 to 3 m containers per year.[NMPKTX99]

SHIPPING

WEB BASED LOGISTICS SYSTEMS

In recent years, the information technology revolution has had an enormous impact in the logistic sector. Most transportation and shipping companies operate world wide, usually with low financial margins. To gain easy and effective access to other markets, many companies have relied on the Internet to provide world-wide services. The web turns the world into one single logistic market and makes it possible to facilitate instant access to information. In the logistic business, these features are important. Customers want to be given up-to-date information about booking status, cargo tracking, arrival support, sailing schedules, calling ports etc. Presently, this type of on-line information is available on several logistic companies' homepages. The systems offer real-time based schedules, which are updated constantly. The cyberlogistics solutions also make it possible to order door-to-door services (order your own container), as well as perform invoicing or payment tasks via the Internet. In the long run these kinds of services should be able to reduce customers' shipments cost by as much as 20 - 30 %. [Nao01].

SHIPPING TRENDS IN NORTHEAST ASIA

In general, factors like high oil prices, fears of a slowdown in the US economy, and weaker markets for electronic goods have combined to result in a slowdown in the Asian markets. Even so, both South Korea and China are expected to register an economical growth around 5 -8 % this year. Due to the trend of a somewhat weakened won this year, the Korean export market looks even brighter.

It is expected that shipping companies' operations to and from Korean ports will sustain a thriving business, also in 2001. The prospering shipping business in South Korea is mainly due to the shipping of automotive vehicles and a steady rise in the amount of crude oil transport. It is also forecasted that the demand for raw material and food grain will continue to increase.

The crude carrier business has lately experienced a boost. As an example, a VLCC (very large crude carrier) earns about USD 2.5 m for one transport between the Middle East and South Korea [Shim00]. Korea's Power Development Plan shows a dramatic rise in the energy consumption in the years to come, which indicates a great

Ports

		Port of PUSAN	Port of INCHON	Port of MOKPO	Port of KUNSAN	Port of POHANG	Port of MASAN
Physical condition							
Coastline		179 km	76.5 km	-	-	30 km	28 km
Tidal range	е	1.3 m	8.6 m	4.1m	7.24 m	0.2 m	1.91 m
Depth of w	/ater	5m~14m	5m~15m	4m~18m	5.5m~11m	4m~19.5m	12 m
Port facilities							
Berthing	Quay	115 ships	62 ships	1 935 m	2 016 m	9 381 m	3 758 m
	Wharf	72 ships	43 ships	2 425 m	-	1 988 m	1 689 m
	Dolphin	43 ships	19 ships	-	19 ships	-	3 units
	Floating pier	-	_	10 units	3 ships	-	-
Storage	Transit shed	76 000m2	58 518m2	-	-	-	3 593 m2
	Open storage	190 000m2	1 889 398m2	63 730m2	1 003 000 ton	906 000 m2	244 178 m2
	Container yard	1 600 000m2	-	-	-	-	44 822 m2
Anchorage		23 units	39 units	-	-	18 units	-
Source: [MON	MAF01]						

market for the carrier division.

There has also been a favourable business climate in almost all divisions covering container shipments. The fare for the Korea-North American route is expected to linger around USD 2 160 per TEU (Twenty-foot Equivalent Unit) this year [Shim 00]. Recently Korea banned the regulations prohibiting the imports of certain Japanese products. As a consequence, the Korea-Japan route should expect a rise in shipping volume in the years to come.

TRANS-SHIPMENTS

Trans-shipments refer to cargo where the nation's ports only play an intermediate role without direct import and export of cargo for end users. A trans-shipment yields some USD 200 in added value per TEU. The transshipments of container shipments in Korea rose up to 53 % in 2000, compared to the corresponding period in 1999. Pusan Port, the largest in the nation, handled 1 725 00 TEUs of trans-shipments in 2000, equivalent to 31.2 % of the port's total container operations. The increasing shipping volume to China might explain the rise. Chinese ports have relatively shallow water depths, making them unable to accommodate ships or container vessels larger than 5 000 TEU. [Shim 00]

PORTS IN SOUTH KOREA

The Korean harbour system has neither the quality nor quantity to handle an increasing volume of goods. As a consequence, the authorities have made plans for expanding the existing harbour works as well as new buildings to increase the capacity. To succeed in realising these projects, foreign investment and technology is encouraged. The Korean Ports and Harbours are Pusan, Inchon, Mokpo, Kunsan, Pohang, Masan, Tonghae, Daesan, Yosu, Ulsan and Cheju. This report's main focus is on the ports of Pusan, Inchon and Mokpo, due to the investments taking place here. In addition, the following table gives a brief presentation of the ports of Kunsan, Pohang and Masan.

THE PORT OF PUSAN

Located in the southern part of the Korean peninsula, the Port of Pusan is a principle gateway linking the Pacific Ocean to the continent of Asia. The Port has 120 years of history, and has a fine, natural deep harbour experiencing only minor tidal changes. The port handles about 45 % of the nation's total export cargo and 95 % of the total container flow [MOMAF01].



The port consists of the North Port, South Port, Gamchun Harbour and Tadaepo Harbour. A construction project is now in progress to provide better service, and will result in New Pusan Port, which is expected to open in 2006. The project is one of several phases, aimed at privatising the container terminal facilities. Furthermore, the project will also add one more berth (passenger accommodation) in Gamman Container Terminal scheduled to start operation in 2002.

The Port of Pusan has reported a critical increase of container handling volumes in 2000 with a growth of 17.1 %, based on 1999 volumes. Of 7 540 387 TEU of the container throughput handled last year, 2 551 162 TEU and 2 483 753 TEU were carried in exports and in imports respectively. Significantly contributing to the total volumes, the trans-shipment reached an impressive growth rate of 46.4 % in 2000 compared to 1999. [MOMAF01].

With the geographical advantage of its location, which connects Asia and North and South America, the Port of Pusan will play a vital role as the hub of sea-borne transport throughout the Northeast Asia region.

THE PORT OF INCHON

The Port of Inchon is located on the Midwestern coast of the Korean Peninsula, 32 km from Seoul. It is an artificial port with lock gate facilities, which have overcome a tidal range of 10 metres. It is one of the busiest international ports equipped with modernised facilities, and actively engaged in trade with major ports of the world. It has contributed greatly to the development of the national economy and other industries as a gateway to Seoul.

THE PORT OF MOKPO

The Port of Mokpo strategically connects the mainland and the islands scattered around the area. The Inner Harbour handles export cargoes and passengers to and from the islands, while the North Port is mainly for shipbuilding industries. The necessity to develop a new port in the Mokpo area is becoming more important due to the expansion of trade with China and Northeast Asia.

INVESTING IN KOREAN PORTS

The total cargo traffic in Korea is expected to increase to 1 billion tons by the year of 2011, whereas container cargo will increase from the current 5.2 m TEU to 19.2 m TEU during the same period [MOMAF98]. Currently, the port facilities are capable of handling only 65 % of the expected total cargo traffic volume, and the container facilities are only 45 % sufficient. Based on these facts, and the geographical conditions, the Korean ports have advantageous prerequisites for future investments. The Ministry of Maritime Affairs and Fisheries has established a specific department to serve as a "One-Stop-Service" centre for foreign investors. The purpose is to eliminate the need to travel to several offices to acquire information. The department is authorised to handle all acquisitions involving investments as well as their approvals.

INCHON INTERNATIONAL AIRPORT

South Korea's new airport, Inchon International Airport will have its initial opening in March 2001. The goal of the new airport is to become the hub of Northeast Asia and serve as the stopping point for trans-Siberia and trans-Pacific air routes, and as well becoming a centre for international trade and cultural exchange. In order to service the diverse functions of an international airport, an Interational Business Center (IBC) will be built, containing conference centres, exhibition halls, office buildings, hotels, shopping malls, sports and leisure facilities. The new airport is close in proximity to downtown Seoul and Inchon, 52 km and 15 km respectively. The main access to the airport is by the Airport North-South Expressway, which also includes a double-tracked airport railway. Its offshore location will ensure minimal noise pollution and thus enables 24-hour operations. In addition, the airport will promote environmental measures, by landscaping 30 % of the site. On its initial opening, the airport will have two independent parallel runways able to handle 170 000 flight movements, carrying 27 m passengers and 1.7 m tons of cargo. Upon completion in 2020, the airport will be able to accommodate 100 m passengers annually.

THE IRON SILK ROAD

The reconnection of the Kyongui Line Railway between Seoul and Shinuiju in North Korea and the Kyongwon Line, which linked Seoul and the North Korean city of Wonsan, represent a new era of trans-Korean rail transport that will eventually link the peninsula with greater Asia and beyond, to Europe.

With the restoration of the Kyongui Line, the Korean government plans to link the cities of Pusan and Seoul in the South to Pyongyang and Shinuiju in the North, and eventually with the Trans-China Railway (TCR). Through the Kyongwon Line, it plans to link the cities of Mokpo in the very south of the peninsula, and Seoul, to the North Korean cities of Wonsan, Chongjin and Najin, and then with the Trans-Siberian Railway (TSR).

There is of course of no doubt that the inter-Korean railway project is expected to act as a driving force in the unification of the Korean peninsula. President Kim Dae-jung has also unveiled an ambitious plan to turn the small nation of Korea into a logistical centre for Northeast Asia that will link Eurasia to the Pacific on a par with the way Singapore and the Netherlands serve their respective hinterlands.

In conception, the Iron Silk Road consists of the Trans-Korea Railways (the Kyongui and the Kyongwon Lines), the TCR, the Trans-Mongolia Railways (TMR) and the TSR. When these railways are vested with high-speed capability, it will take only 48 hours to travel from Pusan to Rotterdam in the Netherlands. And if they were to be upgraded to handle high-speed trains running at 300 km/h (currently being tested for the Kyungbu High-speed Railway between Seoul and Pusan opening April 2004), it would be possible to travel from Pusan to Rotterdam in slightly less time, just 40 hours.

The inter-Korean railways are considered major routes for international transportation between Europe and Asia. And the Iron Silk Road is intended to effectively link the rapidly increasing productivity of Northeast Asia with the abundant purchasing power of Europe through the restructuring of the region's transportation networks with the goal of promoting economic development and peace among the Northeast Asian nations.

The re-connected inter-Korean railways are most likely to attract cargo bound for China, Russia and Europe from Korea and Japan, as well as cargo to be shipped between South and North Korea. Of the cargo shipped between Korea, Japan and Europe, the Kyongui Line is expected to carry some 20 % of the total volume between Korea and Europe. Meanwhile, the line is expected to attract 5 % of the volume of cargo between Japan and Europe, amounting to 240 000 TEU (Twenty-

Comparison between railway and marine transportation (Seoul to Belarus Republic)



foot Equivalent Units). As a result of all cargo shipped via the Kyongui Line, South and North Korea are projected to annually collect some USD 100 m and USD 150 m in revenues, respectively.

When the inter-Korean railways are finally restored and linked with the TSR and TCS, freight rates and shipping times between Korea and continental Europe are expected to be reduced to three-fifths those of marine transport.

The restoration of the Kyongui Line is, without doubt, a winning proposition for all the players in Northeast Asia. In particular, the launch of the Iron Silk Road will position Korea as a link between the Eurasian continent and the Pacific Ocean, as well as bridgehead for penetrating Northeast Asian and European markets. The completion of the Iron Silk Road is sure to have its complications. The DMZ (the demilitarised zone) that divides the peninsula in North Korea and South Korea, is regarded as a major problem because of the density of mines that will have to be removed. The military has therefore been given full responsibility making the area safe and free from mines. Other uncertain issues are financing the different parts and the problems regarding agreements on customs-regulations. But up until now all involved parties have been very positive and willing to co-operate to make the project come true.

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Fisheries & Aquaculture

Korea with its long coastline is located between the Southern Sea, the Yellow Sea and China in the west, and the Eastern Sea and Japan in the east. In addition to the mainland peninsula, Korea includes some 3 000 islands.

Koreans have depended on fish, shellfish and seaweed since migration till the Korean peninsula. Warm water from the south mixes with cold water from the north and nutritious water from China, which forms a temperature front where a lot of species can be found. In the Eastern Sea there is Alaskan Pollock, Squid and Rock Fish, in the South Sea domination is Mackerel, Sardine, Anchovy and Spanish Mackerel and in the Yellow Sea one can find Skate, Yellow Corvenia and Blue Crab.

FISHING

From 1950 to the 70s coastal fisheries were rapidly developed. The introduction of powered vessels, nylon nets and modernised fishing gear made the Korean fleet expand their fishing grounds right upto the waters off China and Japan, including the East China Sea. Through the 1980s and 90s there has been stagnating and declining catches in a lot of stocks in these areas, which indicates the over-exploitation that has taken place. Recent and ongoing negotiations have resulted in a fisheriesagreement with Japan from last year, and a fisheriesagreement with China will come into force this year, to try to rebuild stocks and increase control to prevent overfishing.

SEAFOOD

Koreans eat a lot of seafood. Approximately 33 kg per capita has been registered the last years. To the question, what kind of seafood do Koreans eat, the answer is simply everything. Mussels, squid, seaweed, oyster, slugs, jellyfish, fish, urchin, crabs and shrimps are all found on the fish-markets and in restaurants. The preferences are perhaps somewhat different for Koreans compared to other Asian nations, such as Japan, when it comes to fish. The quality is of course important, but price is also very important in the seafood-market in Korea. Seafood customers can be divided in two groups; those who are looking for high quality and are willing to pay for it, and the ones looking for inexpensive food. The division into these two groups depend on geographical conditions. Using Seoul and the other metropolitan areas as an example, division can be done roughly by saying that the two

groups are divided 50/50. In rural areas the customergroup requiring inexpensive food make up the majority.

BEAUTY AND HEALTH

The Korean way of living includes a major focus on health. That is maybe some of the reason, combined with availability and price of course, that the seafood consumption is very high. Beauty and appearance is also a major issue for Koreans. A population of nearly fifty million health-conscious and beauty-focused people makes a huge market and, as Norwegian fish industry tries to increase utilisation and be in the lead of exploiting marine by-products they should be aware of this huge potential market for health- and beauty products.



KOREAN FISHING INDUSTRY: AN OVERVIEW

FLEET STRUCTURE

The Korean fishing fleet consists of vessels with an average age of 16 - 17 years [MOMAF]. After the recent reductions in the fleet, the average vessel is better equipped than before. Many of the vessels taken out of fisheries were very old. The Ship Safety Act was passed in order to prevent dangers by making the ships maintain seaworthiness and to furnish them with facilities necessary for security reasons. According to this act, Korean vessels are required to install certain types of equipment like radar and GPS. Still, each company usually sets its own standards.

The approximate instrument status of 1999:

- · Walkie-talkies: 18 000
- Radars: 5 000
- Fish detectors: 8 000
- Net haulers: 1 000
- Source: MOMAF

The deep sea vessels are to a large extent equipped with Norwegian or Japanese gear. In the coastal industry, the small vessels are rather poorly equipped with Japanese gear. The vessels are mostly semi-processing; not fullprocessing. Some of the fish gear that is being produced in Korea include fish detectors, sonar, fish aggregating lights, line holders and GPS floaters. The size distribution of the vessels are 8 - 10 GT (Gross Tonne) for coastal fishery-, 8 GT or more for offshore fishery- and 60 GT or more for deep sea fishery-vessels[MOMAF]. The Korean fleet of vessels counts 94 852 (1999). Of these; distant water fisheries are 620, coastal and offshore fisheries are 66 776, aquaculture vessels are 21 742 and 5 714 are others. Korea is now positioned as one of the world's leading deep sea fishing countries, recording the third rank in production. The latest statistics for the annual Korean fish production show that 1.3 million tonnes were caught by coastal and offshore fisheries, while the deepsea fisheries achieved a production of 720 000 tonnes.[KODEFA]

Deep sea vessels:

- Tuna long-liners: 202
- Tuna purse-seining: 26

192

- Trawlers:
- Drift net, squid: 101
- Saury lever-lift net: 30

Source: KODEFA

MANPOWER

It is rather hard to recruit people to the fishing industry. In addition the reduction in the fishing fleet causes many layoffs, and the National Assembly has passed a law that compensates each fisherman that has to go with a certain amount of money. 1999 there were 170 590 persons working within the most important branches of the fishing industry. Out of these 68 956 were working on fishing vessels. This is a total reduction of about 6 000 the past five years. [MOMAFOL]

ANNUAL COASTAL CATCH STATISTICS

In 1997 Korea was the tenth largest seafood producer, following Norway. The species listed underneath are the most important in the coastal and offshore fisheries, and make up 60 % of the total production:

Most important catch, costal and offshore fisheries



FISHERIES POLICY

Until now, commercial fishers have not required permits, and there have been no fixed catch limits on any species. Although there are limits to fishing seasons and size limits for some species, most fishers only target one species and take as much as they can. There are regulations enforced by the Government when it comes to the number of fishing licenses and vessels, fishing seasons, catching-areas, fishing-methods and quotas. Still, the control is not sufficient. All commercial fishers must nevertheless be members of a fishery union, as it is only through these unions that they can legally sell their fish. Catch statistics are collected from the fishery unions. Statistics do not take into account the traditional or recreational fishing that takes place in Korea, which is considerable.

During the 1980s and 1990s the overfishing of a lot of stocks became obvious. There had been a slight reduction in the fishing fleet due to the 1977 declaration of the 200miles exclusive economic zones, but it was not until in 1994 that the Korean Government realised that this had to be done in a more drastic way. The fishing fleet had to be significantly reduced. The result of the general programme put to force during 1994-98 was that the Government bought back 614 vessels weighing more than 10 tonnes. According to the 1999 agreement with Japan, a special programme resulted in a furthermore decrease of 668 vessels. This year, the coming agreement with China will result in 400 more vessels to be bought back by the Government. As the general programme is continuing, the target is to decrease the fleet of 6 000 offshore vessels to half its size over the next years. [MOMAF]



During the last several years, the conservation and trade effects of subsidies in the fisheries sector have been discussed in the World Trade Organization's Committee on Trade and Environment (WTO/CTE), the UN Food and Agriculture Organization (FAO), the Organisation for Economic Cooperation and Development (OECD), and in the Asia Pacific Economic Cooperation (APEC) forum. It has been further analysed by fisheries economists and other experts in a number of non-government technical conferences, and there is general agreement that the world's fishing fleet is too large in relation to available fish stocks. Many fisheries are already exploited at maximum or even beyond sustainable yield. The international trend regarding open access fisheries is that they should be regulated because of the vulnerability for overexploitation. This is the reason why Korea, together with China and Japan, are committed to fisheries agreements that have serious impacts on the fishing fleet. As the delimitation between Korea, Japan and China settles by agreement, the implementation of the TAC (Total Allowable Catch) system for setting quotas will take place.

FUTURE PROSPECTS

TECHNOLOGY

In order to keep up with the Japanese competition, Norwegian producers of fishing-gear have to be able to differentiate their products - that is, always being in the lead when it comes to technology. The Japanese are capable of selling for a much lower price, due to lower production-costs. Norwegian producers could to a larger extent function as a "think tank", and focus on selling the technology itself rather than products. When it comes to fishing gear, Norwegian technology is generally considered being of the uppermost quality. However one of the problems that might arise, is that it is not always adjusted for Korean conditions. More specifically there are market opportunities for Norwegian suppliers of e.g. fishdetecting systems, communications- and radio equipment, net haulers and winches.

PRODUCTION

A certain dissatisfaction could be sensed among the workers within the fishing industry and equipment suppliers regarding the ongoing negotiations with Korea's neighbouring countries. The loss of fishing grounds, overfishing and pollution of the Yellow Sea and East Sea - all these conditions make the future prospects for the Korean fisheries rather pessimistic. This means that the Koreans to a larger extent have to rely on either fishfarming or fish imports in order to preserve their long traditions for eating several different types of seafood.

NORWEGIAN PRESENCE IN KOREA

A fisheries agreement between Norway and Korea, that to a certain extent covers both equipment, technology and fish, is to be negotiated in March 2001, with the visit of the Norwegian Minister of Fisheries, Otto Gregussen.

Questions regarding fish and aquaculture have been discussed at the annual bilateral consultations arranged by the Minstry of Trade and Industry (Næringsog Handelsdepartementet) until now. Last autumn the Korean Minister of Trade, Dr Han, uttered a specific wish for creating a more fish-related treaty. A Memorandum of Understanding (MOU) was received by the Norwegian Ministry of Fisheries last year, and this is to be formalised during Gregussen's visit.

This treaty is meant to be a superior treaty of intentions, aiming at creating a useful forum for discussion and exchange of opinions regarding topics like sustainable growth, pollution and subsidisation. Questions directly related to e.g. quality, quotas, customs duty and obstacles to trade will also be brought up. It is hoped that solutions can be found that will promote mainly the trade of fish between the two countries. Equipment for aquaculture and fisheries will not be in focus, even though the Koreans were eager to include this as an important aspect of the agreement. The main purpose of the agreement, is to create a closer dialogue. [Wilmann01]

DOING BUSINESS

MAKING CONTACTS

Networking is seen as vital for Norwegian companies wanting to explore opportunities in Korea. International Business has learnt that although the Korean fishing industry has gained more information about Norwegian fish during the 1990s, there is still a lack of such knowledge among wholesalers and retailers. Thus one key factor for Norwegian exporters is to be present in the Korean market and convey as much information as possible about their products to different parts of the industry. One can avoid many problems by making frequent personal visits to the Korean partner. One approach to successful market penetration is to make use of Korean agents which other Norwegian companies have had contact with before. Also be sure to obtain experience from other exporters who have got a foothold in the Korean market. Knowledge is the key to success in Korea, to an even larger extent than in other markets.

Several factors should be kept in mind when entering the Korean market:

- You may experience that Korean importers demand exclusive customer status from you as a supplier. That is, they would not like to see you delivering fish to competitors. In return you can expect high levels of loyalty.
- Koreans are efficient end expect efficiency. Therefore be careful to respond to Korean enquiries quickly and promptly. Koreans appreciate that you are frank and honest about business matters, but also firm in negotiations.
- In every contact with your Korean partner it is vital to build trust and reputation. A business relationship in Korea is also seen upon as a personal relationship.
- Language matters should not be looked upon as a huge problem when dealing with Korean companies. As in all markets there may be differences, but either the Imanagement itself speaks English, or young er employees will be able to translate. Please refer to Business Culture in Part 1 of this report for further notice on conduct. However, when dealing with fish, importers do not always understand English, and to avoid the need to trade through a broker, informationwork in Korean could prove efficient to decrease the chance of unnecessary misunderstandings and difficulties.

STORAGE FACILITIES

According to several independent sources cold storage is a minor problem in Korea. The Korean fishing industry has been investing heavily in logistics systems and facilities to make distribution of fish as seamless as possible. Today you will find wholesalers spread across Korea, whose storage facilities will cater for exporters' needs. The biggest concentrations of facilities are in the areas surrounding Seoul and Pusan. The current capacity is as follows:

- Frozen Storage: 12 274 tonnes
- Cold storage: 1 629 583 tonnes
- Manufacturing of ice: 5 599 tonnes/day
- Ice storage: 66 237 tonnes

Source: MOMAF

DISTRIBUTION

Several companies already have relations with Korean companies. Stolt Seafarms are represented through their company Stolt Cocoon, represented by Ms Chris Kim. Dong Nam Fisheries in Pusan has been co-operating with Global Fish (now Pan Pelagic) in Ålesund for many years. Because of the importance of networking and the sometimes lack of English skills with the different importers, we find that a good approach that has proven successful, is to have a local representative in the market. To establish contact with a good agent in Korea, one might try to use someone else's network. Pick somebody representing a brand with a good reputation. Today it is easy to get in touch through email, and addresses are easily obtainable through the companies' homepages.

The Norwegian Trade Council in Seoul will also be helpful with further information about agents and who to contact.

FISH MARKETS AND AUCTIONS

An important feature of the Korean fishing industry is the fish markets and daily auctions. There are auctions for virtually every kind of species both in the big cities as well as in small fishing towns. Vibrant scenes can be experienced, for instance in the city of Tongyong. Widely known as Korea's Naples, the city is a situated within a two hour drive of Pusan at the southern coast. Many oyster farming companies operate out of Tongyong.

The two biggest fish markets are in Pusan and Seoul.



Import by commodity

	99		99.11		2000.11	
	Weight (ton)	Value (1000 USD)	Weight (ton)	Value (1000 USD)	Weight	Value (1000 USD)
Total	746.327	1.178.968	675.043	1.051.582	686.376	1.281.073
Eel	2.909	15.110	2.721	14.067	2.788	15.701
Yellow corvenia	54.281	131.296	42.669	105.440	50.059	121.963
Mackerel	22.412	15.875	21.041	14.824	20.779	17.586
Sea bream	5.294	20.483	4.710	17.943	6.565	30.078
Alaska pollock	102.381	96.990	91.173	83.718	91.316	97.775
Hair tail	23.585	56.536	21.287	50.995	23.951	63.688
Sand lance	-	-	-	-	60.379	11.867
Anchovy	427	325	421	301	2,228	10.422
Puffer	5.454	9.578	4.453	7.425	4.980	13.155
Angler	14.076	46.092	12.544	41.414	15.828	59.658
Rock fish	13.055	14.722	12.196	13.755	9.853	11.142
Sea bass	2.463	12.584	2.099	10.939	3.165	18.348
Cod	18.397	20.809	17.102	19.563	13.200	18.370
Salmon	6.898	15.956	6.111	14.198	7.789	20.975
Skate	6.847	8.672	6.337	7.937	8.495	13.496
Shrimp	22.492	52.410	21.055	47.332	24.657	70.735
Blue crab	-	-	-	-	11.074	32.110
Squid	32.712	45.701	31.461	43.132	17.506	38.116
Octopus	12.336	21.925	10.901	19.435	7.901	15.177
Poulp Squid	21.432	32.223	20.037	30.147	18.655	28.395
Other	377.876	561.681	346.734	509.017	285.188	572.316

Source: MOMAF

It is well worth visiting these markets in the middle of the night to get first-hand impression on the frenetic activity and rich assortment of fish. In both cities the markets occupy huge areas where trading is done between fishermen, wholesalers and retailers.

IMPORTS AND EXPORTS

"SEA-MEAT"

Seafood plays a central role in traditional Korean kitchen, and ever since the Koreans first settled on the peninsula, fish - or "sea-meat" - and seafood have counted for a large share of their diet. In recent years, however, there has been a trend among young Koreans towards eating more fast food. Thus, one can expect the consumption of fish to be slightly decreasing over the next years. Furthermore, the coastal fisheries in Korea are described as being in serious trouble, and the industry is unable to meet domestic demand. The reduction of fishing fleet, lost fishing grounds, and low catches will have serious

The three largest exporters of herring to Korea

No.Country	19	99	2000 (01-06)		
	Value USD 1000	Weight _{kg}	Value USD 1000	Weight _{kg}	
Grand total	2 575	8 629 528	365	829 433	
1 Russia	2 029	7 964 411	167	602 988	
2 Canada	442	596 883	114	153 461	
3 Norway	0	0	38	48 384	

Source: KCS

impacts on domestic fisheries. The decrease in consumption might therefore be considered negligible in this relation. To supply the demand for fish and seafood, increased import seems to be a solution. The value of fishery imports rose from less than USD 20 m in the mid-70s to over USD 1 bn by 1996-97 [Economist 082000].

MACKEREL

Mackerel is a popular species among Koreans. However, South Korea's own catch of mackerel has dropped from a peak of 415 000 tonnes in 1996 to 178 000 tonnes in 1999. [MOMAF]. Due to the factors discussed above, this trend is likely to continue. Hence, the future prospect for import of mackerel is good. The import of Norwegian mackerel was 2 188 tonnes at the end of November 2000, which corresponds to a 35 % increase from 1999 (total of the year) [KCS]. Norway was the second largest exporter of mackerel to Korea by November 2000, and counted for more than 10 % of the total import of mackerel.

Consumption of Pacific mackerel in Korea is high, but sea pollution is an increasing problem for the fisheries. Russian mackerel is often slim, while mackerel from Mexico has a low fat content. This is not how most Koreans prefer their fish. Quality is a very important factor to Korean consumers, and they seem willing to pay more for good quality products. Norwegian mackerel is considered good. During meetings with companies that sell both Norwegian and Scottish mackerel, we have been told that Norwegian mackerel is more expensive, but that it is better packed and has a higher guality. Compared with Korean mackerel, Norwegian mackerel is often cheaper, but an increase in mackerel prices is expected among Korean importers we have been talking to. During our meetings in Korea, we got the impression that Norwegian mackerel is oilier, but the taste is almost the same as that of the Korean coastal mackerel. However, the darker colour and denser pattern has created some problems for Norwegian mackerel. Our impression is that the consumers now have learned to know and like Norwegian mackerel, a positive factor for increased import of Norwegian mackerel

Korean importers mainly buy whole, frozen fish, as the Koreans also eat the head of the fish. Most of the processing takes place in Korea, and the mackerel is often grilled. In addition to supplying the domestic market, some products are even exported to other countries like the USA or Japan.

HERRING

There was no export of Norwegian herring to Korea in 1999, but mid-2000, Norway became the third largest



exporter of frozen herring to Korea. The price of Norwegian herring is considered high. According to Mr Huh Joo-hee, Manager, Young Chang Corporation, the price of Norwegian herring was USD 900 per tonne, while Canadian herring cost USD 650 per tonne. In 1999 Korea imported a total of 8 629 528 kg herring, of which the Russian share counted for almost 90 % [KCS]. As far as we know, there is currently only one importer of Norwegian herring in South Korea. We believe that there is a potential for increased export of Norwegian herring to the country.

SALMON

Korea's import of salmon has increased the past few years. By November 1999 the total import was 6 111 tonnes, while it reached 7 789 tonnes in the same period the following year. [MOMAF] Total import of frozen salmon was 1 405 tonnes in 1999, and it exceeded 3 000 tonnes in 2000 [KCS]. Norway is today the biggest exporter of salmon to Korea, and the quantity has increased by almost 9 % from 1999 to 2000.

A general understanding among Koreans has been that "salmon is from Canada". Promotion campaigns directed by Norwegian Seafood Export Council (Eksportutvalget for Fisk, EFF) have contributed to increased knowledge of Norwegian salmon. Stolt Cocoon has experienced increased volumes of Norwegian salmon sold, both fresh and frozen, over the past years. There are today 7 importers of Norwegian salmon in South Korea. Norwegian salmon is principally sold to Korean hotels. The different importers we interviewed agreed upon the positive future prospects for Norwegian salmon, as the demand is likely to increase. Furthermore, EFF will continue their promotion activities in Korea in 2001, which probably will result in an even higher increase in demand.

Koreans do not like trout very much, one of the reasons might be that the colour is too red - or maybe it has something to do with the name? Salmon, on the other hand, is considered a first class fish. It is believed that salmon has a better quality, and it is important to the Koreans that the nutritional value is good.

Most of the processing takes place in Korea. The tax system seems to be a possible reason for this. There is 20 % import tax on fresh and processed fish, against only 10 % on frozen fish. Another probable cause is the preferences and habits of the Korean consumer. Our impression is that Koreans do not like smoked salmon from Norway very much. Ms Kim believes this is due to a more coarse texture, a pungent odour and a very salty taste of Norwegian salmon. Koreans prefer a softer and oilier

The ten largest exporters of mackerel to Korea

No.Country	19	99	2000 (01-11)		
	Value USD 1000	Weight kg	Value USD 1000	Weight _{kg}	
Grand total	15 836	22 380 801	17 293	20 767 284	
1 Taiwan	10 105	14 582 105	10 629	13 101 755	
2 Norway	1 409	1 623 400	2 204	2 188 000	
3 China	1 150	2 328 052	2 123	2 211 395	
4 Ireland	685	940 000	810	1 000 000	
5 Netherlands	49	62 210	412	499 910	
6 Denmark	0	0	393	425 000	
7 Japan	1 124	885 049	342	276 702	
8 USA	325	624 429	155	325 039	
9 Lithuania	79	94 608	121	144 018	
10 Mexico	1	3 000	104	257 910	

Source: KCS

consistence. The consumers do not seem to care very much whether the salmon is wild or farmed, and would probably choose the cheapest one. Earlier, however, some consumers expressed scepticism towards farmed salmon, due to the content of dioxins, according to Ms Kim. Importers, on the other hand, seem to have better experiences with farmed salmon.

COD

The import of cod reached 13 200 tonnes in November 2000, which represents a slight decrease compared to the same period in 1999. [MOMAF] Despite the recent decrease, cod is regarded a popular species in Korea. During conversation with Ms Kim, representative manager, Stolt Cocoon/Stolt Sea Farm, we understood that around 80 % of the imported cod come from Alaska. Texture and quality of Norwegian cod is considered better, but the prices are high. Many Russian fishing boats sell their cod in Pusan, where cold storage capacity is very good. The price of Russian cod is low, and major shares of cod are further exported to Europe and Japan. South Korea's own catch of cod reached 476 tonnes in 1998, a 60 % decrease from 1988 [KNSO].

The three largest exporters of frozen Atlantic salmon to Korea

No.Country	19	99	2000 (01-11)	
	Value USD 1000	Weight _{kg}	Value USD 1000	Weight _{kg}	
Grand total	5 713	1 405 038	9 255	3 015 152	
1 Norway	5 596	1 274 881	6 679	1 388 101	
2 Chile	0	0	1 173	252 272	
3 Russia	70	109 404	990	1 265 331	
Source: KCS					

FORMALITIES

There are not any specific regulations for exporters of fish and fish products to Korea. Nevertheless, there exists some basic, standard tests to assure the quality, for example to control the content of heavy metals, antibiotics, carbon-dioxide etc. However, the standards vary with species, and type of goods. Regarding quality, freshness is the most important criterion, and Norwegian exporters would need a sanitary certificate issued by the Norwegian Government. In addition to this, a Letter of Credit might be necessary. It is also important to be aware of the different import tax rates, as described under "Salmon".

FUTURE PROSPECTS

Norwegian fish has a very good reputation in Korea, regarding freshness and quality in general. This could contribute to ease further expansion of the market. It is, however, important to be aware of high prices on Norwegian fish, compared with other imported fish. Moreover, as fish and seafood are such an important part of the Korean food traditions, in addition to the increasing problems of the domestic fisheries, we believe that the prospects for increased export of Norwegian fish to Korea are very good.

AQUACULTURE

WHAT IS KOREAN AQUACULTURE?

Aquaculture in Korea is one of the world's most diversified, concerning number of species. As shown in the

Korean aquaculture

Class		No. of species	Name of species			
33 marine species	Fish	12	Flounder(Paralichtys Olivaceus), Red and Black Seabream, other Seabreams, Puffers, Mullet, Common Seabass, Seabass, Brown Croaker, Yellow Tail, Jaco Pever, other Rockfish			
	Shellfish	10	Abalone, Ark Shell(2 species), Pearl Oyster, Ear Shell, Oyster, Scallop, Mussel, Common Orient Clam, Short Necked Clam, Venus Clam			
	Crustacea	2	Tiger Prawn, Large Shrimp			
	Seaweed	7	Larver, Sea Mustard, Kelp, Seaweed Fugiforme, Green Larver, Agaragar, Sea-staghorn			
	Others	2	Sea squirt, Stalked sea squirt			
19 inland species	Fish	14	Carp, Israel Carp, Tilapia, Rainbow trout, Cut-tail Bullhead, Crusian Carp, Loach, Catfish, Channel Catfish, Trout Salmon, Sweet fish, Snake Head, Eel, Goldfish, Mountain Trout			
	Others	5	Freshwater Crab, Soft Shell Turtle, Shrimp, Marteis, etc.			
			Total 52 species			
Source: MO.	Source: MOMAF					



table below, the number of major species being cultured was 52 in 1999 [MOMAF].

The amount of marine shallow sea culture production in Korea for the years 1995-99 are quite variable. Since the volume peaked in 1997 with a production of over 1 million tonnes, production in 1999 declined by approximately 25 %.[MOMAF] However, sources different from the officials have been indicating that due to unreported sales, total production is significantly larger than official figures tell us.

Oyster-culture is big in the southern areas near the city of Yosu and around the city of Tongyong, and the southwestern bay of the island Koje. The volumes produced equal over 33 000 tonnes without shells, of which around 60 % are processed as canned, dried, frozen or fresh oysters to be exported to 25 nations world-wide [OHCFC]. We visited the Oyster Hanging Culture Fisheries Co-operative of Korea and inspected the culture ground off Tongyong. Challenges in this area consists of problems to get enough oyster larvae from the sea to maintain production, and another challenge is to deal with dead shells piling up on the seabed, and deal with dead seaweed drifting in to the area during storms.

GOVERNMENT POLICY

Because of losing fishing grounds for Korean fishermen due to the last year's international agreements, it is getting harder to supply the market with enough fish. Therefore the Korean Government has two parallel strategies. One is to expand fishfarming sites, and hopefully also ocean ranching. From today's production amounting to approx. 800 000 tonnes, prospects estimate production



to be 1 050 000 tonnes in 2004, and 2 million tonnes in 2011. Of the 800 000 tonnes produced today, 33 453 tonnes are fish[MOMAF]. The other strategy is to protect the environment and increase the protection of fishing grounds.

WIDER INITIATIVES

The year 2000 represents an "all time high" in Norwegian aquaculture history due to extremely high prices for salmon and trout. Total volume was 470 000 tonnes round weight[FD]. This is 10 000 tonnes more than the previous year. We have experienced the waking up of investors and share analysts and the Norwegian marine farming industry has undergone restructuring, even though it is not yet complete. The initiatives being taken are broader. The Korean aquaculture industry consists of relatively small units usually owned by one person. The cooperatives play an important role in co-ordinating a lot of services and in financing the projects. It is however likely that "large scale effects" can play an important and positive role in developing the Korean aquaculture industry especially in development of environmentally sustainable farming methods, but also financial benefits will be obtainable. According to MOMAF, the market is open, and they welcome foreign investments.

CHALLENGES

As we spoke to representatives for the marine culture industry of Korea, we realised the present challenges. Piracy, pollution and garbage were mentioned. Additionally, the expression "The 4 D's" was mentioned. Piracy can be a problem, especially in the farming of expensive products. The way this is done, is by highspeed craft, usually at night, emptying the cages. As pollution and garbage are concerned, some of the problems are the same as Norwegian salmon farming has undergone in the last 20 years, some are different. In any case, these issues are serious problems, but present interesting market opportunities for Norwegian consulting companies and research institutions.

"The 4 four D's"-problem is related to labour. It stands for "Distant", "Dangerous", "Dirty" and "Difficult". Some of the people we spoke to mentioned that it was a problem to get labour for the marine farms. Introduction of Norwegian fishfarming equipment can possibly ease the manual work that has to be done in the farms and in that way be an advantage for the owner. Our visit to a flatfish and rockfish farm in Tongyong showed us the solution to make it more attractive for the workers. The owner had invested in very comfortable living quarters for the employees. But still, of course, automatic feeding would have improved the working conditions and made it a less dangerous workplace. In the HSE-context there is a lot of work to be done to improve the working conditions.

FISH-HEALTH

Disease problems that apply to Korean marine-culturing can be divided in types of bacterial-, parasitic-, viral- and mixture infection diseases. Bacteria like Edwardsiellosis apply to most marine fish, and Strepotococciosis apply to flounder and rockfish. Parasitic disease Microcotyliosis apply to rockfish and seabass, and Scuticociliatosis apply to flounder. Viral disease Iridovirus apply to most marine fish, WSBV apply to shrimps and Lymphocystis apply to flounder. Mixture infection diseases consist of different combinations of different types of disease. A FKC (formalin killed cell) vaccine has been developed for E-tarda, and efforts are currently being made to develop FKC vaccines for Stretococcus sp., Iridovirus and Lymphocystis. There has been a major focus on the use of antibiotics in Norwegian fishfarming. Since 1993 the annual use has been around 400 kg, which is virtually nothing compared to 48 tonnes in 1987. [AK103] This is due to better operational hygiene and extensive vaccination. It was not possible to get accurate figures on how much antibiotics is being used, but the total value of antibiotics used in the marine farming industry in Korea is estimated to be USD 15 m. [KMI] The types of antibiotics being used are distributed as follows: antibiotic (65 %, 14 types), synthetic antibacterials (27 %, 11 types), sulphonamides (5 %, 4 types) and furamides (3 %, 1 type)[MOMAF]. Probably, the knowledge acquired by Norwegian researchers can be applicable to some of the same problems in Korea's marine-farming, helping them to reduce treatment-cost loss of production and meet the market1s demand for more naturally grown products.



MARKET OPPORTUNITIES

A summary of the market opportunities in the aquaculture sector in Korea consists of different areas, such as equipment and "know-how". For Norwegian consultingand research institutions efforts to bring down the use of antibiotics to a lower level, solutions to the large pollution problems attached to aquaculture, breeding knowledge and "feeding knowledge" should all be attractive "merchandise" for the industry. For instance, nobody could answer how much they fed the fish to grow one kilogram. This indicates how little, if any, effort they have put into research on how to effectively grow fish. Korean fish-farmers are interested in introducing new species, and they welcome joint ventures with Norwegian investors. For instance, we discussed the possibility of cooperation with local farmers in waters possibly suitable for salmon farming.

The biggest pollution problems were described as problems with garbage-treatment and dealing with dead seaweed from stormy weather. Technology dealing with those problems is welcome. Another big problem was the same as Norwegian salmon farming had for the first ten years, location in calm water and poor control with feeding made the seabed pile up with rotting food-spill and excrements. To us it also looks like there is a pollution problem concerning the use of antibiotics. This leads us to the conclusion that better feeding systems can both reduce the manual work being done, reduce the foodspill and thereby the feeding costs. Better fish-cages can be a solution making it possible to move the farms to more exposed locations with sufficient current and deeper water.

The organisation of the marine farming industry makes it difficult to reach the market because of the structure of relatively small organisations. One-man owned farms are usual. Foreign investors who take over farms can probably rationalise production and have positive large-scale effects. A wider initiative as we have seen in Norwegian fish farming in the last few years, is also a trend in parts of Korea resulting in larger units, for instance around the island Cheju-do. This makes the Korean market more attractive, because of the greater ability for farmers to invest in equipment and services to improve their production. Another possibility is to approach the cooperatives organising the marine farms.

MARINE RANCHING

Since Norway just passed a law allowing marine ranching, although it is only for molluscs and shellfish, we have added a short description of the first marine ranching pilot-project in Korea. The principle is the same; putting out organisms to grow in a natural environment, and then harvesting the organisms when they have grown. The reason for launching the project is the declining fisheries, and the difficulties in the aquaculture-industry, due to high feeding cost and low prices of aquacultured fish, and additionally pollution problems due to lack of reliable management of aquaculture grounds. This pilot-project is located in Tongyong , Kyung-Nam, and was launched in 1998.

Rock fish, gray mullet, grassfish, flatfish and sea bass are produced in this project which covers 20 square-km. The main purposes of Tongyong's Marine Ranching Project are to increase the fishermen's income, stabilising the supply of marine products, and developing the fisheries communities.

The parts, which the project consist of, are first creating fishing grounds by using marine engineering and artificial



reefs. The second is breeding adult females, seed production, multipurpose fisheries base and the production and releasing of healthy seeds using releasing technologies. The third is about controlling the pollution of nearby waters and preserving the environment of the fishing ground and management of fisheries by controlling the waters of the ranch and linking related industries.

The total investment for the period 1998-2006 is about KRW 24 bn. The facility investment is 66 % of this, and the R&D investment is 34 %. The central government invests 87 %, local government invests 7 %, fishermen invest 2.3 % and companies 3.7 % [Ryu]. The project must be looked upon as a model project, and cannot be considered successful yet. It is however clear that the project is preventing pollution and over-fishing. It also stabilises the cost of fisheries products and meets the increasing demand for marine recreation and tourism.



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IT & Telecommunications

South Korea has experienced the development of its information and communication technologies during the past two decades that is even more astonishing than the experience of the western world. Prior to the 1980s these areas were given little Government attention, and as late as in 1980 telephone density was only 71 telephones per 1 000 residents and most international calls required operator assistance. Today, Korea is one of the most advanced countries in the world in terms of infrastructure and telecommunications use, a world leader in computer memory manufacturing, and has presented serious plans of becoming one of the leaders in the international software market.

BACKGROUND

TELECOMMUNICATIONS INFRASTRUCTURE AND USE

Realising the need for infrastructure development, the Korean Government established several new companies and institutions in the early 1980s: Korea Telecommunications Authority (KT) was set up to take over the telephone and telegraph business from the Ministry of Communications. The Data Communications Corporation (DACOM) was established to provide services such as e-mail, information databases and value added networks. Since the early 1990s DACOM has also provided international and long-distance call services. Korea Mobile Telecommunications Services Co. was established and began to provide car phone and paging services in 1984, adding cellular phone service in 1988. In 1997 the KMT (now privatised) joined the SK group and changed name to SK Telecom Co

The infrastructure was built with amazing speed. In 1983 the first optical fibre cable system was built in Korea, linking Seoul to Kuro and Inchon. In 1986, Korea had become the 10th nation in the world to develop an electronic switching system, the TDX-1 system, which became widely exported. KT opened optical cable networks to subscribers in 1992, and started ISDN commercial service in 1993. All telephone-switching systems were digital in 1994, and all domestic telephone lines were digital in 1996. Last December, five years ahead of schedule, the process was completed, and nearly 22,000 km of optical fibre and 118 high-speed switching systems deliver Internet and wireless services to 144 major areas. [KIC 2000]

Until quite recently telecommunications was viewed as either a natural monopoly or a social good that called for government management, as in most other countries. Following the international trends the need for liberalisation and deregulation has been noted also in Korea. Great amounts of effort have been put into revising legislation and enhancing market competition. In 1990, full competition was introduced in the value-added telecommunications service sector. Also, in December 1991, DACOM was allowed to compete with Korea Telecom (KT) in the international telephone service, and in 1996 the market was opened to all domestic carriers. After the WTO Basic Telecommunications negotiations, the Korea Government submitted its final schedule for liberalisation of the in 1997. Until 1998, foreign ownership of wireless services was limited to 33 % of total shares and wired services was prohibited. The government allowed foreign ownership for wired services in 1998 and the foreign ownership ceiling was recently increased to 49 % in both sectors. In 1999, foreigners were allowed to become the largest shareholders or CEOs of Korean telecommunications firms except for the KT. [MIC 2001].

The domestic market for telecommunication services has kept pace with and stimulated technological growth. Since 1997, the number of subscribers for wireless services has exceeded the one for fixed lines, and Korea has had one of the highest mobile penetration rates in the world, ranking third behind Finland and Norway in 1999.

THE KOREAN IT INDUSTRY

The IT industry is vital to the Korean economy and receives a lot of government attention. It is considered an engine for economic growth, employment and trade. Contributing almost 40 % to yoy growth in GDP in 2000, the IT industry was the fastest growing sector in the Korean economy. A slowed but continually robust growth is predicted for 2001. Initiation of digital broadcasting, export of CDMA equipment to the Chinese market, and the growing world market demand for wireless Internet are seen as important contributors to growth in 2001 [Ko 2001] Experiencing a 20 % increase, the number of IT businesses was no less than 12 288 in 1999. By September 2000 the number was increased by 7 735 venture firms, where of 32.1 % were entrants to the information processing and software sector. Although the IT services sector (including facilities-based telecom services, resale services, value-added services, and broadcasting

services) is also showing considerable growth, the manufacturing sector (production of telecom equipment, information equipment, broadcasting equipment and IT components) continues to hold the largest revenue-share. [MIC2001]



Source: Korea Association of Information and Tele

The industry is also of vital importance to Korean trade and foreign direct investments (FDI). IT exports reached USD 39.95 bn in 1999, accounting for 27.8 % of total exports and 56.1 % of the total trade surplus. Although there is large trade surplus, the Korean IT industry imported components and equipment for the considerable amount of USD 25.885 bn, and software / services for USD 0.403 bn. FDI in the IT sector reached USD 2.3 bn in 1999, accounting for 15 % of total FDI in South Korea. After the first 9 months of 2000, the corresponding numbers were USD 2.28 bn and 22 %.

INFORMATISATION AND GOVERNMENT SUPPORT

In their last policy initiative, the Cyber Korea 21; the Korean Government stated its wishes to develop the Korean information infrastructure and industry with the aim of being one of the top ten most advanced nations in the world on these areas. In order to reach this goal, the Ministry of Information and Communication (MIC) has focused on four major policy areas: Increased competition and deregulation of the telecom sector (as described above), policies to promote the national IT industry, programmes to attract foreign investments, and the National Informatization Policy.

The Government's efforts to develop the IT-industry include enhanced IT-education, reduced taxes and regulations, vitalizing the venture capital market and investments in R&D. The following areas are included in the MIC 5-year plan for investments in IT R&D:

- · Next generation Internet
- · Optical communications
- · Digital broadcasting
- Wireless communications
- · Software and computers

In addition to the general policies to attract FDI, the Government has abolished several regulations in the IT industry. There is no longer a ceiling on foreign ownership for value-added services, and the ceiling on aggregate foreign ownership for special service providers will be lifted during 2001. However, there is still a 49 % ceiling on foreign aggregate ownership of facilities-based service providers, and special laws concerning Korea Telecom.

Korea is a quite highly computer-literate society. In August 2000 there were approximately 16.4 million Internet users (35 % penetration rate) and more than 9 million PCs in the country, constituting a large national market for software, Internet-services and potentially for e-commerce. More than 50 % of stock exchange transactions are done online. The Korean Government believes in the great benefits associated with making the envisaged information society into a reality, and is making great efforts to accelerate "informatization" throughout all aspects of the society through The National Informatization Policy. Its top priority so far has been the KII (as mentioned above). Another area of great effort is the computerisation of all levels of public institutions, in order to create a single information/communication network system. The policy includes the re-engineering of the Government in order to deliver high quality on-line services to the public, informatisation in health care and welfare, education, national safety and environmental management. Recently the issue of closing the digital divide has become a major concern. In the interests of achieving well-balanced national development, the MIC has made efforts to expedite regional informatisation, to provide PCs to social groups with low income, and IT training programmes for housewives, soldiers, the disabled and senior citizens. [MIC 2001]

IT I ABOUR MARKET

Generally, Korea is no longer a low-wage country. With the rise of the new middle class, consumerism is on the rise, work weeks are becoming shorter and the cost of labour is rising. To compensate, an increasing number of Koreans have higher education and high technical skills. Korea boasts of the highest number of PhDs per capita in the world, and many highly educated expatriates are returning to their homeland to participate in an exciting

revolution. The literacy rate is virtually 100 % and English is widely taught in middle school (junior high) and high school.

On a per capita basis, Korea produces more software engineers and computer science graduates each year than either Canada, or the USA [IC1997]. The expertise is also used within the hardware industry, where many of them are employed, writing micro code for telephone switches etc. Korea Software Industry Association (KOSA) records the number of technical experts in the software industry and distribution of technical experts. According to the KOSA, there was a 65.2 % increase in the number of technical experts in 1996 and 18.3 % increase in 1997. [KOSA in Lee 1999]

The Korean Informatization Plan also includes the education sector, and the government is making great efforts feed the growing needs of IT-expertise. In 1999 the government set up information and communication research centers in 8, and -departments in 9 universities. 78 colleges and technical high schools were provided with advanced IT equipment. Still, there is an estimated lack of educated manpower in the years to come. In 1999, an estimated 1 080 000 persons worked in the Information and Communications sectors. The Government estimates a 6.5 % increase per year in need of manpower during the period 1999 - 2004, and a deficiency of about 210 000 persons.

Manpower deficiency in the Information and communications sector 2000-04

Classification	Soltware	/content	Haruware	Telecom	Totai	
Master/ Doctor levels	12 032	10 502	1 052	1 295	24 881	
Bachelor level	65 467	56 766	7 477	1 633	131 343	
College or under	0	0	41 771	13 122	54 893	
Total	77 499	67 268	50 300	16 050	211 117	
Unit: persons						
				Sour	ce [MIC 2000]	

THE WIRELESS MARKET

Korea Telecom was Korea's only supplier of wireless phone service in the 1980s and thereby made tremendous profits as a monopolist. However, when the privatisation started 1996 the competition increased sharply. When the market was liberalised 5 CDMA (Code Division Multiple Access) licences were distributed.

A survey conducted by McKinsey & Company by the end of 1999 showed that none of the operators in the market had managed to generate profits out of the investments in the CDMA system. The most obvious reason for the losses was the large part subsidised by the operators in every mobile phone sold. In 1999 practices of giving subscribers phone sets for free were common. In the beginning of 2000 those subsidies were prohibited by law and the operators started to increase their margins. Korea Telecom was the first to break even during 2000.



THE CDMA TECHNOLOGY

Korea was one of three countries adopting the CDMA technology together with the United States and Hong Kong. Although it was launched four years after the Euro GSM technology, its use has spread to 44 countries around the globe. At the moment the majority of the world's mobile phone systems are based on the Euro GSM technology.

SOUTH KOREA AND THE THIRD GENERATION TECHNOLOGY, 3G

International Mobile Telecommunications 2000 (IMT-2000) aims to unify the third generation mobile systems in the world. An increasing number of mobile phones service providers world-wide have already adopted W-CDMA as their technological operating base. Due to this the Korean CDMA based domestic wireless industry has been disadvantaged in its efforts to launch the IMT-2000 system. As the world telecom market is deciding which standard to use as the 3G, the Korean Government decided to go for a double standard- to use both W-CDMA (Wideband-Code Division Multiple Access), which is based on the Euro GSM technology, and CDMA 2000, based on the CDMA technology. The reason for this was that the Government did not want to leave the CDMA standard, which currently is an important industry in Korea. Domestic companies can boast world-class technological

capability in the CDMA area. The number of CDMA related components made in Korea now exceed 400, representing a localisation ratio of 63 %.

The Korean Government has maintained its double standard policy although its requirements are bound to be more specific in the coming year. If all the 3G operators in Korea opt for the W-CDMA method, a trade conflict probably will occur with the United States. U.S. based Qualcomm Inc. holds proprietary rights to CDMA technology. Therefore a switch in the Korean market to W-CDMA would mean a major portion of royalties would be paid instead to European developers of W-CDMA like Nokia of Finland or Ericsson of Sweden. Recently the European developers have joined hands to prevent Qualcomm taking a leadership position in the Korean market. Recently, The Chief Vice President of Qualcomm Inc visited Korea and declared his company's intention not to lose its footing in the Korean market under any circumstances.

THE FUTURE FOR 3G IN SOUTH KOREA

The Korea Information Society Development Institute recently projected that the IMT-2000 project will generate KRW 28 trn in additional GNP over the 2002 - 2010 period. It also forecasted that the project will produce added value worth KRW 21 trn throughout the economy and create 550 000 jobs over the same period.

To date, relatively few Korean equipment makers and mobile phone operators have been successful in making inroads into the development of W-CDMA based products and systems.

It is predicted that the demand for these products will be enormous, and this of course, makes the Korean telecom market an interesting one for non-Korean producers. bear in mind that in European countries like Great Britain the auctions led to prices as high as KRW 39 trn. The subscribers demand national coverage on the 3G net, although this was not one of the terms required by the government in the auction for the 3G licences.

At the end of 2000 two of the candidates for the 3G licence were selected. Not surprisingly Korea Telecom and SK Telecom, the two main operators, were given a W-CDMA license. The third license is a CDMA 2000 license and the operator for this licence will be announced in March 2001.

THE IMT-2000 PROJECT

A consensus of experts is of the notion that the IMT-2000 project will prove lucrative. They predict that it is inevitable that the industry will adopt the 3G IMT-2000 in place of the current 2G PCS (Personal Communication Service) mobile phone system.

Scepticism is emerging in many parts of the world about the promising future for the IMT-2000 project though. Industry observers that earlier forecasted promising outlooks for 3G and 4G wireless systems now have changed opinion citing primarily that the project will involve initial costs of several trillion won for the companies and it will take at least five years to break even. Andy Hyunjoo Lee, deputy director at the finance & accounting office at Korea Telecom, is of the opinion that the company will break even in 2005. This means they will be covering the KRW 1.3 trn in licence fee and KRW 2.2 trn in infrastructure. Korea Telecom will be able to provide the worldwide service around 2002. The goal is to have the system in place before the World Cup Soccer Games that is jointly hosted by Korea and Japan.

3G LICENCE AUCTION

Korea had a beauty contest combined with a licensing fee, instead of an auction as is the case in many other countries that have selected their operators. The applicants were scored according to 5 main criteria and the candidates with the highest score won the licence. The Ministry of Information and Communication has set a minimum payment for band allocation at KRW 1.0 trn and a maximum at KRW 1.3 trn. The Korean telecom industry has been complaining that the price was set too high. But, according to Shin Dong-joon, Deputy director, International Cooperation Bureau at the Ministry of Information and Communication, the operators have to

E-MONEY

E-money, a new currency system currently on trial in Korea, will supplant 20 % of the country's total bank notes by 2004, according to a report by the Korea Chamber of Commerce and Industry. When e-money, now under limited use through a pilot project, is introduced on a national scale, it will replace KRW 1.9 trn (USD 1.7 bn) in bank notes by 2002, KRW 4.3 trn in 2004, and KRW 7.4 trn in 2008. E-money will account for 9.9 % of total notes issued in 2002, 20 % in 2004, and 28.9 % in 2008. *Source: [Asia Pulse]*

E-COMMERCE

Forms of e-commerce in South Korea are developing rapidly. South Korea is now the second biggest Internet market in Asia, after Japan. The initial type of e-commerce took the form of proprietary inter-organisational information systems (IOS) in the early 1980s. As the Internet expanded in scope, so too have the forms of e-commerce. Business to business (B2B) and business to consumer (B2C) are the most popular forms of e-commerce.

While the cellular / PCS market will continue to outperform the fixed line market, increased competition in the latter is expected to fuel further growth, despite an already high penetration rate of more than 55 % as of September 2000. [MIC 2001]. Specifically, the increased competition in the fixed line market is forecast to result in the faster adoption and growth of fixed broadband access in Korea.



Thus, from a highly regulated situation, the Korean telecom industry is fast becoming one of the most liberal in the region. The MIC is also aiming to change 252 (73.7 %) out of 342 existing rules and regulations in the information and communications industry to promote competition and create a market environment driven by market forces. This is a necessary step to deregulate a market still dominated by the incumbent KT as well as major chaebols, which have restrained innovation. However, this would be a difficult effort for a regulator used to heavy intervention in the market and runs counter to its traditional centrally planned approach toward technology and industrial development.

A number of companies provide local content and cater exclusively for the rapidly growing number of Korean Internet users. Foreign companies such as Yahoo! have also expanded rapidly in offering Korea-specific portals.

The potential of e-commerce is substantial. South Korea already is the second largest online purchaser in Asia and although it is unlikely to catch Japan in the near future, it should continue to grow at a rapid pace. The number of Internet users (as opposed to Internet subscribers) was 19 m in December 2000 and rising sharply. As more banks encourage their customers to go online, it is believed that it will lead to an important change in mind-set.

Other important factors should encourage the growth of e-commerce in South Korea. After more than two years of economic pain, the country's economy is recovering though not without problems. Consumer demand is on the rise and although GDP declined in 1999, it is still high. Its high literacy levels and a readiness to accept e-business should also help.

South Korea's vast chaebol or industrial conglomerates are in the process of hard restructuring under Government supervision. However, many of them are becoming active and important players in the Internet and e-commerce industry. For example, one of the largest chaebol's. Samsung signed an alliance with Sun/Netscape to set up an e-commerce platform where buyers and suppliers can directly trade goods. Hyundai, another top-five chaebol has also vowed to turn itself into a powerful e-business. Thus the environment for e-commerce promises to be extremely competitive, which is an advantage for consumers and businesses alike.

Broadband (high-speed) Internet access (households)



Electronics: Total production and trade



Source: [MOST2001]

BROADBAND AND ADSL

The number of households with broadband connection in 2000 has gone from less then 300 000 to over 4 million. The majority of these are ADSL-subscribers. Korean industry does not yet have their own technology for these purposes and is therefore dependent on a very high rate of imports. International corporations such as Alcatel and Ericsson are getting large market shares and the future could look very prosperous. The import of ultra highspeed Internet equipment is on a sharp rise because of the fast growing market for Web-related businesses. According to the Electronic Industries Association of Korea (EIAK), such imports in the January-April 2000 period reached USD 560 m, up 323 % from the same period the year before. By item, optical fibre cable and transmission-related equipment rose 316 % and ADSL equipment including cable modems 325 %.

ELECTRONICS AND THE INFORMATION TECHNOLOGY

MICROELECTRONICS

When Goldstar Co. in 1959 started manufacturing of the company's first vacuum tube radios, it kicked off the micro electronic age in South Korea. Some thirty years after, South Korea boasts the world's sixth largest producer of electronics, and the seventh largest exporter. As for the rest of the country's high tech industries, the birth and expansion of South Korea's electronics industry has taken place at a phenomenal pace during only the last three decades. Successful political 5-year plans, combined with the highly educated and hard working domestic work force enabled progress. The growth of a middle class in a country with 46 million inhabitants also provided a huge domestic market allowing development and implementation of national products, which later on could be exported. The fully digitalised telephone switching system (TDX-1) is a good example of this. In addition, the Government has been careful to properly support and encourage research and development. There are 28 Government supported research institutes (GRIs) all of which have been established during the last four decades, total R&D budget for 2001 is KRW 4.1 bn, which is 4.4 % of the total Government budget [MOST2001]. The overall ambition is to be amongst the world's seven most advanced countries.

The electronics market is heavily dominated by the large business conglomerates - or chaebols, the biggest in electronics being Samsung Electronics, Lucky Goldstar (LG), Daewoo Electronics and Hyundai Electronics. Each of these companies have their own set of production lines and produce virtually every kind of electrical devices, the largest market shares include semiconductors, televisions/display arrays and household appliances [IC1997]. South Korea is today the worlds largest exporter of D-RAM, Samsung Electronics alone holding 5 % of the world market [SAM1999].

Politically there is an increasing desire for a broader distribution of power and market shares, and thus MIC has recently launched a three-year plan especially encouraging minor enterprises and ventures to develop new voice information technology, giving KRW 700 m in loans and investing KRW 1000 m. [Rel010208]



INFRASTRUCTURE

The South Korean IT infrastructure was built at an amazing speed and in this process a few things have been forsaken. A very obvious problem at present time is the lack of sufficient cabling in the major cities. Korea is one of the most densely populated countries in the world, it has 468 inhabitants per square kilometer, in comparison Norway has only 11. A steady flow of people moving from the rural parts to larger cities [GYL1999], forces the Koreans to literally live on top of each other in urban areas. This makes it extremely expensive to lay cables in the ground in the cities. In, addition, landowners will often ask for unreasonably amounts of money or simply refuse to let someone stretch/dig cables across their property [Kim2001]. As both the Government and the market pushes for increased flow of digital information, sometimes other solutions than connecting through wires need to be found. Broadband satellite connection is available through Korea Telecom (KT), but at considerable cost. The demand for low power radio links or optical links (laser) is rapidly increasing, the Korean technology in this field is still not mature and this opens a very interesting market opportunity for foreign high tech suppliers.

However, "living on top of each other" does have its positive sides. Residential buildings with 15 - 30 floors are very common, and according to MIC there is now an emerging market for connecting the private apartments so that individual residential blocks have their own local area networks (LAN). The investment in an expensive high speed Internet connection to the LAN, either fibre optic or radio/laser, can then be split between the inhabitants. The local net will also enable the inhabitants to play computer net-games internally. Internet based games are very popular in South Korea and has been a major driving force for the rapid increase in ADSL subscriptions [MIC2001].



The urge to implement new technologies at a very early stage will sometimes cause unforeseen problems. When KT introduced ADSL to the public last year, they neither had the necessary equipment nor the needed expertise to meet the huge demand smoothly [MIC2001]. Many customers had to wait much longer than they were promised from requesting a connection until having ADSL fully operational in their homes. The providers were forced to look beyond domestic technologies to meet demands. Although this trend is clearly lessening, it seems South Korea still has not closed the small high technology gap to the western world - their strength lays in the manufacturing and implementation of established technologies.

The MIC has decided and announced that the 3G mobile telephone net will be operating in time for the 2002 Soccer World Championships. At the time of writing, only 2 out of three licences have been given and neither of the two operators has yet started to build the necessary infrastructure. There will not be much time to make this high ambitious project be realised. If there is indeed a financial will to start this project only just after the 2G mobile net has reached break-even [MCK2001], it is most likely that South Korea will need to import both equipment and expertise [MIC2001].

SATELLITE TECHNOLOGY

Korea launched its first satellite in 1992, the KITSAT-1 (Korea Institute of Technology Satellite 1). The KITSAT programme is intended only for research purposes, and has included a total of 3 satellites. Korea completely lacked space technology at the time, and the KITSAT programme is based mainly on licensed technology. The commercial programme KOREASAT included a total of 3 satellites (two of which are still operating), all owned and operated by KT. The satellites were all built by Lockheed Martin Telecommunication in the USA, but include Korean payload. With the KOREASATs, KT offers services such as remote videoconferencing, remote medical treatment, intra-office broadcasts, SNG services, direct broadcasting services, high-speed leased line services, trunk transmission and other new services. [KT 2001]



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Norsk Hydro

A NORWEGIAN GIANT

Norsk Hydro, a European industry leader, has always been fascinated by the enormous potential of natural resources. The company was founded in 1905 on the novel idea of extracting nitrogen from air and converting it into a plant fertilizer. Large sources of energy were needed in the process, and due to the potential of Norway's mountains and rainfall, an idea emerged. This was the beginning of large-scale development of hydro-electric power in Norway, just like the company's name expresses, Norsk (Norwegian) Hydro.

Today Hydro operate worldwide with almost 39 000 employees in 70 different countries. The main business areas are still based on natural resources and range from Oil and Energy and Light Metals to Plant Nutrition and Petrochemicals. The operating revenues of the company were in 1999 estimated to some USD 11.3 bn.

THE ASIAN MARKET

Presently, the Asian market share amounts to about 5 %. Even so, Hydro's main business areas in Asia, fertilizers, petrochemicals and light metals hold larger market shares. Hydro is represented with sales offices throughout Asia, and has also during the years established several production facilities in the region. Today, the company operate Joint Venture (JV) production plants in Singapore, India, Malaysia, Sri Lanka, Thailand and China.

CHINA

Hydro is interested in the emerging North East Asian market. As for now, they try to develop broader activities in China.

One of the first establishments in this market was the partly owned PVC plant in Suzhou near Shanghai in China, run by Hydro Petrochemicals in 1999. The plant has a production capacity of 100 000 tonnes of polyvinyl chloride (PVC) which will be used to greater the extent in the company's downstream activities in the area of plastic foil production.

The new JV company, Hydro Aluminium Wuxi, was established in 2000 to serve the automotive tube market in China and the rest of Asia. The company is Hydro's first majority-owned company in China, and are going to combine the strengths of the Hydro's Aluminium Extrusion, with the leading domestic Chinese suppliers of drawing tubes. The plant is located in Wuxi in the Jiangsu province.

Also Hydro Magnesium has announced plans to build a magnesium foundry in China. Since 1994, the majority of growth of global magnesium supply has come from China. The operation will concentrate on producing high-quality alloy ingot dedicated to the Asian and European market. The plant is located in Xi'an, the Shaanix province in Central China and will start production in June 2001. The plant capacity is measured to 10 000 tpy alloy and 4 000 tpy anodes. Norsk Hydro hopes that these first ventures in China will provide the foundation for additional activities in the future in this area.



Life consists of innumerable choices. Big choices and little choices. Everything from what to wear in the morning to the person you want share your life with. And to which job you will start in when you graduate.

Whatever you choose to do, Hydro is a company you can grow with. A place where you can get breadth of experience while at the same time sharpening your particular professional interest. A place where your language skills will be put to good use.

We like to say that Norway's biggest and most internationally-oriented company is one that stimulates learning. And that we owe our success in new markets to a company full of team players who know how to apply the creative force of innovation.

Hydro wishes you a good choice.



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Norske Skog

Norske Skog is one of the world's leading suppliers of publication paper and the second largest manufacturer of newsprint paper with mills and sales offices in all five continents. The company is based in Norway with head office at Oxenøen outside Oslo. Currently 21 mills are spread over 13 countries in Europe, Australasia, Asia, North America and South America. These mills make Norske Skog able to meet their customers demands in delivering high quality paper and pulp.



The company was founded in 1962, and has today grown to be an international forest industry group with about 10 000 employees world-wide. Currently it is one of the largest companies traded on Oslo Stock Exchange in Norway. In 2000, Norske Skog had a pre-tax profit of NOK 3 021 million and an operating profit of NOK 4 211 million.

CORE ACTIVITIES

Norske Skog is divided into four regions: Norske Skog Europe, Norske Skog Australasia, Norske Skog South America and Norske Skog North America- in addition Asian activities. Around 90 % of the company's operating revenues come from markets outside Norway.

Publication paper is considered the major business. This includes newsprint, improved newsprint, magazine paper and book paper. Where newsprint and magazine paper

are the most profitable ones, the two areas supply some of the world's largest publishing houses. The total capacity is approximately 5.8 million tonnes of paper.

Newsprint and improved newsprint is produced in all regions within Norske Skog. End use varies from newspapers to various types of directories, inserts and supplements. Magazine paper includes super calandered, machine finished pigmentised and light and medium weight coated grades produced within the European region Book paper is produced at Norske Skog Union located in Skien, Norway. End use ranges from paperback to hard cover books.

One of the goals is to supply virtually all grades of woodcontaining printing paper to discerning customers in virtually every country in the world.

Norske Skog is a major user of recovered paper. Some 35 % of their tonnage is made from recycled waste paper.

THE KOREAN MARKET

One of the reasons for entering the Asian market was the high annual newsprint paper consumption of 9 million tonnes. During the 90s the consumption of newsprint paper increased by 55 %. South Korea is South-East Asia's third largest paper producer after China and Japan.

1998 Norske Skog bought two papermills in Thailand and Korea and in 1999 "Pan Asia Paper Company" was formed with 4 mills in Korea, China and Thailand. In 2000 Norske Skog also got one third of one new papermill in Malaysia, Malaysian Newsprint Industries (MNI).

The joint venture, Pan Asia Paper Company, with headquarters in Singapore and with 1 895 employees, makes Norske Skog one of the owners of the two newsprint mills in Korea. The mills are located in Chongwon and Chonju and have a total annual production capacity of 1 180 000 tonnes.

The two other owners are Abitibi Consolidated, Canada, and Hansol, Korea. In addition to the capacity of 1.4 million tonnes, when Thailand and China are included, Norske Skog and Abitibi Consolidated channel another 500 000 tonnes through Pan Asia's sales network. This makes the joint venture the largest newsprint supplier in Asia when Japan is excluded, with a market share close to 25 %.

Norske Skog has been successful in Asia based on clearly defined strategy for growth within growing markets and the ability to act fast when the opportunity was available, in a mix with good timing and some luck. Actions were taken at a time when the Asian economy was in its deepest financial crisis ever, and Norske Skog was therefore able to acquire top quality assets at favourable prices.

Pan Asia Chongwon, Korea	Pan Asia Chonju, Korea
One paper machine	Seven paper machines
180 000 tonnes newsprint	1 000 000 tonnes newsprint and other publication paper
235 employees	880 employees
	The world's largest newsprint mill



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Star Alliance

SAS and Lufthansa have played a key role in the creation of Star Alliance, the world's biggest airline alliance. Star Alliance is a strategic cooperative association which in addition to SAS and Lufthansa incorporates Air Canada, Air New Zealand, Ansett Australia, British Midland, Mexicana, Thai Airways International, United Airlines, Varig, All Nippon Airways, Austrian Airlines, Tyrolean Airways, Lauda Air and Singapore Airlines. The network covers more than 815 destinations in 130 countries.

SCANDINAVIAN AIRLINES SYSTEM

(SAS) was formed in 1946. It is a consortium consisting of the three national airlines SAS Danmark A/S, SAS Norge ASA and SAS Sverige AB. SAS's main task is to offer competitive air connections within, between, to and from each of the three Scandinavian countries, partly using its own aircraft, and partly together with selected partners.

SAS's vision is to make Scandinavians proud of their airline. The business concept is to offer the Scandinavian market a broad and profitable range of airline based services, focusing particularly on business travel. SAS prioritizes absolute safety, maximum punctuality and excellent personal service.

SAS's traffic system is built up around nonstop routes to and from the Scandinavian capitals and offers its customers a global traffic system through the Star Alliance network. In the Scandinavian market, SAS has partnerships with the regional carriers such as Cimber Air, Widerøe, Skyways, airBaltic, Air Botnia and Maersk. During 2000, SAS flew more than 23 m passengers to over 100 destinations in 31 countries, and had more than 1 000 daily departures. In 2000, the SAS Group reported pre-tax profits of SEK 2.8 bn.

LUFTHANSA

Lufthansa German Airlines (Lufthansa) was formed in 1926 and therefore celebrating 75 years of operation in 2001. The airline is today the world number two in international scheduled services and is ranked among the leaders in the international airline business. Lufthansa operates as an autonomous unit within the Lufthansa Group. The airline serves 339 destinations in 90 countries with a fleet of about 240 aircraft and a staff of more than 29 000 employees.

Aside from the global Star Alliance, Lufthansa cooperates with regional carriers under the Team Lufthansa brand. In the airfreight business, Lufthansa Cargo is enhancing its logistics networks through strategic alliances with the Deutsche Post as well as the "New Global Cargo" airfreighting system, which it is forging jointly with Singapore Airlines and SAS Cargo.

In 1999, the Lufthansa Group returned an operating result of DM 1.4 bn and pre-tax profits of close to DM 2 bn, placing it among the best-performing European airlines for the third year in a row. With more than 400 000 shareholders following its privatisation in 1997, it ranks among Germany's biggest public companies.






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Next years project country is Poland

Poland was the first country in Central and Eastern Europe to break out of the communist rule.

Now a republic, the country is experiencing a rapid political and economic development. After starting its formal negotiations in 1998, Poland will most likely become a member of the EU around 2004. A development making economic prospects even brighter. Poland is one of the largest countries in Central Europe, with a population of 38.7 million people. It's northern frontier on the Baltic Sea, gives it easy access to Scandinavia and the North Sea Ports. Poland has substantial mineral resources,

contributing significantly to the country's exports. It is also a leading producer of agricultural products, due to its favourable geographic positioning and temperature climate arable lands amount to almost 60%.



EARLIER PROJECT COUNTRIES:

Singapore -	1984/19
Brazil -	1985/19
Australia -	1986/19
Italy -	1987/19
China -	1988/19
Thailand -	1989/19
Russia and	
the Baltic states -	1990/19
Portugal -	1991/19

985	Mexico -
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