APPENDIX

APPENDIX A: Results of Questionnair Survey of Japanese Corporations

Outline of the Survey

Number of firms surveyed:	
Members of the Japan-Chile Business Cooperation Committee	53
Selected major companies listed at the Tokyo Stock Exchange (Fishery, Agriculture, Food, Beverage, Paper, Furniture)	128
Investing companies interested in Latin America [JETRO *Potential Investors from Japan* (1999)]	55
Investing companies interested in Latin America [JETRO *Potential Investors from Japan* (2000)]	28
Total	264
Number of responding firms (%):	42 (16%)
Survey period:	May 17-June 10, 2000

Q1. Please answer the following questions about your company's strategy for foreign direct investment (FDI).

Q1-1. What is the current stance of your company on FDI?

		Numbers	(%)
1	We give higher priority to domestic investment, thus, there are no particular plans for FDI for a while.	8	17
2	We give higher priority to domestic investment but will consider FDI if there is a good investment opportunity.	5	11
3	We treat domestic investment and FDI as equals and will invest if there is a good opportunity.	23	49
4	We give higher priority to FDI since opportunities for domestic investment have been decreasing.	0	0
5	Considering the recent trend of economic globalization, we give higher priority to FDI rather than to domestic investment.	3	6
6	We invest both in domestic and overseas projects but because of difficulties in the project environment, investment amount for both is limited.	8	17
	Total	47	100

Q1-2. If you chose 2, 3, 4, 5, or 6 on Q1-1, what are your emphasis in terms of country, sectors, and motives for investment?

	Country	Numbers	(%)
1	USA	15	19
2	Europe	11	14
3	Asia	31	40
4	Latin America	14	18
5	Others	6	8
	Total	77	100

	Sector	Numbers	(%)
1	Manufacturing	30	52
2	Services	4	7
3	Natural resources development (mining, agriculture, forestry, fishery, and others)	13	22
4	Tourism	0	0
5	Public utility (electric power, gas, water, and, others)	1	2
6	Infrastructure (railroads, roads, ports, and others)	2	3
7	Others	8	14
	Total	58	100

	Motives	Numbers	(%)
1	To secure a market share in the invested country	14	17
2	To secure profit in the invested country	18	22
3	To secure natural resources	17	21
4	To develop export-oriented investment	10	12
5	To establish a trade base in the global market	15	18
6	To reconsider investment portfolio	1	1
7	To develop new projects and to secure profit opportunities	19	23
8	Others	2	2
	Total	82	100

Q1-3. Has your company ever considered investing in Chile?

		Numbers	(%)
1	We have already invested and are considering additional investment.	7	16
2	We have already invested but are not considering additional investment.	7	16
3	We have considered before but not realized. We want to consider it again in the future.	5	12
4	We have considered before but not realized. We won't consider it for a while.	2	5
5	We have never thought about it but want to look into the possibilities in the future.	9	21
6	Others	13	30
	Total	43	100

Q1-4. If you chose 1, 2, 3, 4, or 5 on Q1-3, what are your motives for investing in Chile?

		Numbers	(%)
1	To secure a market share in Chile	7	11
2	To gain profit in Chile	7	11
3	To secure natural resources	19	31
4	To develop export-oriented investment	10	16
5	To establish a trade base in Latin America	7	11
6	To reconsider investment portfolio	0	0
7	To develop new projects and to secure profit opportunities	14	23
8	Others	4	7
	Total	61	100

Q2. Chile has already signed bilateral free trade agreements with Canada and neighbouring countries. And it is said that Chile is considering to conclude similar agreements with Korea and Japan in the future. Chile is also active in signing regional trade agreements and is a member of APEC and an associate-member of MERCOSUR. Under these circumstances, Chile's trading partners have been rapidly expanding. For instance, the economic zone of Region I in the northern part of Chile extends from Iquique Port and Alica Port to the border ares of Peru, Bolivia, Brazil, Paraguay, and Argentina. Valparaiso Port and San Antonio Port located in Region V extend to the Provinces of Mendosa, San Juan, and San Louis in Argentina.

What does your company think about the above recent trends in Chile?

		Numbers	(%)
1	Very interested	9	20
2	Interested	15	34
3	Not interested for now	7	16
4	No opinion	13	30
	Total	44	100

Q3. Our study has so far found that there are the following investing opportunities in Chile.

(1) Investment in a project development, taking account of the future expansion of Chile's domestic demand well as of macro-regional marekts as stated in Q2.

(2) Investment in highly competitive companies/sectors or a joint venture in sectors such as the lumber industry in Chile with considering export expansion from Chile to the United States.

(3) Investment in highly competitive companies/sectors, such as agricultural products, foodstuffs, beverages, or a joint venture with consideration for possible export expansion from Chile to a global market.

(4) Investment in the development of a joint venture by acquiring a concession in natural resource based sectors.

(5) Investment in infrastructure related projects (such as construction of a fruit port, development of existing ports, and development of a computer system for improving the distribution system.).

How much is your company interested in the above mentioned investments?

Q3-1.	About Investment type (1)	Numbers	(%)
1	Very interested	3	5
2	Interested	16	29
3	Not interested for now	24	44
4	No opinion (due to lack of information)	12	22
	Total	55	100

Q3-2.	About Investment type (2)	Numbers	(%)
1	Very interested	4	8
2	Interested	6	11
3	Not interested for now	34	64
4	No opinion (due to lack of information)	9	17
	Total	53	100

Q3-3.	About Investment type (3)	Numbers	(%)
1	Very interested	8	15
2	Interested	9	17
3	Not interested for now	27	50
4	No opinion (due to lack of information)	10	19
	Total	54	100

Q3-4.	About Investment type (4)	Numbers	(%)
1	Very interested	7	13
2	Interested	10	19
3	Not interested for now	25	46
4	No opinion (due to lack of information)	12	22
	Total	54	100

Q3-5.	About Investment type (5)	Numbers	(%)
1	Very interested	3	5
2	Interested	6	11
3	Not interested for now	31	56
4	No opinion (due to lack of information)	15	27
	Total	55	100

Q4. Assuming your company has interests in some kind of investment in Chile, what will be the concerning matters? (You can choose more than one answer.)

		Numbers	(%)
1	Our company is too busy for investing in Japan or developing existing projects.	7	7
2	Our company is too busy for investing in Southeast Asia and China.	8	8
3	Our company is too busy for investing in the United States.	5	5
4	Our company is too busy for investing in Europe.	4	4
5	Our company is too busy for investing in other Latin American countries e.g., Mexico, Brazil and Argentina.	3	3
6	Mexico, Brazil, and Argentina have a larger investment merit in Latin America than Chile.	7	7
7	Chile's domestic market is too small.	12	12
8	Distance to Chile is too far.	13	13
9	Chile's products are weak in cost competitiveness.	4	4
10	Chile's supporting industries are too weak.	2	2
11	It is difficult to find a good business partner in Chile.	8	8
12	There is a concern on the stable supply of raw materials.	5	5
13	There is a concern on the investment environment.	16	16
14	There is lack of information.	8	8
15	others	0	0
	Total	102	100

Q5. If your company has some kinds of investment in Chile, what are the conditions to increase the possibility of investment to Chile? (You can choose more than one answer.)

		Numbers	(%)
1	Japan's business recovery	15	20
2	Chile's favourable economic development	11	15
3	Latin America's favourable economic development	14	19
4	Asia's economic recovery and favourable development	4	5
5	Development of international transport infrastructure between Chile and surrounding	3	4
6	Development of Chile's domestic infrastructure (ports, roads, airports, communication	9	12
7	Improvement of the investment environment	12	16
8	Availability of information	3	4
9	Others	4	5
	Total	75	100

If you chose 7) in the above Q-5, what investment environment should be improved?

	Numbers	(%)
i) Conclusion of the investment protection agreement	5	45
ii) Lowering royalty and the rate of income tax (About 35% of remittance from Chile to overseas is collected as withholding tax.) or conclusion of tax agreements including the provision of tax deductions in Japan	3	27
iii) Compatibility in trade policies between the Japanese government and the Chilean	1	9
iv) Others	2	18
Total	11	100

APPENDIX B: Interview Survey of 13 Japanese Firms

	Company S	Company M	Company H	Company Y
Size	Very large	Very large	Very large	Medium
Type	Smelter/Manufacturer	Smelter/Manufacturer	Manufacturer	Manufacturer
Product	Copper Copper products New materials	Copper Cement Non-ferrous metals Silicon High-tech products	Truck Bus Pickup	Car parts
Chilean relation	* Chile is the main source of copper concentrate * Invested in one copper mine (1992-) from which 200,000 tons of concentrate is imported annually * Purchase concentrate from other mines	* 35% of copper concentrate comes from Chile * Invested in two copper mines which are the only source of Chilean concentrate	* Truck sales 150 per year (600 in the past) ** Biggest markets in Latin America are Ecuador and Guatemala (600 buses a year)* ** No factory in Latin America*	* None at present ** A new investment in the US is underway; not possible to make two foreign investments at the same time*
Trade possibility			* Try to export more	
Investment possibility	*** Very positive if new good mines can be developed** * No possibility to invest in a smelter or copper-based manufacturing in Chile	*** Positive if new good mines can be developed and can find good partners** * In the past studied possibility to invest in a smelter in Chile but conclusion was negative	* None at present	* None at present
Remarks/ Suggestions	* Low country risk, good infrastructure--no reason to hesitate to make investment	* See possibility to start a JV to produce copper-based products targeting MERCOSUR * New materials may be a better choice for the JV	* Competition for Chilean car market is already fierce; will get tougher as Mexican, Brazilian and Argentine cars will join in * Possibility to export Chilean-made cars to Mexico	* Investment in Chile may become possible in the long run

	Company M	Company S	Company D	Company G
Size	Large	Very large	Very large	Medium
Type	Manufacturer	Manufacturer/Importer	Manufacturer	Manufacturer/Importer
Product	Car parts Motorbike parts	Wooden house Sawn timber Building materials	Paper	Spice Canned fruits Canned pickles
Chilean relation	* None at present ** Factories are in the US, Mexico, Italy, Thailand, Philippines, China, Viet Nam*	* Imports sawn timber and building materials from Chile ** Own factories are in Indonesia (3) and New Zealand (1)* ** New Zealand and Chile have very similar conditions; but language and the policy were the factors*	* 20% of chips now come from Chile; will increase to 40 to 50% * Made $70 million investment into Chile in 1989: 64,000 ha land in Region X for plantation * Planted 30,000 ha so far with *eucalyptus*	* None at present ** Own a factory in Malaysia where spices from India, Indonesia, Malaysia are processed and exported to Japan* ** Importing tapioka from Brazil*
Trade possibility	*** Like to import Chilean-made parts if prices are low**	*** Will increase Chilean import: good-quality and low-cost engineered wood is in ample supply**	* Chips from the plantation will be imported to Japan--$43 million annually	*** Interested in new foodstuff (other than spice) for import; seafood?**
Investment possibility	* None at present * Future possibility if Chile joins MERCOSUR while keeping low tariff	* Negative because (1) Chilean companies seem to need no foreign investment (2) Future supply from the plantations will increase--buyers' market will prevail	* Will construct a chip plant near a port in Region X ($5 million) * Further investment will much depend on better roads; worried about higher transport costs due to road concessions	* None at present to grow and import spices from Chile due to limited variety
Remarks/ Suggestions			*** Chilean government should swiftly declaire plantation be eligible for CDM. New South Wales of Australia is benefiting from this receiving large-scale investment from a major Japanese utility company**	

	Company N	Company M	Company O	Company K
Size	Medium	Very large	Small	Medium
Type	Importer/Manufacturer	Manufacturer	Importer	Wholesaler/Importer
Product	Tea Herb tea	Wine Beverage	Food Building materials	Oyster (fresh/frozen) Other shellfish Oyster-based pre-cooked food
Chilean relation	* None at present *** Highly interested in rosehip; Chile is the world's biggest producer and has good conditions for organic production**	* Imports wine from *Concha y Toro* : from ordinary to high-grade wine * Chilean wine is well received by Japanese consumers; its advantage is "value for market"--good quality with reasonable price--which appeals to contemporary consumers	* Imports raspberry and blueberry from Chile (frozen)	* Imports 200-300 tons of frozen Japanese oyster a year * Trade started in 1988 * The grower (a NZ-Chilean JV in Chiloe) sells all yield exclusively to this company
Trade possibility	* Will start growing rosehip on a contract basis; export to Japan, US and Europe in 5 years	* Closely keeps eye on its cost: when Chilean wine cannot keep costs low, it will lose competition to French and California wines	* Will also import other frozen foodstuff * Also considers importing fresh fruits	*** Wants to increase import to 500-700 tons a year** *** Considers exporting fresh oyster to Hong Kong, Singapore, Taiwan**
Investment possibility		* None at present: *Concha y Toro* has no need for our investment *** Long-run possibility to invest in Chile; good natural endowment and low cost production are advantages**	*** Possible investment in a major fruit producer** * Wants to visit Chile in January to observe fruit farms	*** Considers investing in the grower to build its own processing plant**
Remarks/ Suggestions	* Affinity with Japan is the key factor when making an investment decision; Chile marks high with this account	* Invested in France and California in the form of take over: no possibility of investment from the grassroots * Familiarity with Chile will help when making investment there	* Chile needs a strong justification to compete with other fruit-growing countries on the southrn semisphere: quality, costs, transport costs, delivery time, etc. * Keeps close contact with Chilean embassy (ProChile)	* Chile-grown oyster has better taste than other countries' * Chile's domestic consumption of Japanese oyster must increase to support growers

	Company I
Size	Small (?)
Type	Subsidiary to a large trading company
Product	Various
Chilean relation	* Invested in mining and forestry
Trade possibility	*** Strong interest in food**
Investment possibility	*** Little interest in manufacturing** *** Investing in infra-structure is finan-cially too large; but interested in logis-tics as one of the priority areas of the company**
Remarks/ Suggestions	* Interest in acquiring one of Fundacion Chile companies; any good offer on the table?

APPENDIX C: Evolution of Japan's Foreign Direct Investment

Table C.1 shows evolution of Japan's foreign direct investment for the period of 1951-1998. Japan's foreign direct investment started with investment for securing natural resources as Japan is little endowed with natural resources (Table C.2). To sustain high economic growth, Japan had to exploit natural resources overseas and import them. As the economy grew, Japanese industries expanded export, but the rapid export expansion caused trade frictions with importing countries. To abate the frictions, Japanese industries began to invest in those countries for overseas production.

Table C.1 Trend of Japan's Foreign Direct Investment by Region in 1951-1998

	No. of Invest-ment	Amount (US$M)	North America	Central & South America	Asia	Middle East	Europe	Africa	Oceania	Chile	Brazil	Argen-tina	Mexico	Panama
51-70	3,733	3,577	912	567	751	334	639	93	281	74	288	25	40	26
1971	904	858	230	140	237	36	84	21	110	0	122	0	1	1
1972	1,774	2,338	406	282	401	236	935	34	42	-	169	3	38	22
1973	3,093	3,494	913	822	998	110	337	106	208	1	435	1	26	11
1974	1,912	2,395	550	699	731	64	189	55	108	15	250	0	6	14
1975	1,591	3,280	905	372	1,100	196	333	192	182	0	271	0	30	13
1976	1,652	3,462	749	420	1,245	278	337	272	162	-	270	0	30	25
1977	1,761	2,806	735	456	865	225	220	140	165	0	267	0	10	69
1978	2,393	4,598	1,364	616	1,340	492	323	225	239	13	258	1	37	140
1979	2,694	4,995	1,438	1,207	976	130	495	168	582	12	409	3	516	142
1980	2,442	4,693	1,596	588	1,186	158	578	139	448	9	170	8	85	222
1981	2,563	8,931	2,522	1,180	3,339	96	798	573	424	3	316	58	82	614
1982	2,548	7,703	2,905	1,503	1,385	124	876	489	421	13	322	45	143	722
1983	2,754	8,145	2,701	1,878	1,847	175	990	364	191	3	410	5	121	1,223
1984	2,499	10,155	3,544	2,290	1,628	273	1,937	326	157	38	318	1	56	1,671
1985	2,613	12,217	5,495	2,616	1,435	45	1,930	172	525	0	314	8	101	1,533
1986	3,196	22,320	10,441	4,737	2,327	44	3,469	309	992	2	270	17	226	2,401
1987	4,584	33,364	15,357	4,816	4,868	62	6,576	272	1,412	7	229	15	28	2,305
1988	6,077	47,022	22,328	6,428	5,569	259	9,116	653	2,669	46	510	24	87	1,712
1989	6,589	67,540	33,902	5,238	8,238	66	14,808	671	4,618	47	349	3	36	2,044
1990	5,863	56,911	27,192	3,628	7,054	27	14,294	551	4,166	30	615	213	168	1,342
1991	4,564	41,584	18,823	3,337	5,936	90	9,371	748	3,278	75	171	40	193	1,557
1992	3,741	34,138	14,572	2,726	6,425	709	7,061	238	2,406	27	464	18	60	938
1993	3,488	36,025	15,287	3,370	6,637	217	7,940	539	2,035	3	419	34	53	1,390
1994	2,478	41,051	17,823	5,231	9,699	290	6,230	346	1,432	14	1,235	21	613	1,655
1995	2,863	50,694	22,761	3,877	12,264	148	8,470	379	2,795	137	256	117	129	1,660
1996	2,501	48,019	23,021	4,446	11,614	238	7,372	431	897	2	634	13	-61	1,009
1997	2,489	53,972	21,389	6,336	12,181	471	11,204	332	2,058	23	924	57	128	1,119
1998	1,597	40,747	10,943	6,463	6,528	146	14,010	444	2,213	12	559	128	153	1,040
51-98	86,956	657,034	280,804	76,269	118,804	5,739	130,922	9,282	35,216	606	11,224	858	3,135	26,620

Source: Ministry of Finance, Statistics Monthly

Although Japan's foreign direct investment has continued to grow almost every year, there were some critical years. The first critical year came in 1973, when the first oil crisis occurred. Faced by the increased import bills for crude oil, the Japanese government took a restrictive investment policy in an effort to improve the worsened balance of payment. At the same time, however, the crisis forced Japanese corporations to invest overseas to secure natural resources as energy sources and raw materials for their production, e.g., crude oil, LNG, corking and steaming coal, and uranium. Such investment was accelerated by the second oil crisis in 1980.

The second wave of expansion of Japan's foreign direct investment came in 1985. Following the Plaza accord in 1985, Japanese yen was rapidly appreciated against US dollar. The appreciation of yen stimulated Japanese corporations to go abroad, construct their factories, and manufacture their products there. The movement was accelerated especially in assembling industries such as the electrical machinery industry

and the transport equipment industry. Since then, a new type of investment was added to traditional types of investment for securing natural resources and alleviating trade frictions. It is investment for realizing a new international "division of labor" in the global market and pursuing "strategy as multinationals."

Table C.2 Changes in Foreign Direct Investment Policy: Process of Deregulation

Process of Deregulation		Automatically approved amount of outstanding invested	Automatically approved foreign entity		Non-liberalized industry or country invested
Before Oct.1,1969			Approved upon investigation		
First liberalization measure	Oct.1,1969	Less than US$200,000	More than 25% and at least one director to be dispatched		(1) Fisheries (2) Pearl farming (3) Banking and security (4) In case that the investment brings about adverse affect on national economy
Second liberalization measure	Sept.1,1970	Less than US$1,000,000	More than 50% or more than 25% but less than 50% and at least one director to be dispatched		(1) Fisheries (2) Pearl farming (3) Banking and security (4) In case that the investment brings about adverse affect on national economy (5) In case that the investment occurs problems in international cooperation or diplomat
Third liberalization measure	July 1,1971	No limit	More than 25% or more than 10% but less than 25% and satisfying one of the following conditions:	(1) Dispatch of director (2) Supply of manufacturing technology (3) Supply of raw materials (4) Purchase of products (5) Financial support (6) Conclude sole agent agreement	(1) Fisheries (2) Pearl farming (3) Banking and security (4) In case that the investment brings about adverse affect on national economy (5) In case that the investment occurs problems in international cooperation or diplomat
Fourth liberalization measure	Jun.8,1972	No limit	More than 25% or less than 25% and satisfying one of the following conditions:	(1) Dispatch of director (2) Supply of manufac- turing technology (3) Supply of raw materials (4) Purchase of products (5) Financial support (6) Conclude sole agent agreement (7) Continuous relationship with the invested entity	(1) Fisheries (2) Pearl farming (3) Banking and security (4) In case that the investment brings about adverse affect on national economy (5) In case that the investment occurs problems in international cooperation or diplomat
Fifth liberalization measure	Apr.1,1978	No limit	More than 25% or less than 25% and satisfying one of the following conditions:	(1) Dispatch of director (2) Supply of manufacturing technology (3) Supply of raw materials (4) Purchase of products (5) Financial support (6) Conclude sole agent agreement (7) Continuous relationship with the invested entity	(1) Fisheries (2) Pearl farming (3) Banking and security (4) In case that the investment brings about adverse affect on national economy (5) In case that the investment occurs problems in international cooperation or diplomat (6) Manufacturing and processing of textile products (7) Manufacturing of ammunition

Table C.2 Changes in Foreign Direct Investment Policy: Process of Deregulation (Continued)

Amendment of Foreign Exchange Law	Dec.1 1980	Prior report is requested and inspected (No need for less than ¥3 millions)			Prior report is requested regardless of investment amount for the following investment: (1) Fisheries or pearl farming (2) Manufacturing leather or its products (3) Manufacturing and processing of textile products (4) Banking or security business (5) Manufacturing of ammunition
Amendment of Ministerial Ordinance for Foreign Exchange Law	Apr.1,1984	Prior report is requested and inspected (No need for less than ¥10 millions)			Prior report is requested regardless of investment amount for the following investment: (1) Fisheries or pearl farming (2) Manufacturing leather or its products (3) Manufacturing and processing of textile products (4) Banking or security business (5) Manufacturing of ammunition
Amendment of Ministerial Ordinance for Foreign Exchange Law	Apr.1,1984	Prior report is requested and inspected (No need for less than ¥30 millions)			Prior report is requested regardless of investment amount for the following investment: (1) Fisheries or pearl farming (2) Manufacturing leather or its products (3) Manufacturing and processing of textile products (4) Banking or security business (5) Manufacturing of ammunition

Table C.3 shows how Japanese corporations have shifted their production basis from Japan to foreign countries. In the transport equipment industry, for example, around 30% of total production by Japanese corporations is achieved abroad. In the course of the changes mentioned above, Japanese corporations have become multinational. Their motives for foreign direct investment have changed from such a simple one as securing natural resources or overcoming trade frictions to a more sophisticated one as realizing strategic alliance. Accordingly, Japan's foreign direct investment has become more diversified.

Table C.3 Overseas Production by Japanese Industries in 1980-1998: Ratio of Overseas Production to Total Production (%)

Year	Manufac-turing	Food	Textile	Wood and Pulp	Chem-ical	Iron and Steel	Non-ferrous metal	General machin-ery	Electric machin-ery	Trans-port equip.	Precision machin-ery	Petro-leum and coal	Others
1980			4.0	1.4	1.4	3.4	4.1	1.8	6.3	2.2	2.5	1.0	
1982			2.7	2.6	3.1	3.5	5.6	4.0	8.9	6.1	6.1	1.1	
1984			4.7	1.6	2.0	8.1	4.9	2.6	11.8	6.4	6.4	0.1	1.5
1985			2.7	1.2	2.0	5.3	2.7	3.4	7.4	5.6	5.6	0.0	0.8
1986			3.4	0.8	2.7	5.4	1.5	3.7	8.1	4.8	4.8	0.8	1.3
1987			3.1	1.3	3.2	5.9	2.6	4.0	9.4	9.3	9.3	0.7	1.2
1988			4.2	1.8	3.9	6.6	4.0	4.5	10.6	9.4	9.4	0.2	1.4
1989			1.3	1.9	3.8	5.3	6.4	3.8	11.0	14.3	5.4	0.1	3.1
1990			3.1	2.1	5.1	5.6	5.2	10.6	11.4	12.6	4.7	0.2	3.1
1991			2.6	1.6	5.5	4.9	5.2	7.6	11.0	13.7	4.4	1.2	2.6
1992			2.3	1.4	4.8	5.0	7.8	4.1	10.8	17.5	3.6	5.2	2.3
1993			3.2	1.9	7.0	6.3	6.5	5.8	12.6	17.3	5.6	7.1	2.8
1994			4.0	2.1	8.1	5.4	8.8	8.1	15.0	20.3	6.0	5.6	3.0
1995			3.5	2.2	8.3	9.2	6.7	8.1	16.8	20.6	6.6	3.7	3.0
1996			7.6	2.9	10.0	12.1	11.1	11.7	19.7	24.9	8.6	2.8	4.3
1997	12.4	2.8	8.0	3.8	12.4	13.1	10.9	11.5	21.6	28.2	9.1	1.7	4.1
1998	13.8	3.0	9.2	4.1	14.0	15.2	11.3	12.4	24.1	31.6	10.0	0.8	4.7

Source: MITI " Foreign Activity of Japanese Enterprise"

By industry, it is noted that the food industry is one of industries where Japan's investments have been rapidly growing, though the total amount is not significantly large compared with those of machinery industries by nature of the industry, i.e., a

concentration of smaller sized projects (Table C.4).

Table C.4 Japanese Foreign Direct Investment by Industry in 1951-1998

	Manufac-turing	Food	Textile	Wood/ Pulp	Chemical	Metal	General machinery	Electrical machinery	Transport equipment	Others
51-70	928	51	189	212	50	138	68	73	87	61
1971	290	18	65	49	17	50	23	30	13	25
1972	525	29	163	35	66	53	37	69	42	31
1973	1,496	68	326	64	394	245	85	156	80	79
1974	874	64	175	61	97	149	89	99	38	103
1975	924	58	98	89	151	147	98	96	100	87
1976	1,025	26	112	63	270	171	53	164	93	74
1977	1,074	48	158	52	325	99	61	161	86	85
1978	2,038	67	171	23	705	498	119	243	114	99
1979	1,693	103	89	33	238	578	160	180	150	161
1980	1,706	54	91	78	314	493	102	309	176	89
1981	2,305	142	91	65	228	521	207	475	406	169
1982	2,076	78	67	76	322	468	164	267	439	195
1983	2,588	77	174	91	450	479	169	502	486	160
1984	2,505	118	85	115	223	718	185	409	437	215
1985	2,352	90	28	15	133	385	352	513	627	208
1986	3,806	127	63	57	355	328	626	987	828	435
1987	7,832	328	206	317	910	786	687	2,421	1,473	703
1988	13,804	419	317	604	1,293	1,367	1,432	3,041	1,281	4,051
1989	16,283	1,300	533	555	2,109	1,590	1,762	4,479	2,052	1,900
1990	15,485	820	795	314	2,291	1,046	1,453	5,684	1,871	1,206
1991	12,310	631	616	311	1,602	906	1,283	2,296	1,996	2,665
1992	10,057	516	428	431	2,015	824	1,103	1,816	1,188	1,732
1993	11,131	888	497	345	1,741	754	1,170	2,761	942	2,028
1994	13,783	1,260	641	140	2,600	1,038	1,622	2,633	2,021	1,826
1995	18,623	844	1,043	357	2,114	1,555	1,870	5,288	1,989	3,564
1996	20,258	729	606	619	2,059	2,446	1,438	6,513	3,873	1,974
1997	19,339	572	958	352	3,013	1,413	1,284	6,689	2,908	2,151
1998	12,252	1,270	341	677	2,246	1,223	795	3,418	1,607	673
51-98	199,362	10,795	9,126	6,200	28,331	20,468	18,497	51,772	27,403	26,749

Source: Ministry of Finance, *Statistics Monthly*, various issues.

Table C.5 summarizes how Japanese corporations changed their investment strategies in the past. Foreign direct investment by Japanese manufacturing corporations has uniqueness that stems from the large share of export in their total production. It was made possible by Japan's strong international competitiveness in the manufacturing sector. However, importing countries imposed import quotas and/or high tariffs on imported goods to curb the importation of finished products and tried to promote own manufacturing industries. Faced by these restrictions, Japanese corporations changed their export strategies. They began to export semi-finished products and assemble them in importing countries instead of exporting finished products. So to speak, they became "screw drivers." The invested countries were not satisfied with the new movement and they imposed another restriction, that is, the "local content rule." Japanese corporations were forced to invest in those countries to increase the local content, but they selected rather low-technology fields to meet the rule. Then the invested countries effectuated the "rule of origin," i.e., basic and important parts should be included in local content items. Japanese corporations followed the rule. Now, the importing countries request "quality investment" of Japanese corporations to facilitate thorough technology transfer.

Table C.5 Changes in Corporate Strategy for Foreign Direct Investment

1. Past performance

(1) Raw materials based industry

	Before 1985	After 1985
Iron and steel	Investment in mining to secure raw materials such as iron ore and corking and steaming coal (Brazil, Australia, USA, and Canada)	Investment in the US iron and steel industry to secure the US market
	Investment in the processing industry to secure the export of steel (South America, South East Asia)	Investment in new materials such as electronics for diversification of business (USA)
	Investment in the engineering industry (South America, South East Asia)	
Refining of non ferrous metals	Investment in mining to secure raw materials such as copper (South America, USA)	Investment in mining to secure raw materials such as copper (South America, USA)
		Investment in refinery due to yen appreciation (USA)
		Investment in new materials such as electronics for diversification of business (USA)
Chemical	Investment in big petrochemical projects (South East Asia, Middle East)	Investment in "commodity" area to develop new business in new markets (East Asia)
	Investment in fine chemicals (USA, Europe)	Investment in fine chemicals to develop new business in new markets (USA, Europe)
		Investment in automobile parts industry upon request of Japanese car assembler (USA)
Textile	Investment in processing and finished products manufacturing industry for cheap labor in invested country (Asia)	Investment in the spinning industry due to yen appreciation (USA)
		Investment in the automobile parts industry upon request of Japanese car assembler (USA)
Pulp and paper	Investment in the forest industry and chip factory to secure raw materials (South East Asia)	Investment in the pulp manufacturing industry with background of natural resources nationalism (Canada)
	Investment in the pulp manufacturing industry to secure raw materials for paper (North America, South America, New Zealand)	Investment in the finished products manufacturing industry due to yen appreciation (USA, Canada)
Cement	Investment in coal mining to secure raw materials (USA)	Investment for local production (USA, China)
	Investment in the engineering industry (USA)	Investment in electronic materials for diversification of business (USA)

(2) Assembling industry

	Before 1985	After 1985
Electrical machinery and electronics	Investment to cope with a lockout for finished products in developing countries (Asia, Central and South America)	Investment from view points of division of labor due to yen appreciation (Asia, USA, Europe)
	Investment to cope with trade frictions with developed countries: request of orderly marketing (USA, Europe)	
General machinery	Investment to cope with trade frictions with developed countries (USA, Europe)	Investment from view points of division of labor due to yen appreciation (Asia, USA, Europe)
Automobile	Investment to cope with a lockout for completed knock down in developing countries (Asia, Central and South America)	Investment from view points of division of labor due to yen appreciation (Asia, USA, Europe, Central and South America)
	Investment to cope with trade frictions with developed countries: request of orderly marketing (USA, Europe)	Investment in the parts industry (Asia)

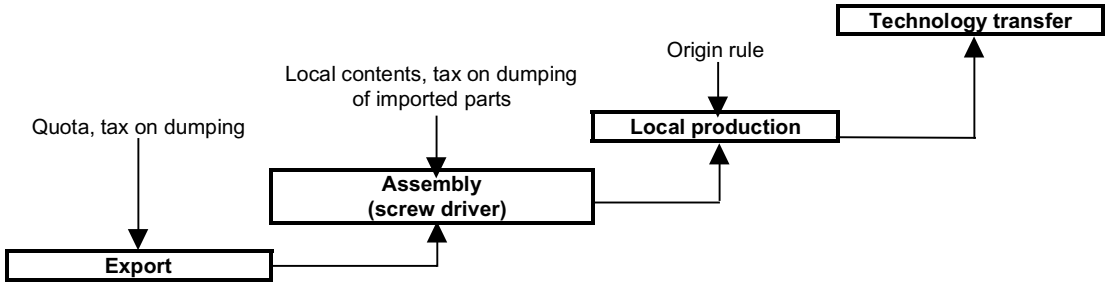

Table C.5 Changes in Corporate Strategy for Foreign Direct Investment (Continued)

(3) Non-manufacturing industry

Mining	Investment in secure minerals and hydrocarbon resources						
	Crude oil	LNG	Coal	Uranium	Iron ore	Aluminum	Copper
	Middle east	Middle east	Oceania	Oceania	Oceania	Asia	S. America
	Asia	Asia	USA		USA		USA
		Oceania	Canada		S. America		Asia
		USA					
Banking	Investment in areas where tax heaven is given						
	(Cayman, Bermuda, etc.)						
Transport	Investment in shipping						
	(Panama and Liberia)						
Real estate	Investment in properties						
	(USA and Europe)						

2. Recent Trend (common to all industry)

1) Investment for strategic alliance
2) Acceleration of investment to strengthen core business
3) Diversification of investor

Table C.6 shows Japan's foreign direct investment by industry and by destination.

Table C.6 Investment by Industry and by Region in 1951-1998 (%)

Wood and Pulp		Fisheries		Mining	
North America	60.4	Asia	40.5	Asia	42.9
Asia	20.4	Central & South America	17.3	Oceania	16.9
Central & South America	8.6	North America	17.1	North America	11.8
Oceania	7.3	Africa	12.4	Central & South America	11.6
Europe	3.2	Oceania	10.1	Europe	10.3
		Europe	2.4	Africa	3.5
				Middle East	3.1

General Machinery	
North America	42.5
Asia	26.7
Europe	24.0
Central & South America	5.7

Banking and Insurance	
Europe	39.1
North America	29.3
Central & South America	21.9
Asia	7.5

Service		Transportation		Real Estate	
North America	62.2	Central & South America	66.7	North America	64.8
Asia	14.9	Africa	16.9	Europe	14.8
Europe	10.7	Asia	8.5	Oceania	12.4
Oceania	6.0	North America	4.8	Asia	7.5
Central & South America	4.7	Europe	2.3		

Construction		Agriculture and Forestry		Commercial	
North America	45.8	North America	28.3	North America	49.7
Asia	32.8	Oceania	24.3	Europe	24.8
Central & South America	8.8	Asia	23.5	Asia	13.8
Europe	5.9	Central & South America	19.1	Central & South America	7.0
Oceania	4.8	Europe	2.8	Oceania	4.4
Electrical Machinery		Transport Equipment		Chemical	
North America	51.3	North America	43.2	North America	36.6
Asia	27.1	Asia	21.3	Asia	31.1
Europe	18.0	Europe	18.6	Europe	17.6
Central & South America	3.2	Central & South America	12.2	Middle East	8.0
		Oceania	6.6	Central & South America	5.4

Metal		Food		Textile	
Asia	34.5	North America	39.3	Asia	53.4
North America	32.5	Asia	24.8	North America	18.3
Central & South America	19.6	Oceania	20.5	Europe	16.8
Oceania	6.3	Europe	10.0	Central & South America	10.2
Europe	5.4	Central & South America	5.3		

All Industries		Manufacturing		Non-manufacturing	
North America	41.6	North America	43.5	North America	41.5
Europe	19.4	Asia	29.1	Europe	21.0
Asia	18.2	Europe	15.1	Central & South America	15.1
Central & South America	12.5	Central & South America	7.3	Asia	13.3
Oceania	5.4	Oceania	3.4	Oceania	6.3

Source: Ministry of Finance, *Statistics Monthly*, various issues.

These figures are obtained by aggregating the investment for 1951-1998. For manufacturing, Asia and USA are major destination of investments. For non-manufacturing industry, Central and South America are one of major destination. However, it is owing to the fact that the investment includes one in maritime industry in Panama, one in banking and insurance industry in Cayman and Bermuda as well as one in mining industry in Chile, Brazil, Peru and Mexico.

APPENDIX D

MINECON-CORFO-JICA TECHNICAL COOPERATION

THE STUDY FOR PROMOTION OF INVESTMENTS AND EXPORTS FOR THE BALANCED ECONOMIC DEVELOPMENT IN THE REPUBLIC OF CHILE

Discussion Paper 1:

Finance for Small and Medium Sized Enterprises (SMEs) in Japan

July 2000

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Satoko Emoto, Export and Investment Promotion (2)
Hiroo Okuda, Economy of Metropolitan Zone

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1. Development of SMEs finance in Japan

1.1 Importance of SMEs in Japan's economy

Small and medium sized enterprises (SMEs) have been playing a vital role in the development of Japanese economy and industry for many years. Among 57,346,000 employees, about 80% are working for SMEs and 99% of all business establishments are SMEs in 1996 (Table 1). Japanese companies are not only such world-famous multinational companies as Toyota, Honda, Seiko, and Sony. A large number of SMEs have contributed to the establishment and expansion of these companies, which is one of the sources of the international competitiveness of Japan's industry as a whole.

Table 1 SMEs' Importance in Employment and Establishments in 1996

Industry	Number of employees			Number of establishments		
	Total (a) (1,000)	SMEs (b) (1,000)	(b)/(a) (%)	Total (a) (1,000)	SMEs (b) (1,000)	(b)/(a) (%)
Construction	5,774	5,527	95.7	647.3	646.9	99.9
Manufacturing	12,922	9,575	74.1	771.7	767.5	99.5
Wholesale trade	5,061	4,086	80.7	447.3	443.0	99.0
Retail trade	11,774	9,732	82.7	2,381.2	2,361.5	99.2
Services	13,801	10,040	72.7	1,679.5	1,663.3	99.0
Others	8,012	7,164	89.4	575.6	574.2	99.8
Total	57,346	46,124	80.4	6,502.9	6,456.7	99.3

Source: The Ministry of International Trade and Industry (MITI) of Japan, *White Paper on SMEs*, 1999.

1.2 Financiers for SMEs

Around 73% of the total finance for SMEs is provided by domestically licensed bank such as city banks and regional banks, while 19% is provided by private financial institutions for SMEs (Table 2). Government (or state) financial institutions for small business provide around 9% of the total finance for SMEs. There are both private and government financial institutions specialized in finance for SMEs.

Box 1 Definition of SMEs

SMEs is defined as an individual or a corporation that meets one of the following criteria.

Industry	Capital	Number of employees
Manufacturing Mining Construction Transportation Others	¥300 millions or less	300 persons or fewer
Wholesale trade	¥100 millions or less	100 persons or fewer
Services	¥50 millions or less	100 persons or fewer
Retail trade	¥50 millions or less	50 persons or fewer

Source: MITI, *White Paper on SMEs*, 1999.

Table 2 Finance for SMEs in Japan

Type of institution	Number of institutions	Outstanding loans and discounts (¥ billions)	(%)	Ratio of loans for SMEs (%)
Domestically licensed	161	235,347	72.7	62.5
City banks	9	95,709	29.6	61.1
Regional banks	64	74,574	23.0	71.5
Second regional banks	61	31,970	9.9	83.9
Others	27	28,115	8.7	44.1
Trust accounts		4,977	1.5	36.1
Financial institutions for SMEs	718	59,772	18.5	100.0
Credit associations	396	50,230	15.5	100.0
Credit cooperatives	322	9,542	2.9	100.0
Government financial Institutions for SMEs	3	28,465	8.8	100.0
NFLC	1	9,849	3.0	100.0
JFC	1	7,402	2.3	100.0
SCB	1	11,213	3.5	100.0
Total	882	323,585	100.0	

Notes: Numbers are as of end of March 1999.
(1) NLFC: Consolidated numbers for People's Finance Corporation and Environmental Sanitation Business Finance Corporation
(2) JFC: Japan Finance Corporation for Small Business
(3) SCB: The Shoko Chukin Bank (Central Finance Corporation for Commercial and Industrial Associations)

Source: MITI, *White Paper on SMEs*, 1999.

Roughly speaking, the market environment of SMEs changed from a lenders' market to a borrowers' market around the corner of the 1980s, when the Japanese economy shifted to a stable-growth economy from a high-growth economy. One of the reasons why city banks could not afford to extend enough funds to SMEs lies in their financial position called "overloan," as discussed in the next section. In recent years, however, domestically licensed banks give priority on finance for SMEs for two reasons. First, the business chance for financing large corporations is getting narrower because these corporations tend to look for funds in the capital market. Secondly, finance for SMEs is more profitable than that for large corporations as long as risks are properly managed.

1.3 Problems for SMEs finance: Crowding out and high credit risks

Despite their importance, SMEs have been placed in an unfavorable position with respect to access to the financial market for the following two reasons.

First, the Japanese economy achieved high growth for a long time after World War II, which continuously brought about a relative shortage of funds. In such a situation, even large corporations sometimes found it difficult to obtain funds for expanding their business. The immature capital market accelerated the situation. SMEs were crowded out by large

corporations, especially during the period of tight monetary policy. The situation was worsened by the "overloan" of city banks. "Overloan" is defined as a lasting phenomenon that city banks extend their loans far beyond their capability of gathering deposits and call money and fall into continuous borrowing from the Bank of Japan, Japan's central bank. For lack of funds, city banks could hardly afford to extend loans to SMEs. SMEs complained that city banks pushed them to borrow an umbrella (i.e., money) when sky was clear (i.e., SMEs did not need it) and to return the umbrella when it was raining (i.e., they needed it).

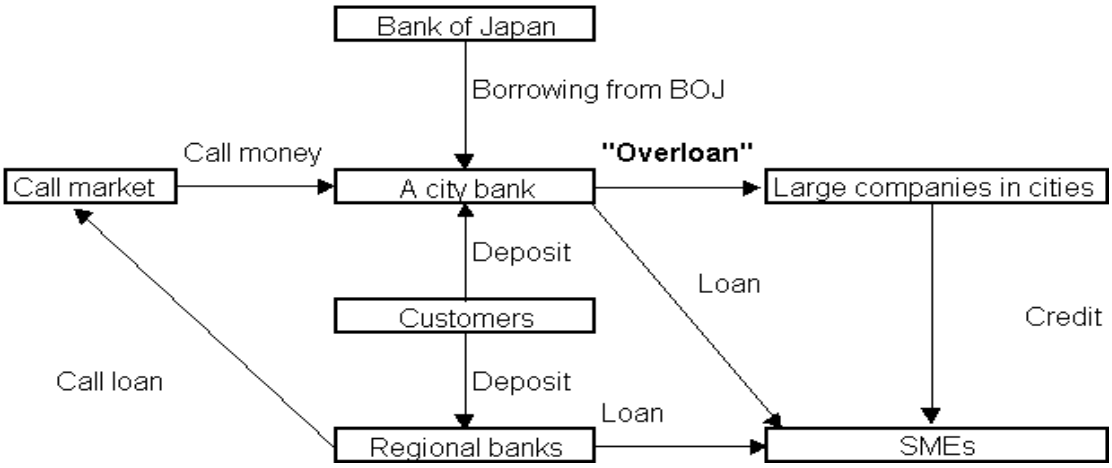


Figure 1 "Overloan" Situation of City Banks in Japan

Second, SMEs' credit risks were higher than those of large corporations were. In general, following factors are pointed out as the source of SMEs' high credit risks:

- Lack of management capability
- Weak financial positions (i.e., fewer own financial resources)
- Immature management organization
- Incomplete disclosure of financial status
- Lack of long-term business plans

To avert these SMEs credit risks, commercial banks charged higher interest rates and imposed stringent conditions on collateral and guarantees. SMEs were always dissatisfied with the higher interest rates, relatively short maturity, and too severe requirements for collateral and guarantees when they borrowed money from commercial banks. They were also frustrated by the intricate loan procedure and time-consuming credit analysis of commercial banks. Complains on collateral was partially solved by widening the range of collateral items and revising the calculation method of the collateral value. However, even those improvements never completely satisfied SMEs. The results of a survey on SMEs finance conducted by the Bureau of SMEs, the Ministry of International Trade and Industry in 1982 are presented in Appendix A.

1.4 Establishment of financial institutions specialized in SMEs finance

In order to improve SMEs' unfavorable position for finance as mentioned above, some financial institutions specialized in finance for SMEs were founded in the 1940s-1950s. In the private sector, credit associations and cooperatives were established, while in the public sector, the National Life Finance Corporation (NLFC), the Japan Finance Corporation for Small Business (JFS), and the Shoko Chukin Bank (SCB) were established[1]. These institutions have made a great contribution to the improvement of SMEs' position by extending necessary loans. In particular, their finance relieved many SMEs during the period of tight monetary policy and supported the development of SMEs. Table 3 presents the outlines of NLFC, JFS, and SCB.

Table 3 Outlines of Government Financial Institutions

	NLFC	JFS	SCB
Date of establishment	1949	1953	1936
Legal status	The NLFC Law	The JFS Law	The SCB Law
Purpose	Providing necessary funds to those who have difficulty in obtaining loans from private financial institutions	Providing necessary funds to those who have difficulty in obtaining loans from private financial institutions	To carry out business necessary to facilitate the financing of cooperatives for SMEs
Source of funds	(1) Capital (2) Money borrowed from the Government	(1) Capital (2) Money borrowed from the government (3) Proceeds from bonds issued under the government guarantee	(1) Capital (2) Debentures (3) Deposits
Borrower	An individual proprietor or a corporation	An individual proprietor or a small business	An association or its members
Supervising Ministry	MOF MHW	MITI MOF	MITI MOF
Number of branch offices	152	57	92
Number of employees	4,845	1,753	5,178

Note: MOF = The Ministry of Finance; MHW = The Ministry of Health and Welfare of Japan; and MITI = The Ministry of International Trade and Industry.

Sources: Annual reports of respective institutions; and the Ministry of Finance, *Statistics Monthly*, various issues.

As the Japanese economy developed and matured, demand for funds by large corporations became modest. In addition, with the development of a capital market, they began to raise necessary funds in the capital market rather than in the loan market. Furthermore, the globalization of the financial market facilitated them to procure necessary funds in foreign

[1] Shoko Chukin Bank is an abbreviation for Shoko Kumiai Chuo Kinko, which literally means "Central Finance Corporation for Commercial and Industrial Associations."

markets relatively easily. As a result, commercial banks lost business opportunities with large corporations and began to pay more attention to the SMEs loan market. In the beginning of the 1980s, the percentage share of SMEs loans in the total loans by commercial banks began to increase (Figure 2). The trend is still persisting at present. Taking into consideration the change in commercial banks' behavior, it can be said that SMEs' financial position was largely improved at least in quantitative aspects. SMEs can obtain necessary funds as long as they pay risk premiums in accordance with their credit risks.

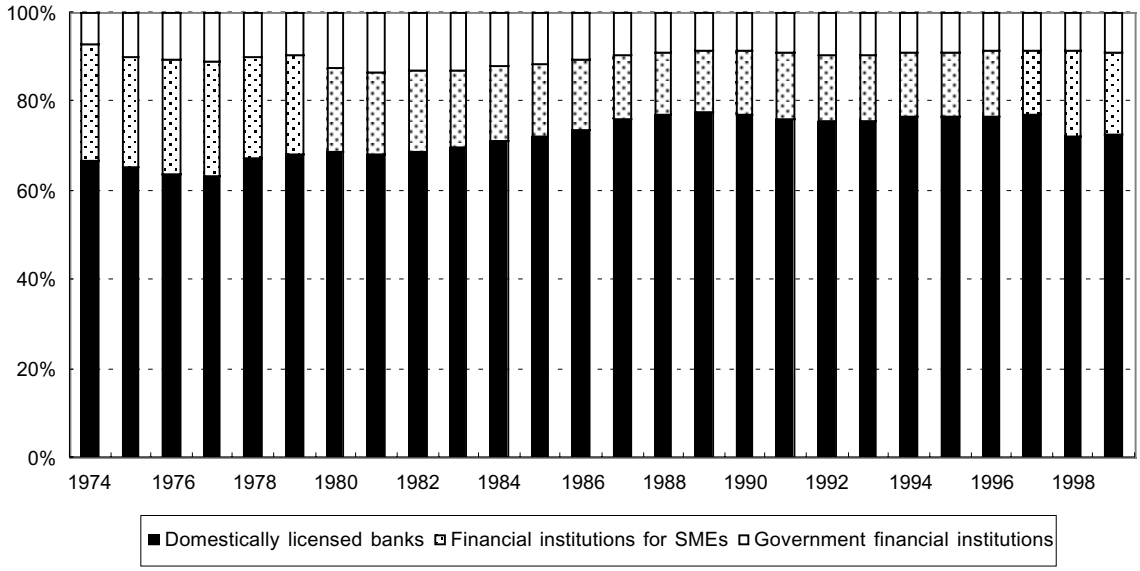


Figure 2 Percentage Distribution of SMEs Loans by Type of Institution

Note: At the end of March of each year, when Japan's fiscal year ends.
Source: MITI, *White Paper on SMEs*, 1999.

2. Fiscal Investment and Loan Program (FILP)

The Fiscal Investment and Loan Program (FILP) has been playing a key role in improving SMEs finance by the government financial institutions in that SMEs finance has been extended under the framework of FILP.

Japanese citizens save their money not only in commercial banks but also in post offices; pay premiums not only to private insurance companies but also for the postal life insurance; and pay funds for national and employee pension programs to receive their pensions after retirement. These moneys are gathered into three funds: 1) Trust Fund Bureau Fund; 2) Postal Life Insurance Fund; and 3) Industrial Investment Special Account Fund, and then utilized under FILP. FILP also borrows money from private financial institutions and issues bonds under the guarantee of the government.

In 1998, the total amount collected from the above-mentioned three funds and from private financial institutions through borrowing and bond issuing was estimated to be ¥65,622 billions (approximately US$600 billions), of which about 17% were spent for SMEs finance and 36% for housing finance.

3. Finance for SMEs by government financial institutions

The financial schemes of the three government financial institutions, NLFC, JFS, and SCB, are generally simple, as they act as direct financiers. Terms and conditions are very competitive with those of private financiers' loans. For NLFC and JFS, FILP is a key system that supports their financing activities. The respective SMEs financial schemes of these government financial institutions are briefly described below, while the flows and types of loans, terms and conditions, loan procedures, and so on are presented in Appendix B.

3.1 National Life Finance Corporation (NLFC)

NLFC is a product of the consolidation of the People's Finance Corporation (PFC) and the Environmental Sanitation Business Finance Corporation (ESBFC), which occurred in 1999. PFC was founded by the PFC Law in June 1949. With 152 branches all over Japan, NLFC is specialized in SMEs finance. The outstanding of their loan was ¥10,869 billions as of October 1, 1999. Terms and conditions for the most typical loan, the "general loan," are as shown below (the interest rate is as of June 1999). It should be noted that the interest rate is subject to change, depending upon the situation of the financial market.

- Maximum amount: ¥48 millions
- Period
  - Equipment fund: 10 years or less
  - Working fund: 5 years or less
- Interest rate: 2.2% per annum
- Guarantor or collateral: Required

Under the general loan scheme, a special loan for specified equipment is available. The maximum amount is ¥72 millions and the period is 20 years or less. A slightly higher, but no more than 2.5%, interest rate is charged.

It should also be noted that it is possible for SMEs to borrow money with very competitive terms and conditions. The period is longer, but the interest rate is only a slightly higher than that of the long-term lending prime rate applied and charged to large corporations by commercial banks. NLFC can afford to extend long-term loans to SMEs because it can procure long-term funds from FILP. In other words, NLFC has no liquidity risks in its loan business. Such a situation is the same for JFS and SCB and this is one of the sources of their competitiveness against commercial banks.

Besides the general loans, NLFC prepares the "smaller business loan," for which terms and conditions are as follows:

- Maximum amount: ¥5.5 millions
- Period
  - Equipment fund: 7 years or less
  - Working fund: 5 years or less
- Interest rate: 2.1% per annum

- Guarantor or collateral: Not required

Funds necessary for NLFC to extend loans to SMEs are supplied from FILP. Therefore, NLFC does not have any difficulty in procuring money for financing SMEs. Interest paid to the FILP fund is 1.6% per annum and NLFC lends the money to SMEs at an interest rate of 2.2%. That is, NLFC's margin is 0.6%.

3.2 Japan Finance Corporation for Small Business (JFS)

JFS was established by the JFS Law in August 1953. With 58 branches all over Japan. JFS is specialized in loans to SMEs, too. The outstanding of loans was ¥7,497 billions as of the end of March 1999. JFS's characteristic lies in its specialization in long-term loans. Terms and conditions of the "general-purpose loans," the most popular loan scheme, are as follows:

- Maximum amount: ¥480 millions
- Period: No longer than 10 years
- Interest rate: As a rule, equal to the long-term prime rate
- Guarantor or collateral: Required

In addition, JFS introduces the "special-purpose loans," such as loans aimed at fostering the growth of new businesses, loans for the development of new industries and technologies, and business innovation loans.

Since the number of its branches is not large, JFS extends its loans through commercial banks it has assigned as its agents. Those agents are requested to guarantee their loans to SMEs without charging any guarantee fee. They usually make the most of this scheme because they can arrange long-term loans for their clients.

Like NLFC, JFS is financed by FILP. JFS borrows funds from FILP and issues bonds underwritten by FILP. JFS's funding cost is 1.6% for borrowing, while it is 1.5% for bond issuing when lending rate is 1.9% (as of June 1999). That is, JFS's margin is 0.3-0.4%.

3.3 Shoko Chukin Bank (SCB)

SCB was established by the SCB Law in December 1936. It owns 100 branches all over Japan. SCB's clients are various associations/cooperatives and members of those associations/cooperatives. The outstanding of loans was ¥11,378 billions as of the end of March 1999. Terms and conditions of SCB's loans are as follows:

- Maximum amount
  - For association: ¥20 billions
  - For association's member: ¥2 billions
- Period
  - Equipment fund: No longer than 15 years
  - Short-term working fund: Shorter than 1 year
  - Long-term working fund: No longer than 10 years

- Interest rate
  - 1-2 years' loan: For association - 2.3%; for member - 2.5%
  - 3-6 years' loan: For association - 2.5%; for member - 2.8%
  - 7-10 years' loan: For association - 2.8%; for member - 3.1%
  - Longer than 10 years: For association - 3.0%; for member - 3.3%
- Collateral: Required

SCB can obtain funds for SMEs by issuing a debenture whose maturity is 1, 2, 3, or 5 years. Some portion of the debenture is underwritten by FILP. Thus, SCB also operates under the framework of FILP.

3.4 Evaluation of finance by the government financial organizations

NLFC, JFS, and SCB have made a great contribution to the development of SMEs through extending loans steadily even during the period of the tight monetary policy. However, these institutions were caught with problem loans upon the collapse of the bubble economy in the early 1990s as most Japanese commercial banks were. For example, the ratio of NLFC's problem loans outstanding to total loans outstanding increased from 1.53% in 1994 to 3.35% in 1998, though the percentage itself was still very low (Table 4).

Table 4 Problem Loans of Government Financial Institutions

NLFC: (¥ billions)

	1994	**1995**	**1996**	**1997**	**1998**
Loans to bankrupt parties				4.9	6.3
Loans past due	17.2	20.7	23.3	23.7	27.8
Loans overdue for 3 months or more				2.7	3.0
Total	17.2	20.7	23.3	31.3	37.1
Ratio to total outstanding (%)	1.53	1.90	2.14	2.87	3.35

JFS: (¥ millions)

	1997	**1998**
Reserves for possible loan losses	232,015	277,715
Ratio to total outstanding (%)	3.22	3.70

SBC: (¥ billions)

	1997	**1998**
Loans to bankrupt parties	122.8	123.9
Loans past due	275.1	331.7
Loans overdue for 3 months or more	32.6	33.8
Renegotiated loans	181.9	158.7
Total	612.5	648.3
Ratio to total outstanding (%)	5.41	5.69

Sources: Annual reports of respective institutions.

Theoretically speaking, government financial institutions are not in a better position to understand the financial situations of their clients as compared with commercial banks. It is because loan officers of the government financial institutions do not have close contact with their clients, while loan officers of commercial banks see their clients almost every day

through collecting deposits.

Even with all the efforts to be made, the government financial institutions, except SCB, are not in a position to help SMEs to place their bonds in the capital market. On the other hand, domestically licensed financial institutions are aggressively acting as a lead manager for privately subscribed bonds issued by SMEs. Therefore, there is a possibility that the finance for SMEs by the government financial institutions will become marginal for grown-up SMEs.

The client assessment of the government financial institutions about their loan activities normally reveals that their loan procedure is intricate and the time for credit analysis is too long (Appendix A). The consciousness of officers of the government financial institutions that they are dealing with "government funds" may be one of the reasons for such a deed.

4. Lessons from the experiences of the Industrial Bank of Japan before World War II

4.1 Start of SMEs finance

The Industrial Bank of Japan (IBJ) was established in 1902 as a semi-governmental bank. IBJ was the first bank to develop a SMEs loan as a financial product and to make it available to SMEs (For the details of IBJ's pre-World War II experiences, see Appendix C). IBJ extended two kinds of SMEs loans. One is institutional finance directly supported by the government. The Ministry of Finance made a plan for SMEs loans and had IBJ execute the finance by providing necessary funds to IBJ. Then IBJ acted merely as a lending agent.

The other is IBJ's original finance to SMEs. IBJ launched the original finance for SMEs in 1926, three years after an unprecedented earthquake hit the Tokyo Metropolitan area and damaged many companies. The government launched a disaster relief loan to SMEs through IBJ. Based on such an experience, IBJ took over the finance for SMEs suffering from the severe economic recession brought about by deflation after the earthquake.

4.2 IBJ's loan procedure

In order to implement the original finance, IBJ enacted its own procedure for SMEs loans. Terms and conditions of IBJ's original finance were not significantly different from those of the government loans. To speed up the loan procedure, however, IBJ changed its basic financing policy from "credibility-based finance" to "collateral-based finance" for a small-sized loan. Credibility-based finance means that the finance is extended taking into consideration the credibility of the company's managerial staff, the strength of its core business, and future potential. On the other hand, collateral-based finance means that the finance is extended based mainly upon the value of the collateral when it is disposed. In this case, too, the factors regarded as important in credibility-based finance are carefully investigated, but the final decision on the loan relies on whether the value of the collateral is enough to cover the payment of interest and principal of the loan. If the value is enough, the loan is extended even if credibility dose not satisfy the lender, i.e., IBJ. Under a situation in which many SMEs rushed to IBJ for funds to survive the sluggish economy, IBJ had to shorten the time for credit analysis. It may be argued whether such a change in IBJ's

financing policy was proper, but IBJ had no other choice but to change the policy in order to speed up the loan procedure in those days.

IBJ tried to improve the stringent conditions on collateral. To give some examples, IBJ widened the range of objects of collateral and revised the method for measuring the collateral value so as to be fair to borrowers. IBJ also introduced a new finance scheme for SMEs, such as finance under the fiduciary transfer of Japanese sake as collateral.

Among various terms and conditions, a guarantee used to be a very important element. Needless to say, the guarantor has an obligation to pay interest on the loan and repay principal if the borrower fails to pay them. However, what IBJ expected from a guarantor was to guarantee the "credibility of the borrower" before World War II. Therefore, persons who knew very well the personality and management capability of the borrower were selected as guarantors. IBJ did not pay so much attention to the wealth of guarantors. This is the reason why old friends of the borrower were often selected as guarantors.

4.3 Activity after World War II

In 1949, IBJ was transformed into a private and commercial bank. In 1952, again, the bank was converted to a long-term credit bank specialized in providing long-term credits to industries which were under a process of reconstruction from the war. By its nature, IBJ had to make its funds available mainly to basic industries such as electricity, coal mining, the maritime industry, and the iron and steel industry. This situation continued until the end of the 1970s, though the industries on which IBJ put emphasis differed from time to time, and, therefore, IBJ could not afford to provide enough funds to SMEs. However, IBJ began to pay more attention to finance to SMEs, as the economic situation changed in the early 1980s. At present, around 40% of total loans by IBJ are directed to SMEs (Table C.1 in Appendix C).

5. The future of government institutions' finance for SMEs

5.1 Impact of the reform of FILP

Since commercial banks have become very aggressive towards SMEs finance, the competition among various financial institutions will become fierce in the SMEs loan market. One of the features of Japan's financial system after World War II was to establish a "specialized" institution by the line of business, for example, long-term credit banks, foreign exchange banks, and financial institutions for SMEs. However, as the economy has evolved and become mature, such a situation has been changing. There is a possibility that the current financial system featured with specialization will be revised.

Since the government financial institutions for SMEs extend their loans to SMEs under the framework of FILP, the reform of FILP will have a substantial impact on their activities. From a viewpoint of government administrative and financial efficiency, the reform is being planned to take place in the near future. Although the fund of FILP is still utilized, today those institutions have to obtain the fund by issuing bonds and tapping the market by themselves. They will be forced to make their activities more efficient and thus to become

more competitive. Otherwise, the funding cost of their finance for SMEs will become much higher. There is no security that FILP always underwrites or subscribes the bond placed by the government financial institutions.

5.2 Main subjects to be discussed

Now that SMEs' access to the financial market has been improved largely, main subjects to be discussed are how to relax the conditions on collateral and guarantees and how to facilitate SMEs' access to the "capital market."

Banks' acceptance of more various kinds of assets for collateral and improvement in evaluating their values will be possible measures to relax conditions on collateral. Recently, the Tokyo Metropolitan government initiated a financial scheme for SMEs through a special bond market originated by investment bankers. Under this scheme, financial institutions transfer their loans to SMEs to a special purpose company (Figure 3). The company issues asset-backed bonds and distributes them to investors through investment bankers. Although SMEs' access to capital market is still indirect, it has become a topic of conversation as one of measures to accelerate finance to SMEs and as a first step for SMEs' access to the capital market. Since it has just been launched, it remains to be seen whether the scheme is more useful and beneficial to SMEs as compared with their traditional borrowing from commercial banks. Commercial banks are very active in underwriting privately placed bonds issued by SMEs. The growth of the capital market will be sure to bring benefits to SMEs in obtaining funds from such a market.

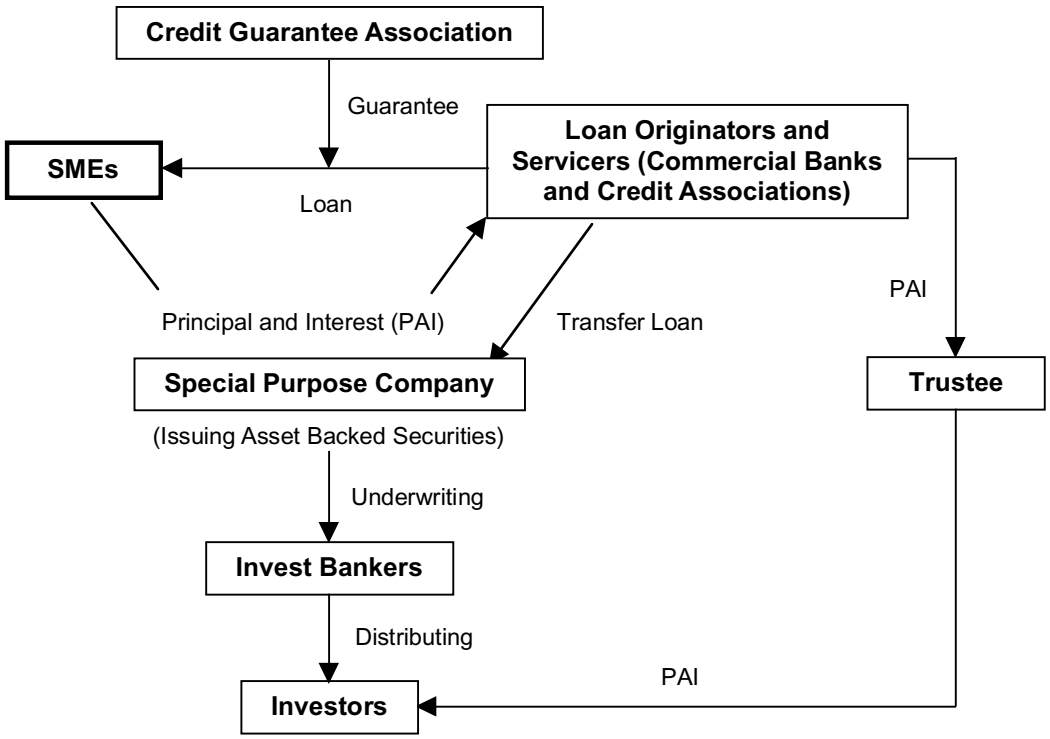


Figure 3 Financial scheme for SMEs through a special bond market

APPENDIX E

Macro Statistics To Analyze The Competitiveness of a Country

Ranking evaluated among the 47 countries stated by IMD

Countries	Real GDP growth (1999)	Total gross domestic investment (1999)	GDP per capita (1999)	Consumer price inflation (1999)	Real Growth in private final consumption expenditure (1999)	Government final consumption expenditure (1999)
US	16 (3.8%)	1 (1,878.3)	5 (US$33,846)	19 (1.60%)	12 (2.59%)	28 (13.47%)
Singapore	9 (5.35%)	30 (27.6)	18 (US$21,814)	7 (0.50%)	7 (5.37%)	42 (9.7%)
Finland	17 (3.7%)	32 (22.7)	11 (US$24,430)	14 (1.20%)	13 (2.13%)	10 (19.56%)
Ireland	1 (8.6%)	36 (19.1)	12 (US$24,353)	20 (1.70%)	5 (6.24%)	22 (15.60%)
Australia	11 (4.3%)	14 (91.5)	20 (US$20,441)	17 (1.40%)	24 (0.57%)	16 (17.82%)
HK	25 (2.9%)	22 (40.8)	17 (US$23019)	1 (-3.30%)	42 (-2.82%)	41 (9.83%)
UK	33 (1.9%)	6 (244.8)	14 (US$24,168)	20 (1.70%)	20 (0.80%)	18 (16.60%)
Japan	40 (0.62%)	2 (1,220.8)	3 (US$34,459)	4 (-0.30%)	17 (1.21%)	44 (9.30%)
NZ	27 (2.7%)	44 (10.9)	24 (US$13,994)	17 (1.40%)	33 (-0.55%)	26 (13.85%)
Taiwan	7 (5.67%)	17 (66.1)	25 (US$13,991)	5 (0.20%)	8 (4.95%)	30 (13.12%)
Spain	18 (3.7%)	9 (128.2)	23 (US$15,124)	28 (2.30%)	18 (0.94%)	23 (15.11%)
Malaysia	8 (5.42%)	37 (17.6)	38 (US$3,596)	32 (2.80%)	11 (2.76%)	35 (11.08%)
Chile	43 (-1.5%)	35 (19.4)	34 (US$4,346)	24 (2.00%)	35 (-0.71%)	36 (11.02%)
Brazil	38 (0.80%)	8 (154.3)	37 (US$3,697)	40 (8.90%)	36 (-0.74%)	17 (17.77%)
Mexico	24 (3.08%)	12 (97.3)	32 (US$4,964)	43 (12.32%)	21 (0.73%)	45 (10.46%)
Argentina	45 (-5.30%)	16 (70.9)	30 (US$7,816)	3 (-1.20%)	44 (-5.78%)	32 (12.52%)
India	5 (5.76%)	13 (95.6)	47 (US$446)	35 (5.00%)	29 (0.04%)	39 (8.48%)

(Source: ERI sources based on IMD statistics, 2000)

Abbreviation:
the United States USA United Kingdom UK
Hong Kong HK New Zealand NZ

COMPETITIVENESS AND LOCATION ATTRACTIVENESS OF CHILE IN THE WORLD

Countries	Overall competitiveness ranking (2000)	Location attractiveness for manufacturing	Location attractiveness for R&D	Location attractiveness for Services and management
US	1	1	1	1
Singapore	2	2	8	3
Finland	3	4	2	2
Ireland	4	5	13	10
Australia	5	11	10	7
HK	6	6	22	6
UK	7	16	14	15
Japan	8	22	6	25
NZ	9	15	21	16
Taiwan	10	18	19	21
Spain	11	25	24	24
Malaysia	12	24	29	28
Chile	13	21	27	23
Brazil	14	29	30	32
Mexico	15	28	38	36
Argentina	16	35	43	40
India	17	38	40	43

(Source: FRI sources based on IMD statistics, 2000)

CHILE GLOBAL COMPETITIVENESS WORLD RANKING
WITH 16 OTHER SELECTED COUNTRIES

Evaluated from the 249 competitiveness factors of IMD

Countries	Openness	Government	Finance	Infrastructure	Management	Science & Technology	People
US	1	10	1	1	1	1	3
Singapore	2	1	10	13	5	9	5
Finland	8	9	7	2	4	6	2
Ireland	7	3	14	19	8	17	16
Australia	29	4	9	4	11	18	6
HK	9	2	11	20	14	27	19
UK	6	17	8	18	20	14	24
Japan	27	22	22	21	24	2	20
NZ	36	11	18	14	12	2	15
Taiwan	31	14	26	22	18	25	18
Spain	20	18	20	23	30	26	25
Malaysia	17	8	29	26	25	31	35
Chile	21	13	25	32	22	32	34
Brazil	34	27	36	35	26	35	40
Mexico	37	20	40	39	33	44	37
Argentina	38	35	39	37	38	46	38
India	41	29	31	47	43	29	45

(Source: FRI sources based on IMD statistics, 2000)

CHILE IT COMPETITIVENESS WORLD RANKING WITH 16 OTHER SELECTED COUNTRIES

Evaluated from the analyze of 52 competitiveness factors among the 249 stated by IMD

Countries	Openness	Government	Finance	Infrastructure	Management	Science & Technology	People
US	19	12	8	7	4	7	9
Singapore	10	6	14	13	6	6	9
Finland	5	7	4	7	12	5	6
Ireland	7	9	10	10	12	12	10
Australia	21	12	16	6	11	13	9
Hong Kong	19	12	32	14	17	24	22
UK	15	15	17	13	15	21	24
Japan	31	10	29	16	32	17	26
New Zealand	20	15	19	7	12	19	16
Taiwan	29	25	31	13	19	15	18
Spain	19	21	26	15	34	27	22
Malaysia	20	21	33	14	22	25	27
Chile	10	17	26	14	19	31	15
Brazil	24	29	33	32	21	29	24
Mexico	22	32	33	21	30	33	30
Argentina	19	38	31	34	37	37	33
India	27	27	38	21	35	30	27

(Source: FRI sources based on IMD statistics, 2000)

COMPETITIVENESS OF CHILE: 52 FACTORS RANKINGS

Openness

Countries	1) Direct investment stocks inward (98)	2) Protectionism	3) Foreign investors	4) Foreign and domestic companies	5) Public sector contract	6) Investment protection schemes	7) Investment incentives	8) Immigration laws	9) Integration into regional trade blocks
US	10	30	7	24	28	16	14	39	7
Singapore	35	19	9	17	4	2	2	1	5
Finland	1	4	3	3	5	4	27	3	1
Ireland	5	5	1	6	2	14	1	28	2
Australia	39	23	10	21	11	21	31	30	6
HK	43	2	2	5	10	40	33	34	13
UK	24	11	4	16	12	38	10	18	8
Japan	32	44	12	35	45	23	40	47	7
NZ	36	1	6	8	3	44	45	26	15
Taiwan	44	32	13	38	40	27	22	37	9
Spain	25	16	8	19	31	26	13	28	4
Malaysia	33	40	15	15	14	30	6	23	10
Chile	23	13	5	4	1	7	22	13	6
Brazil	8	36	23	26	29	37	11	19	26
Mexico	22	22	11	31	25	32	20	31	3
Argentina	19	20	3	12	9	17	38	6	43
India	20	42	14	14	36	42	28	36	14

(Source: FRI sources based on IMD statistics, 2000)

1) annual percentage change based on US$ value
2) mild enough not to prevent foreign products and services from being imported
3) may acquire easier control in domestic companies.
4) they are treated equally
5) they are sufficiently open to foreign bidders
6) they are available more or less for most foreign partner countries
7) attractive to foreign investors
8) they don't prevent companies for employing foreign labor.
9) the country's involvement in regional trade blocs provides sufficient access to foreign market

Government

Countries	10) Employer's social security contribution rate	11) Real corporate taxes	12) Government decisions	13) Political system	14) Bureaucracy	15) Custom's administration	16) Competition laws	17) Personal security and private property	18) Risk of political instability
US	16 (7.64%)	6	13	10	14	19	19	7	6
Singapore	30 (20%)	3	1	1	1	1	13	1	5
Finland	34 (23.05%)	10	2	2	2	3	1	3	2
Ireland	20 (11.99%)	2	10	6	5	6	9	13	7
Australia	22 (12.99%)	23	9	7	10	21	2	10	4
HK	1 (0%)	1	12	30	3	4	31	5	22
UK	17 (8.6%)	9	16	11	17	17	16	21	10
Japan	26 (14.38%)	41	34	44	25	26	26	14	12
NZ	8 (2.61%)	14	15	19	11	7	14	22	25
Taiwan	15 (7.09%)	18	30	22	19	29	21	27	40
Spain	39 (32.84%)	24	11	9	21	24	25	18	16
Malaysia	21 (12%)	4	17	14	16	31	33	24	27
Chile	5 (0.34%)	5	24	16	18	14	12	33	21
Brazil	30 (11.00%)	13	32	37	29	38	30	38	28
Mexico	31 (20.1%)	28	29	33	28	36	29	42	34
Argentina	42 (16.99%)	39	33	38	38	39	46	43	24
India	1 (0%)	13	42	35	36	15	38	31	36

(Source: FRI sources based on IMD statistics, 2000)

10) Compulsory contribution as a percentage of GDP per capita
11) Discouragement of entrepreneurial activity
12) Effectively implemented
13) Well adapted to today's economic challenges
14) Does not hinder business development
15) Does not hinder the efficient transit of goods
16) Prevents unfair competition in the country
17) Adequately protected
18) Very low

Finance

Countries	19) Cost of capital	20) Foreign financial institutions	21) Access to local capital market	22) Venture capital	23) Rights and responsibilities of shareholders	24) Central bank policy
US	5	15	19	1	2	5
Singapore	8	29	29	7	9	1
Finland	2	2	4	4	1	10
Ireland	4	12	5	9	11	19
Australia	10	13	18	19	3	6
HK	19	3	8	10	8	14
UK	24	14	9	8	10	35
Japan	20	38	35	42	44	15
NZ	25	1	10	34	13	23
Taiwan	22	43	44	6	28	32
Spain	11	25	21	28	23	8
Malaysia	18	44	43	29	29	25
Chile	26	20	9	41	24	38
Brazil	47	22	32	37	26	36
Mexico	44	30	28	39	27	31
Argentina	46	11	11	45	33	42
India	42	40	42	32	40	33

(Source: FRI sources based on IMD statistics, 2000)

19) Does not hinder business development
20) Access to the domestic market
21) Access to local capital market is not restricted for foreign companies
22) Venture capital is easily available for business development
23) Rights and responsibilities of shareholders are well defined
24) Positive impact on the economic development of the country

IT Infrastructure

	25)	26)	27)	28)	29)	30)	31)	32)	33)	34)	35)
Countries	Electricity costs for industrial clients	Investment in telecommuni-cations (95-97)	Computers per capita (1999)	Connections to internet (1999)	New information technology	e-commerce	Cellular mobile telephone subscribers (1999)	Office rent (1999)	Labor regulations	Telephone lines (1999)	International telephone costs
US	6 (US$0.043)	41 (0.3797%)	1 (538.9)	1 (136.65)	5	1	9 (314.87)	7 (US$413)	4	1 (709.8)	1 (US$0.360)
Singapore	47 (US$0.065)	28 (0.5173%)	12 (390.9)	17 (22.19)	2	3	7 (381.45)	8 (US$425)	2	9 (484.1)	9 (US$1.661)
Finland	11 (US$0.046)	32 (0.4784%)	2 (507.8)	2 (117.25)	1	2	1 (678.10)	5 (US$340)	10	6 (557.2)	8 (US$1.319)
Ireland	16 (US$0.056)	22 (0.6031%)	15 (352.6)	10 (15.95)	6	5	8 (360.59)	9 (US$432)	8	10 (472.4)	4 (US$0.701)
Australia	1 (US$0.056)	11 (0.7241%)	6 (492.0)	9 (50.34)	8	4	5 (397.41)	4 (US$249)	12	2 (610.4)	3 (US$0.601)
HK	46 (US$0.105)	37 (0.4195%)	14 (360.2)	6 (60.40)	9	9	2 (551.02)	13 (US$757)	1	5 (559.6)	13 (US$2.671)
UK	35 (US$0.069)	35 (0.4409%)	13 (379.0)	14 (28.40)	11	8	4 (409.30)	14 (US$864)	7	3 (570.8)	6 (US$0.948)
Japan	43 (US$0.146)	33 (0.4558%)	18 (325.5)	9 (16.65)	15	10	6 (382.57)	15 (US$1,493)	11	7 (551.6)	11 (US$1.696)
NZ	3 (US$0.036)	15 (0.6584%)	9 (416.9)	10 (47.81)	5	6	10 (190.60)	2 (US$142)	6	8 (496.9)	5 (US$0.741)
Taiwan	42 (US$0.058)	6 (1.1721%)	23 (260.1)	19 (20.04)	7	7	3 (493.60)	11 (US$534)	9	4 (569.5)	10 (US$1.662)
Spain	8 (US$0.070)	29 (0.5141%)	27 (178.7)	27 (7.41)	14	14	8 (381.22)	6 (US$366)	14	11 (452.2)	7 (US$1.030)
Malaysia	17 (US$0.057)	5 (1.1989%)	32 (94.5)	35 (2.80)	10	11	11 (145.05)	1 (US$133)	5	13 (219.3)	12 (US$2.368)
Chile	28 (US$0.038)	9 (0.8971%)	34 (70.2)	36 (2.65)	8	12	13 (144.11)	3 (US$229)	3	12 (227.3)	2 (US$0.593)
Brazil	42 (US$0.082)	10 (0.7973%)	39 (52.9)	38 (1.93)	26	28	39 (84.70)	26 (US$395)	35	39 (152.2)	33 (US$1.842)
Mexico	23 (US$0.045)	45 (0.3046%)	36 (57.8)	37 (2.40)	13	15	14 (72.24)	10 (US$436)	13	14 (105.3)	14 (US$3.049)
Argentina	29 (US$0.065)	21 (0.6036%)	35 (59.9)	34 (3.08)	30	35	36 (109.72)	37 (US$540)	39	36 (213.8)	42 (US$2.831)
India	27 (US$0.070)	14 (0.6909%)	47 (5.0)	47 (0.02)	12	13	15 (1.60)	12 (US$541)	15	15 (25.3)	15 (US$4.132)

(Source: FRI sources based on IMD statistics, 2000)

25) US$ per kwh
26) Average percentage of GDP
27) Number of computers per 1000 people
28) Number of host per 1000 people
29) Implementation of new technology meets business requirements
30) Electronic commerce is sufficiently developed for business opportunities
31) Number of subscribers per 1000 inhabitants
32) Office total occupation cost (US$/SQ.M/P.A.)
33) Labor regulations (hiring and firing practices, minimum wages, etc)
34) Number of main lines in use per 1000 inhabitants
35) US$ per 3 minutes in peak hours to USA (for USA to Europe)

Management

Countries	36) Creation of firms	37) Shareholder value	38) Competence level	39) Employee training
US	1	1	23	12
Singapore	15	3	21	2
Finland	32	2	2	3
Ireland	9	10	9	18
Australia	12	7	17	16
HK	2	17	29	34
UK	13	6	31	28
Japan	47	45	38	6
NZ	10	13	25	14
Taiwan	8	18	36	31
Spain	42	22	20	39
Malaysia	11	30	37	26
Chile	21	12	3	24
Brazil	16	27	4	22
Mexico	39	23	27	30
Argentina	39	37	18	37
India	19	43	16	43

(Source: FRI sources based on IMD statistics, 2000)

36) Creation of firms is common
37) Shareholder value is efficiently managed
38) Domestic and international managers have the same competence level
39) Employee training is a high priority in companies

Science and Technology

Countries	40) Qualified engineers	41) Availability of information tech.skills	42) Tech. coop.	43) Company-University coop.	44) Financial resources	45) Develop. and application of technology	46) Basic research	47) Science and education	48) Patent & copyright protection
US	12	5	5	2	2	6	1	24	6
Singapore	9	8	8	3	3	1	5	1	15
Finland	17	1	1	1	1	2	2	11	7
Ireland	21	14	14	8	9	3	7	15	15
Australia	7	21	21	13	19	11	16	10	4
HK	39	26	26	27	13	12	29	9	36
UK	36	23	23	19	22	20	7	35	8
Japan	18	10	10	25	20	24	13	19	21
NZ	31	8	18	20	24	17	18	23	14
Taiwan	14	12	12	11	17	13	26	6	28
Spain	22	28	28	34	23	30	22	30	26
Malaysia	30	29	12	29	26	23	23	17	35
Chile	3	41	41	31	31	38	33	40	22
Brazil	8	15	25	37	37	33	36	34	34
Mexico	27	12	38	42	38	37	37	39	32
Argentina	15	13	40	44	44	46	46	45	44
India	2	37	37	43	33	44	28	8	42

(Source: FRI sources based on IMD statistics, 2000)

40) Qualified engineers are available in the country's labor market
41) Qualified information technology skills are available in the country's labor market
42) Technological cooperation is common between companies
43) Lack of sufficient financial resources does not constrain technological development
44) Technology transfer between companies and universities
45) Development and application of technology is supported by the legal environment
46) Basic research does enhance long-term economic and technological development
47) Science and education is adequately taught in compulsory schools
48) Patent and copyright protection is enforced in the country

People

Countries	48) Skilled labor	49) Brain drain	50) The educational system	51) University education	52) Flexibility &adaptability
US	13	1	17	6	10
Singapore	8	25	1	4	8
Finland	10	15	2	1	5
Ireland	32	7	3	2	6
Australia	2	18	7	8	11
HK	31	11	31	34	2
UK	26	13	26	22	35
Japan	23	9	15	47	37
NZ	20	14	18	15	14
Taiwan	18	33	12	20	7
Spain	27	5	20	32	29
Malaysia	33	32	20	26	25
Chile	16	3	28	7	21
Brazil	25	23	42	29	1
Mexico	29	27	36	37	23
Argentina	21	36	44	40	26
India	12	42	27	25	31

(Source: FRI sources based on IMD statistics, 2000)

48) Skilled labor (relevant to the country's economy) is available in the country's labor market
49) Well-educated people do not emigrate abroad
50) Meets the needs of a competitive economy
51) Meets the needs of the enterprises
52) People are flexible enough in adapting to new challenges

APPENDIX F

Financial Aid To Ireland From The European Union

1 The European Structural Fund (ESF) and its Benefits

There have been economic and social differences among the fifteen Member States of the European Union (EU) as well as variations in development and living standards. The aim of the Structural Funds has been to help those less developed regions, and Ireland was one of them.

(1) Operational Programs 1994-1999

Projects were undertaken through the Programs:

Environmental Services (£101.5 million)

Economic Infrastructure (£37.1 million)

- The computerization and interlinkage of postal services.
  The funding allocation was £5.3 million.
- Upgrades of the telecommunications network including digitization and the introduction of advanced services for industry and commercial telecommunications users (£15.75 million).
- Development of broadband technology to promote the development of Ireland's information society (£16 million).

Industrial Development (£3,376 million)

- EU contribution: £832m (23.3%)
- Irish government: £642m (17.7%)
- Private sector: £2,200m (59%)
- To promote competitiveness and human resources:
  (1) National industry
  (2) Inward investment
  (3) Research and development
  (4) Commercial development
  (5) Food industry
  (6) Land and buildings
  (7) Technical assistance

Human Resources Development (2.1 billion ECU)

80% of all ESF expenditure proposed for the period 1994 – 1999 was focused on this project. It satisfied the training and educational needs of many different groups within Irish society and contributes to Ireland's economic development and enhances the employment rate in the labor market.

Other Projects under the Programs have been:

Fisheries (£140 million)

Transport (£1,137 million)

Tourism

Agriculture, Forestry and Rural Development

Total expenditure amounted to £1,406 million, of which the EU contributed £969 million.

(2) The Local Development Program (£348 million)

(1) Local enterprise
(2) Integrated development of designated disadvantaged and other areas
(3) Urban and village renewal
(4) Overall administration

(3) Operational Programs 2000-2006

The next funding Programs are under negotiation.

2 Benefits from the Cohesion Fund

The Cohesion Fund was established to complement the Structural Funds. It was intended to assist preparations for Economic and Monetary Union in four countries - Ireland, Greece, Portugal and Spain - because their per capita Gross National Product (GNP) was less than 90% of the EU average in 1992.

The Cohesion Fund assists projects in the fields of environment and transport infrastructure, focusing on larger projects. The rate of Community assistance granted by the Fund is up to 85% of eligible expenditure.

More than 100 projects have been approved in Ireland since the Fund was established in 1993.

FACTS AND STATISTICS OF IRELAND

1 Benefits from the European Structural Fund (ESF)

(estimates and growth in %)

GDP	8.25
Exports (goods & services)	14.5
Imports (goods & services)	14.5
Trade Surplus	10.2
Growth in Manufacturing	10
Inflation	4.6

Source: IDA Statistics, 1999

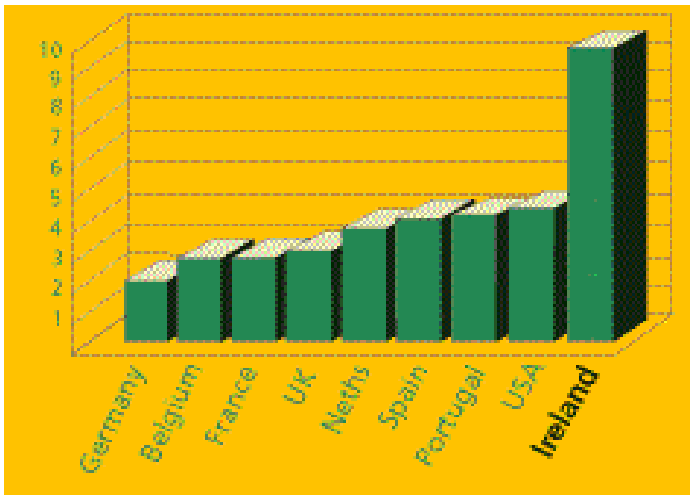
2 Components of GDP

(estimates and growth in %)

Private Consumption	50.8%
Public current expenditure	13%
Investment	25%
Exports	85.5%
Imports	-74%

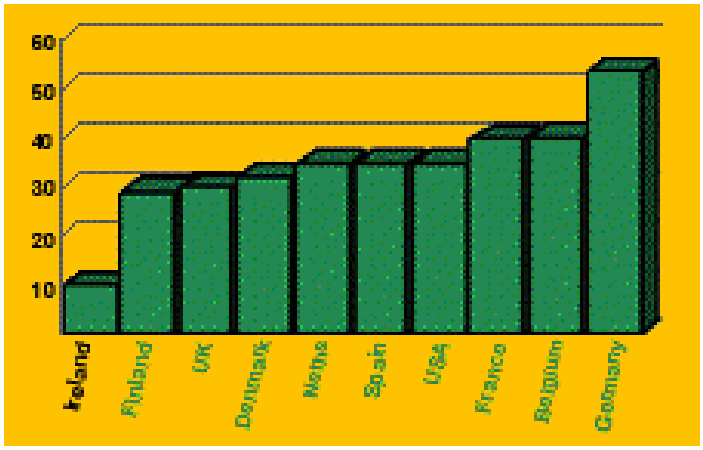
Source: IDA Statistics, 1999

3 Average Growth in Real GDP 1995 – 1999



Source: OECD Economic Surveys, 1999

4 Corporation Tax Rates in Manufacturing and Qualifying Services

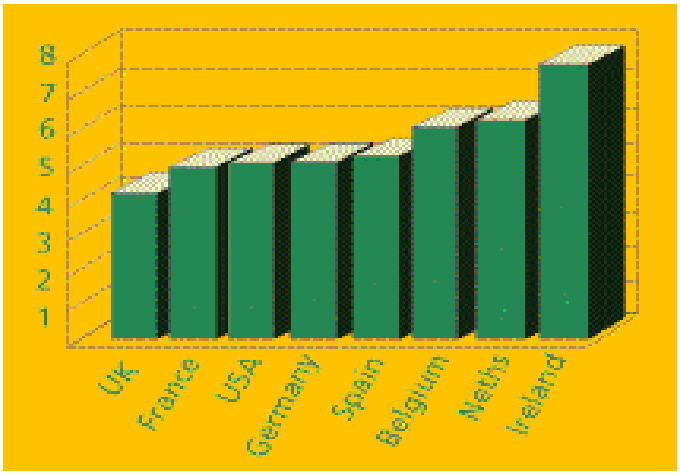


Source: Deloitte & Touche, 1999

5 The Educational System Meets the Needs of a Competitive Economy

(country score)

Source: IMD World Competitiveness

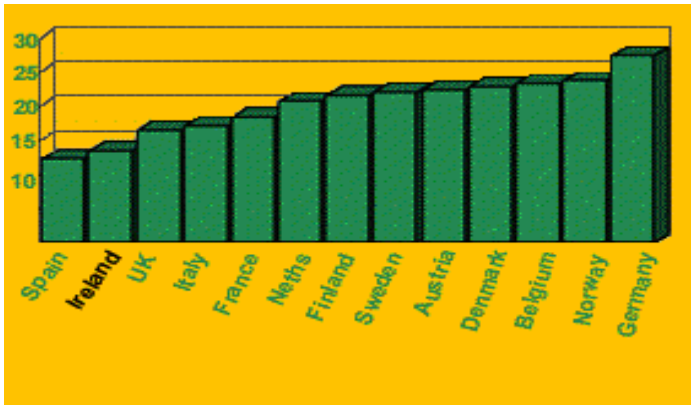


Yearbook 1999

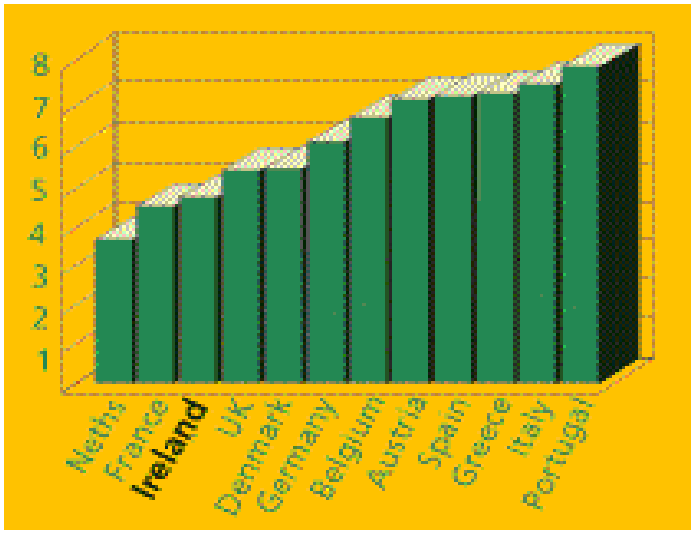
6 Cost of Payroll

(1) Hourly compensation including additional costs, in US$

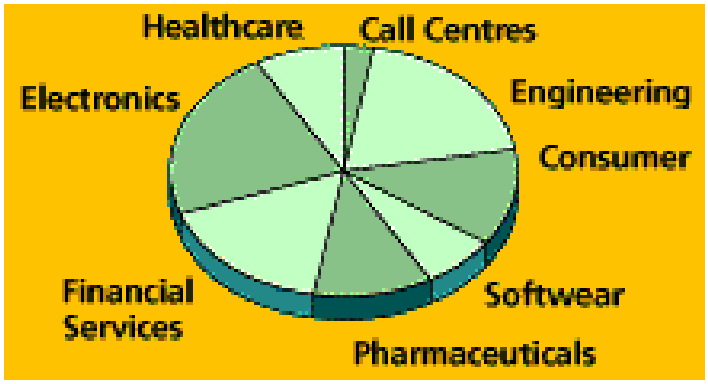
Source: US Department of Labor, 1999



(2) Monthly cost for a multinational company in capital city (1998)
Source : Tarifica, UK 1999



7 Foreign Investments by Industries



Source: IDA Ireland, 2000

Foreign Investment in Ireland

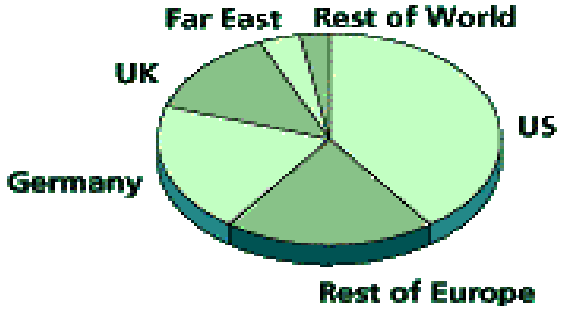
Ireland has a long history of openness to FDI dating from the 1960s. Pro FDI policies have played a major part in underpinning Ireland's overall industrial and trading performance. For example, in 1995, of the IR£ 23.5 billion exported by companies with more than 19 employees, and IR£ 16.5 billion or 70 % was accounted for by foreign-owned companies. In 1998, foreign enterprises exported goods and services equivalent to the value of £21 billion, an increase of almost 30% (in value terms) over the previous year. These companies also spend approximately £8 billion on the Irish economy each year. By 1998, 1,200 companies, employing 116,000 people, had set up operations in Ireland. An additional 15,000 people have been employed by the enterprises on a temporary or contract basis.

Current FDI policies are aimed at maintaining Ireland's position as a strategically attractive location for FDI and an increasingly competitive and globalized environment. 3 key strategies are being pursued:

- focus on attracting projects in sectors and segments where Ireland has a sustainable competitive advantage

- primarily knowledge based and technologically intensive manufacturing and international services
- targeting of emerging sectors (IT) and preparing to meet their requirements
- ensuring that Ireland's competitiveness in relation to key location decision factors, such as costs and skills, is continuously upgraded.

Enterprises by Origin



Source: IDA Ireland, 2000

8 Why is FDI Attracted to Ireland?

Some views from investing industries (IDA sources)

Oracle

Oracle Corporation is a recognized world leader in relational database management systems for IBM and related hardware platforms.

In 1989, Oracle established two operations in Ireland. One is a major development center responsible for converting existing Oracle products to run on a range of different UNIX platforms. The second is a software manufacturing and localization facility responsible for the European and Middle East markets.

In 1996 Oracle established a European business center in Dublin, their third operation in Ireland. The center provides centralized sales, customer services and technical support for their European business and will employ over 400 people. Key factors in this decision included the availability and quality of a young, multilingual workforce in Ireland and an excellent telecommunications infrastructure.

Novartis

Novartis was established in Ireland in 1989. The plant makes active substances, which are distributed to affiliates around the world. The site also includes a peptide synthesis plant and a plant for the purification of Sandimmun, the company's very successful immune suppressant drug for organ transplant therapy. Novartis investment is now over IR£300 million and it is the most important manufacturing site for the company outside of Switzerland.

Ireland was chosen because it offered EU market access, a stable environment and most importantly, the first class graduates the companies require.

Motorola

In 1989, Motorola, a leader in wireless communications, semiconductors and advanced

electronics systems and services, established a purpose-built, manufacturing operation in Dublin to produce pagers, two-way radios and battery packs. In 1995 it embarked on a significant expansion. Total site employment will reach 2,000 people, of which 30% will be third level graduates.

Motorola has also made Ireland its European Software Center for developing cellular communications systems software to GSM standard. Opened in Cork in 1981, the center employs over 200 software engineers, which increased to 500 in the year 2000.

Motorola announced that it is to establish a semiconductor design center in Cork creating 120 new jobs over a three-year period. The semiconductor designs will be technologically complex and used by the Corporation worldwide. Semiconductor design is at the cutting edge of electronic technology and most of the new jobs will be for experienced graduates, mainly semiconductor design engineers. Recruitment of the first 20 people will commence immediately.

According to Mr. Fred Shlapak, Vice President and General Manager of Motorola's wireless systems subscribers group: *"Ireland, with its rich talent pool, strong University base and attractive living conditions make it an ideal match for Motorola, as we continue to staff our global development needs."*

9 Financial Policies to attract FDIs and nurture the enterprise sector

(1) Industrial Development Acts, 1993, 1995 and 1998

The Acts aimed to enhance the competitive advantage and employment potential of all enterprises operating in Ireland through the creation of a pro enterprise environment.
Key financial policies:
The tax system was reformed: the government simplified it and reduced personal and business taxation. In relation to business taxation, the most significant development has been the government's decision to maintain a low rate of corporation tax on enterprise profits arising from trading activity. Both the Capital Gains and Capital Acquisitions tax codes have been amended to facilitate enterprise growth.
Moderate wage increases have been achieved through a series of social partnership agreements.
Welfare supports have been reformed with the aim of helping unemployed people make the
transition back to the world of work.

(2) The Industrial Development Agency Ireland (IDA)

IDA was established on January 1st, 1994 as an Agency of Forfás (the policy and advisory board for industrial development in Ireland) under the provisions of the Industrial Development Act, 1993. Enterprise Ireland, the agency responsible for development of the national industry, also established under the Industrial Development (Enterprise Ireland) Act, 1998.

(3) Benefits from European Institutions

The industry development in Ireland has been receiving benefits from European

Institutions:

Oireachtas Grants

The Oireachtas Grants are provided under Section 33 of the Industrial Development Act, 1998.

The aggregate amount provided to IDA in the period 1 January 1994 to 31 December 1998 was IR£547,780,000

The aggregate amount provided to IDA in the period 1 January 1994 to 31 December 1999 was IR£675,393,497

	1998 (IR£)	1997 (IR£)
(i) Grant for Industry	124,400,000	120,000,000
(ii) Grant for Promotion and Administration Expenditure	11,200,000	8,186,000
(iii)Grant for Industrial Property	13,530,000	3,200,000
Total	149,130,000	131,386,000

The Oireachtas Grant for Industry is supported by funding from the European Regional to IR£965,000 in 1998 (IR£5,970,000 in 1997).

No ERDF funding was applied in support of IDA Oireachtas Grant in 1999

European Structural Funds (ESF)

- ESF receipts

An amount of IR£2,281,398 was received in respect to the element of Training and Employment Grants which are assisted by the European Social Fund, at rates of up to 75%
of eligible expenditure.

- Industry Research & Development Scheme (Measure 1)

The EU funded Industry Research & Development Scheme (Measure 1) aims to address an
identified need for demand-led research and development in ***indigenous*** industry by providing support to encourage product and process development initiatives.

- Research Technology & Innovation Initiative

The EU funded Industry Research Technology & Innovation Initiative aims to bring about a
substantial increase in the level of high quality research and development in businesses in
Ireland and to ensure an integrated and unified approach to research related activities and the
technological aspects of company development.

APPENDIX G: Case Studies

CASE OF SAN FRANCISCO MULTIMEDIA GULCH

The Multimedia Gulch has gradually developed without premeditated policies in the ex-industrial area of San Francisco, Potrero Hill, and South of Market. It locates contents industry. Laissez-faire policy prevailed but the local authority acknowledged the existence of the cluster and designated the San Francisco Enterprise Zone in 1992, and has been promoting focused incentives for businesses locating in the area.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of the Multimedia Gulch
Area Attractiveness		◎	city attractiveness: highly attractive amenity suiting the creators' value system & work style. Liberal cultural climate. Just one hour away from Silicon Valley. Renown hardware industry, a world wide reputed multimedia industry cluster, and many graphic, design, publishing, and advertising related industries are originally located in the Bay Area.
Educational Institutes		◎	High quality & specialized, ready-to-use skill maker. San Francisco State University (SFSU) established the New Media Institute in Multimedia Gulch, teaching the [how-to digital contents making] to working people. Plenty of specialized schools in art & computer, for the supply of skilled creators and artists.
Policies	Partnership with the industry	◎	San Francisco Partnership created by the city of San Francisco in association with private enterprises to solve issues related to contents industry (ex: employment issues) through task forces. The local government and enterprises provide grants to The Bay Area Video Coalition program to teach multimedia skills to young people.
	Education program	◎	Employment Training Panel program The Bay Area Video coalition program.
	Network creative events	◎	Multimedia Development Group organizes seminars and events to develop an interactive multimedia industry.
	Infrastructure development	△	
	telecommunication/electricity	–	
	parking and transportation	△	Department of Parking and Traffic tries to solve the issues on parking and public transport infrastructure.
	Tax favors	–	Payroll Expense and Business Tax Credits
	Assistance for venture capital	△	Working Capital Loan Guarantee Program
	Subvention on rent	–	
	Supply of space	△	Creation of an "Entitled Area": the Bureau of Building Inspection gives permission for office use refurbishment in 3-5 days if the refurbishment occurs in the Area. The system is called "Enterprise Zone Permit Fast Tracking"
	Support for NPOs	--	
Others		◎	Players 1) public institutions: - The Bureau for Re-Development: :research and analysis to attract, develop and keep the contents industry cluster. Its actions created an important announcement/advertising effect -Department of Parking and Traffic, cooperating with the Bureau: find solutions to infrastructure issues. -Department of Building Inspection, cooperating with the Bureau to make procedures to own offices much simplified for the contents firms. 2) PPO: San Francisco Partnership in cooperation with the Bureau of Re-Development: to solve issues related to the multimedia (infrastructure, regulations, etc) through task forces. 3) NGO: Multimedia Development Group: organize events and seminars and develop an interactive multimedia industry (more than 300 companies are members)

CASE OF TOKYO BIT VALLEY

From 1996, a cluster of net and contents industries rapidly developed in the Shibuya and Akasaka districts of Tokyo in Japan. More than 300 companies are clustered in the area. The net and contents industries were attracted by the substantial existence of youth culture, social amenities focused on young people, the presence of artists, cheap space compared to other office areas in Tokyo, related educational institutes, and proximity to industries that would procure contracts and human resources. The located net and contents entrepreneurs have created a strong community link with the help of NGOs, making it the driving force for further development of the cluster.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of the Bit Valley
Area Attractiveness		◎	city attractiveness: highly developed social amenity, convenience and convenience and access to town center, and fashionable places with youth culture
Educational Institutes		△	25% of all professional IT related schools of Tokyo. But not the highest knowledge quality. Most of the creators are learning through daily practice.
Policies	Partnership with the industry	×	
	Education program	×	
	Network creative events	×	
	Infrastructure development	×	
	telecommunication/electricity	×	
	parking and transportation	×	
	Tax favors	△	The Government's [Plan for Regional Platform] aims to promote industry cluster in accordance with the region's economy and human resources and planning capacity.
	Assistance for venture capital	△	Shibuya/Akasaka districts are supporting SMEs and firms in general through institutional financing.
	Subvention on rent	×	
	Supply of space	×	
	Support for NPOs	×	
Others		◎	2 main NGOs: - Bit Valley Association BVA is organizing networking events and seminars. Its operations are mainly based on Internet, hence BVA is rather a "virtual organization" that brings together entrepreneurs, venture capitalists, Japanese ministries, foreign businesses and the media. To provide “more analysis" in formulating their Japanese ventures’ strategy and partnerships, BVA extended network to Silicon Alley. - Jingumae. org is offering spaces to serve as incubators for the entrepreneurs and organizes parties to enhance face-to-face communication. - Web Design Consortium WDC is organizing seminars and solution groups to discuss on issues related to the web design and related sector. It provides a useful occasion for communication between specialists. Private sectors: -Private sectors are actively supporting the net ventures, offering incubation facilities i.e. in 1997 Tokyu Department Stores had the project of building a multimedia incubator building called [QFRONT} in Shibuya -in 2000, Shibuya Mark City owned by Teito enterprise and assisted by Tokyu railway enterprise, opened in Shibuya and became the symbol of Bit Valley. Behind a commercial tower with restaurants and boutiques, stands a business-orientated tower where some 20 Japanese and foreign IT-related companies are based. -Net Age is a net enterprise that also incubates start-ups and organizes events for an active interaction between enterprises, ventures and venture capitals. -There are more than 1,000 private venture capitalists and incubators in Japan. According to BVA, just 1/100 is very good. i.e. Softbank, Whitney and Co. ,Sunbridge are major investors to ventures. The aim of the NGOs and the private sectors is to create a community in Bit Valley strong and independent enough to develop the cluster themselves, while government’s regional development policies seem to be reaching a deadlock.

THE ZHONGGUANCUN AREA

Located at the northern part of Beijing since the early 1980s, the Zhongguancun area has rapidly developed a computer industry cluster around its stakeholder universities, using the model of Stanford University. Its rapid development attracted skilled professionals from all around China, creating a "China Dream" phenomenon. 70% of the ventures have interaction with the Universities, and in total, the area counts more than 6600 foreign and ***indigenous*** NATIONAL firms, including large companies such as Microsoft. Since 1988, the Central government took a resolution to assist the cluster but universities and enterprises have mainly provided financial assistance.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of the Zhongguancun area
Area Attractiveness		◎	City attractiveness: situated in the northern part of Beijing. Amenities like Internet cafes and IT products selling retailers are abundant, the location is a mixture of Akihabara (Tokyo) & University Town.
Educational Institutes		◎	39 institutes of higher learning, including Beijing University & Qinghua University (both considered as the Harvard of China) and several research institutes under the China Academy of Science are located. Provide highly skilled workforce and researchers as well as venture managers with cutting edge computer technology. Universities sponsor and invest in ventures: Legend, Stone, Founder Group of Beijing Unv. Legend is listed as number 1 in sales volume of home computers in the Asia-Pacific region. The students of Universities are creating the venture, directly invested by their old schools. Beijing University is already investing on 33 IT related enterprises.
Policies	**Partnership with the industry**	×	
	Education program	×	
	Network creative events	×	
	Infrastructure development	△	Plan for the Development of software industry cluster in the Zhongguancun Area to develop electronic & information technology industries. (2000/01)
	telecommunication/electricity	×	
	parking and transportation	△	Department of Parking and Traffic tries to solve the issues on parking and public transport infrastructure.
	Tax favors	◎	The Central and Beijing Governments undertook -Preferential policies -New preferential tax measures for building risk investment systems to encourage technicians to operate high-tech ventures & commercialize their scientific achievements. -IT Preferential Policy to IC firms and computer and software related firms allows Tax pay-back System (2000/11)
	Assistance for venture capital	◎	-New preferential measures for building risk investment systems to encourage technicians to operate high-tech ventures and commercialize their scientific achievements. -IT Preferential Policy to IC firms and computer and software related firms allows venture capital funds. (2000/11)
	Subvention on rent	×	
	Supply of space	△	Plan for the Development of software industry cluster in the Zhongguancun Area (2000/11)
	Support for NPOs	×	
Others		◎	Players from the private sector : Students of Universities are stockholders of venture firms Incubator system: Science Parks & High Technology Parks inside Beijing offer preferential tax policy & the best infrastructure for high technology ventures. The restricted public support: because of the financial condition of the government & the currency value, government investments, though active, are not capable to upgrade the IT industry to the level of developed countries Enforcement of Human Resources through: -New Residential Certificate Regulations to attract Senior Technical Professionals from abroad and regions. (1999/06) -Chinese high officers' official appeals through the media to attract cash in-flows and management skills from the Chinese speaking communities abroad.

CASE OF TAIWAN THE HSINCHU PARK

The Hsinchu Park was created in 1980 to make Taiwan the IT Island of Asia, and to create a knowledge intensive industrial structure to stop the flow of skilled students and technicians abroad. Making emphasis on research and development activities, it succeeded in attracting the returnees whose number rose from 27 in 1986 to 2,465 in 10 years. Today, there are more than 300 firms related to high-tech sectors and electronics clustered in the Park.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of the Hsinchu Park
Area Attractiveness		◎	Technology Park located outside of Taipei city center, exempt from traffic jams & other infrastructure issues. The park's facilities provide every amenity business and residents require.
Educational Institutes		◎	The Science Park is located in a University Town Area, where there are famous Universities like National Tsing Hua University and National Chiao Tung University with Colleges majoring in Sciences and Engineering. Those Universities not only provide an abundance of young and skilled personnel, but also support the Park industries in training.
Policies	Partnership with the industry	×	
	Education program	×	
	Network creative events	×	
	Infrastructure development	◎	Under the Vision : Taiwan as "island of science and technology," the Government is accelerating the expansion of the Hsinchu Science-Based Industrial Park with the support of the Park Administration.
	telecommunication/electricity	◎	
	parking and transportation	◎	
	Tax favors	◎	-Decrease or exemption of import tax on import for own use -Decrease in investment tax: 4 year exemption or apply 15% of the investment cost if cost itself is less than 15%, the credit will apply in the 4 following years -Decrease in corporate tax: 5 year exemption enterprise income tax; following this period, the tax will not exceed 20% Financial favors for R&D projects.
	Assistance for venture capital	◎	Include grants and tax favors (see above)
	Subvention on rent	×	
	Supply of space	◎	Faster to answer the applications: the Park Administration's efforts to gain time and service competitiveness in all area of management from 1989
	Support for NPOs	×	
Others		◎	-Financial support for investment on facility and R&D: The Park Administration presents Awards and Grants for innovative R&D projects. -A special support agency: the Park Administration. Its efforts to gain time and service competitiveness from 1989, resulted to the facilitation of the overall investment process, and the simplification of the importing process: the Cargo Clearance System, and the simplification of the visa application process through electronised application process. -In order to reduce market risks and stimulate industry's willingness to engage in R&D work: The National Science Committee NSC promoted the "Research and Development of Key Parts, Components and Products Program" and regularly provides market information and technical assistance. -The Program for the Increased Utilization of High-Level Technical Personnel: provides for the recruiting of technical personnel in both Taiwan and abroad.

CASE OF DENMARK AND SWEDEN THE MEDICON VALLEY

The Medicon Valley is one of the largest pharmaceutical and biotechnological growth centers in Europe featuring a cross-border partnership between industries. The zone incorporates Copenhagen in Denmark and "Skåne" in Sweden. It was developed to strengthen healthcare, pharmaceuticals, biotechnology and the life science research area. 50-60% of the pharmaceutical & biotech companies of Scandinavia reside in the valley, as well as a fair number of the medical device companies. 30,000 people and 4,000 researchers work there. The main clustering industry sectors are: Pharmaceutical, biotech companies, medical device companies and research institutions.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of the Medicon Valley
Area Attractiveness		◎	No city attractiveness but abundance of hospitals, Universities and research institutes. Client confidence is very important in this field (pharmaceutical, biotech companies, and medical device companies). The institutes and Universities give the firms a high degree of credibility.
Educational Institutes		◎	-Abundance of university research: Lund University (Sweden 's largest) , the University of Copenhagen, the Copenhagen Business School of Pharmacy and Malmo University. - High quality, worldwide reputed institutions as well as cost effective. The education in this field is high standard, and research and especially clinical testing are inexpensive compared to the USA. Private and government research institutes, such as the John F. Kennedy Institute for neurology and genetics, the Hagedorn Institute for Diabetes and Molecular Endocrinology, the Wallenberg Neuroscience Center & Danish Society's Cancer Epidemology Center.
Policies	Partnership with the industry	×	
	Education program	×	
	Network creative events	×	
	Infrastructure development	×	.
	telecommunication/electricity	×	
	parking and transportation	×	
	Tax favors	×	
	Assistance for venture capital	◎	-[The Business Development Finance] (from 1992): The Danish Ministry of Business and Industry offers to companies financing and risk-sharing. -Public debt financing through low-interest loans and business development finance provide a low-risk environment in which the loans are only paid back if the venture is successful.(if not, the loans are exchanged with the rights to the project)
	Subvention on rent	×	
	Supply of space	×	
	Support for NPOs	×	
Others		◎	Interactiveness: -Enormous business potential in some of the works of the Universities, if commercialized. -The university hospitals and other regional hospitals offer clinical-trial services and medical collaborations. Private players that play an effective part in the zone: -The Medicon Valley Academy : to further the relationship between the Universities, industry, hospitals and life science based companies in the area. -The Copenhagen Capacity: aims to provide services and information to foreign companies. -Many privately led business funds and financing institutions exist in the Valley to help the small start-ups and companies building on licensed or proprietary technology.

CASE OF BANGALORE CITY

The Indian Government put great emphasis on the development of IT Parks in Bangalore from the early 1980s. One of them, the Bangalore Information Technology Park (BITP) opened in 1997 to provide South East Asian and Western high-tech software companies with a gateway into the Indian market and to promote the pooling of knowledge and information within the region. Usually referred to as the "Silicon Valley of India", Bangalore has attracted more than 271 enterprises and succeeded in attracting many multinationals like Microsoft, Siemens, Hewlett Packard, Bosh, IBM, Digital, Compaq, Novell, Intel, Motorola, and many indigenous firms related to hardware, software, and IT related service sectors.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of Bangalore
Area Attractiveness		◎	-Bangalore city's attractiveness: located in the western end of the Decan Highlands, cool and comfortable climate (24C year round), the city is called the Air-conditioned City of India and provides a comfortable amenity for the engineers. -Safe location: far from Pakistan, China, and the Arab nations, with which India was in confrontation. -The area provides highly mathematically skilled labor that can communicate in English.
Educational Institutes		◎	The Indian Institute of Technology located in Bangalore provides highly skilled engineers and personnel.
Policies	Partnership with the industry	×	
	Education program	×	
	Network creative events	×	
	Infrastructure development	△	-The Government developed highways, airport, and railways in the region in the 1980s. -The Software Technology Park Scheme (1990-) to promote state-of-the-art infrastructure
	telecommunication/electricity	×	
	parking and transportation	×	
	Tax favors	◎	-Until 2000, all companies, located in or out of the Parks, have been receiving benefits from tax preferences -The Software Technology Park Scheme (1990) to promote software exports with offering new fiscal incentives, state-of-the-art infrastructure and an investor friendly environment -Long Term Capital gains tax in securities was limited to 10% -Service tax on computer software withdrawn -Tax exemptions for export profits -Computer softwares are exempt from customs duty. -Under the new Income Tax Act (2000), venture capital gains are exempt from tax duties.
	Assistance for venture capital	△	-The STP Scheme provides funds (1990-) -Establishment of KITVEN Fund Karnataka IT Venture Fund (1999-) -National Venture Capital Fund (1999-)
	Subvention on rent	×	
	Supply of space	×	
	Support for NPOs	×	
Others		◎	Other industry clusters in Bangalore have attracted IT cluster: -Existence of the heavy industry sector attracted by the abundance of natural resources. -Existence of supporting industries, attracted by the well developed basic infrastructure : service industry and many Government owned enterprises related to electronics, machineries, and telecommunications. -Existence of India's high-tech industry sectors concerning national security, such as aerospace and radar development providing highly skilled researchers. The enforcement of the competitiveness of the area and the Parks: -Sustained support of the incubation centers in the parks by the local government. -Proposal for corporatisation of the parks to make them profit-driven, and get greater autonomy in fixing tariffs.

CASE OF NEW YORK SILICON ALLEY

The Silicon Alley has been developed through effective local authority development policies. Three major policies made the Silicon Alley world famous: The Plug 'n' Go Program, The Information Technology District program, The Lower Manhattan Revitalization program. These policies were put into action at the same time, to give a synergy effect. The Alley clusters more than 5,000 firms related to the contents industry, which have been creating employment for more than 60,000 people until now.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of the Silicon Alley
Area Attractiveness		◎	City attractiveness: highly attractive amenity, one of the best developed and managed in the world (ex: 24h open facilities), suiting the creators' value system and work style
Educational Institutes		◎	High quality & specialized, ready-to-use skill supplying institutes, many Art related specialized schools, attracting talented skills from around the world supplying the contents industry. Some University postgraduate programs target contents industry: Interactive Telecommunication Program of New York University and Columbia University's New Media Center.
Policies	**Partnership with the industry**	◎	Initiatives such as the Technology Center, Venture Capital Conference, and Plug'n Go program mentioned above are all joint participation.
	Education program	◎	Centers for Advanced Technology at Columbia and New York University provide research, educational training, and networking assistance to interactive media and technology firms.
	Network creative events	◎	New York New Media Association holds monthly "Cybersuds" happy hour for interactive media firms to meet in an informal environment..
	Infrastructure development	◎	The Plug'n Go program offers Internet-ready, pre-built spaces for technology firms in six downtown Manhattan buildings. Wiring improvements also include the Technology Center.
	Telecommunication/electricity	◎	New York Information Technology Center NYITC: the first building to have provided state-of-the-art information infrastructure with cheap rent to the technology industry
	parking and transportation	×	
	Tax favors	◎	_Through the Technology Center, real estate tax savings (passed through from landlord to tenant in lower rent) of 50% for 3 years, 33% for Year 4, and 16,7% for Year 5. _Commercial rent tax abatement of 100% for 3 years, 66% for Year 4, and 33% for Year 5. _Con Edison savings result in 48% energy reduction.
	Assistance for venture capital	◎	New York City Discovery Fund is a public-private venture fund ($90 million) providing capital funding and consulting services for technology start-ups.
	Subvention on rent	◎	Both the Plug'n Go program and Technology Center offer discounted rent opportunities to technology firms.
	Supply of space	◎	The Plug'n Go program plus the 450,000-square-foot Information Technology Center offer commercial office space to technology firms.
	Support for NPOs	◎	New York City Economic Development Corporation (EDC) provides funds to other players
Others		◎	There are major players in the development of the cluster: PPOs focus on the economic development of the cluster: - EDC [NY city Economic Development Corporation]: providing funds to Alliance, which advertises/promotes and realizes ITD program, and to NYNMA (see below). - Alliance [Alliance for Downtown New York]: materialization of the ITD program's concept, business and networking support for the firms located in ITD and advertising/marketing supports for the estate owners. Under the Plug'n Go program, it plays the role of broker between entrepreneurs and estate owners. NGOs focus on supporting the contents industry: - NYNMA [New York New Media Association] enhance interaction between people through seminars and networking events. - WWWAC[World Wide Web Artist Consortium] contributes to the development of community and information exchange. Private sectors: Real estate agencies and estate/building owners (players in Plug'nGo program). They receive no subvention for refurbishing cost of their buildings but instead get tax and electricity fee reduction by the authority and Alliance organizes marketing for them.

CASE OF PHILIPINES SUBIC BAY FREE PORT (SBF)

The Subic Bay Free Port Area was created in 1992 within the Subic Naval Base and Clark Air Base region after the retreat of the US military to capitalize on the existing infrastructure facilities and re-develop the base as a free port and attract industries. Considered as a model for military base conversion, it reemploys former military workers. The main industries include: Service, telecommunication, transportation, retail and tourism. A&T, FedEx, Prudential Bank, and Taiwan Economic Cooperation Development Foundation are main participants. The Bay offers favorable tax rates and inexpensive long-term leases to attract industries.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors		Case of the Subic Bay Free Port	
Area Attractiveness		◎	-Vicinity to major South East Asian cities -Highly maintenance social infrastructure (airports, deep water bays, sewage systems, telecommunication facilities…) -Steady electricity supply - English speaking labor - Relatively low cost of labor. Literacy rate of the country is 94%, one of the most highly educated populations in Southeast Asia -High Quality Living Environment: tourism and recreational facilities, education (international school), health care, natural environment, housing and community facilities
Educational Institutes		×	
Policies	Partnership with the industry	×	
	Education program	×	
	Network creative events	×	
	Infrastructure development	△	Under the presidential order, the development of the Subic Bay Freeport was considered national priority project and the existing infrastructure was capitalized on.
	telecommunication/electricity	△	
	parking and transportation	△	
	Tax favors	◎	-Free flow of goods and capital within the Freeport Zone. Registered enterprises are exempt from all local and national taxes, enjoy tax and duty free exemptions on imported raw materials, supplies, capital equipment and other items for consumption in the Freeport.
	Assistance for venture capital	×	
	Subvention on rent	◎	The Subic Bay Metropolitan Authority is offering favorable tax rates and inexpensive long-term leases
	Supply of space	×	
	Support for NPOs	×	
Others		◎ × ×	Other incentives to attract foreign industries: -Allows access to domestic market: 30% of total production output could be sold within the Customs Territory. -No exchange control policy is applied. Furthermore, markets for foreign exchange, gold, securities and futures are allowed. -100% foreign-owned companies may invest in any economic activity within the Freeport excluding certain exceptions. -Exemption from SGS inspection: registered enterprises are exempt from SGS (Societe Generale de Surveillance) pre-inspection of exported goods. - The Industrial Park in the Subic Bay Freeport Zone: a special economic area created by the Philippine government to promote FDIs through economic incentives and regulations favorable to business. It plays as an incubator for the cluster of industries Existence of incubator system: the Subic Bay Industrial Park -Temporary Work Permit and Subic Special Work Visa: to foreign nationals who possess executive or highly technical skills that no Filipino citizen within the SBF possesses. -Subic Special Investor's Visa: to any investor who has made an investment of not less than US $250,000 within the Subic Bay. -Permanent Residency Visa for Retirees: to foreign national retirees and their spouses and dependent children under 21 years of age. Support from private sector: -The Taiwan Economic Cooperation Development Foundation leases 325 acres of commercial purpose property (300 companies are located to manufacture semi-conductors, sports apparel and pharmaceutical products). Obstruction to development: - the corruption inside the Subic Bay Metropolitan Authority: because of conflicts and corruption inside the Authority, nothing worth being mentioned has happened in the Subic port development program for the last eight years. The capacity of the Subic port declined from 75,000 TEUs per year to only 27,000 TEUs in 1999 (TEU means 20 equivalent unit).

CASE OF IRISH CALL CENTERS

Since 1996 Ireland has emerged as the leader in the field of pan-European call centers. Over 60 companies are based in Ireland for their new European call center. It created employment for 6,000 people. The main functions carried out by these centers are: sales, technical and customer support for computer and system hardware and software, reservations and customer care for airlines, hotels and other accommodation services.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of the Call Centers
Area Attractiveness		◎	-Highly competitive location: Europe (membership of the EEC in 1973) -Founder member of EMU (the only English speaking one) _means elimination of exchange rate risks & transaction costs _more predictable economic environment for European companies. -Country of stable economy, with high growth in a consistent low inflation, low cost, & low corporate tax investment.
Educational Institutes		◎	High quality & specialized, ready-to-use skill supplying institutes, many Art related specialized schools, attracting talented skills from around the world supplying the contents industry. Some University postgraduate programs target contents industry: Interactive Telecommunication Program of New York University and Columbia University's New Media Center.
Policies	Partnership with the industry	×	
	Education program	◎	The Training and Employment Authority (FAS) provides education and training needed by the IT industry.
	Network creative events	×	
	Infrastructure development	◎	Ireland invested heavily over the last 10 years on infrastructure, and especially for the development and modernization of telecommunication infrastructures, with the help of investment aid from the EU.
	Telecommunication/electricity	◎	
	parking and transportation	×	
	Tax favors	◎	-A reduced corporation tax rate off 10% on profits from manufacturing and international services -Low telecommunications Tariffs
	Assistance for venture capital	◎	The Industrial Development Authority (IDA) offers grants and other financial facilities to new and existing manufacturing for the furtherance of industrial development in Ireland, including: -Generous capital allowances for tax purposes; -Cash grants towards fixed assets up to a maximum of 60% depending on the location, size and nature of the project; -Staff training grants of up to 100% for workers in new industries.
	Subvention on rent	×	
	Supply of space	×	
	Support for NPOs	×	
Others		◎	Main players: -NGO: "Call Center Management Association" - CCMA Ireland - Develop the Public Relations Profile of Call Centers and indirectly Call Center Managers through education of the general public on what call centers really do. -Build a better call center industry through Education by sharing knowledge on best practice throughout the Irish Call Center Industry. -Develop standards for regulation of the Telebusiness industry. -Public agency: The Irish Science and Technology Agency (EOLAS) undertakes wide range of planning promotional, advisory, and review activities. Other incentives: -Low general corporate costs -Highly progressed telecommunications -Low operating costs -Low labor Costs -Ready availability of skilled multilingual staff -Originally well developed industry in Ireland (Electronics, Healthcare, Software, Financial services, Service Providers composed of multinationals and FDIs) played as supporting industries to introduce and develop the call centers:

CASE OF THE AUSTRALIAN TECHNOLOGY PARK (ATP)

The ancient locomotive workshop of Sydney had been refurbished at a cost of over AUD 45 million to house a broad range of technology-focused tenants including premium research and development organizations, a number of Incubator companies, as well as purpose built conference and exhibition space. Today, the ATP community comprises more than 1000 people. There are over 70 industries, including research and development initiatives such as the Australian Photonics Cooperative Research Center, multinationals such as Fuji Xerox, start-up Incubator companies, TAFE's Industry Partnership Center, The "Sydney Transport Control Center", "New South Wales Ambulance Center", the "Australian Center" for Advanced Computing and Communications, Johnson & Johnson Research, and The "Advanced Manufacturing Center".

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of the ATP
Area Attractiveness		◎	-City attractiveness: located at the south west of the center of Sydney, it offers city amenities and attractiveness. - Tourist attractiveness: the site is refurbished railway workshops with heritage value.
Educational Institutes		◎	The University of New South Wales, the University of Sydney, the University of Technology, Sydney and the Australian National University are key players for the development of the ATP
Policies	Partnership with the industry	×	
	Education program	◎	The Science and Engineering Center for career path guidance for youth, and an Advanced Skills Center supported and managed by the Technical and Further Education (TAFE) system.
	Network creative events	×	Under the Building on IT Strengths program of the Government (BITS): links and networking between participants are encouraged. The ATP management authority's activities are focused on the development of SMEs and other firms mostly through supporting and networking services
	Infrastructure development	◎	Under the Building Better Cities Program of the Federal government, the ATP received financial support. AUD 45 million was invested to develop the location.
	Telecommunication/electricity	◎	
	parking and transportation	×	
	Tax favors	◎	-A reduced corporation tax rate off 10% on profits from manufacturing and international services -Low telecommunications Tariffs
	Assistance for venture capital	◎	Under the Building on IT Strengths (BITS) program, for stronger commercialization links with R&D organizations and the creation of clusters of innovative IT&C businesses: - increase the rate of new SME formation in the Australian information industries (especially from R&D organizations), and foster links and networking between participants in the information industries sector - facilitate the availability and use of leading-edge network technologies by the information industries sector
	Subvention on rent	×	
	Supply of space	×	
	Support for NPOs	×	
Others		◎	Effective incubation system through the Incubator Program focused on the nurture of ventures and SMEs: -The Incubator Program is managed by the Australian Technology Park Innovation (consortium comprising the University of New South Wales, the University of Sydney, the University of Technology, Sydney and the Australian National University) to incubate, facilitate and accelerate the development of promising start-up businesses. There are currently 38 businesses in the Incubator Program, and the program boasts an enviable track record with over 80% of the participants having successfully graduated following their two-year tenure in the program. -The National Innovation Center inside the ATP: It houses leading R&D development institutes to thrive alongside start-up businesses by R&D innovations. -"Advanced Manufacturing Center" ('AMC') inside the ATP: The AMC has been specifically designed to meet the advanced technology needs of small to medium-sized businesses by liaising with overseas technology providers, demonstrating leading-edge Australian technologies and taking a leading role in the promotion to secondary school children of advanced manufacturing as a career alternative. The AMC creates opportunities for networking, exchange and facilitation through focus groups. (700 companies are members). - the Photonics Supercorridor Project (1999): expenditure of $24 million over the next three years to establish a "High Performance Computing Center" at the ATP to serve as incubator. Enforcement of the ATP through the Agreement for the joint venture with Questacon (The National Science and Technology Center in Canberra)by early 2001: The venture will re-inforce the role of the ATP as the innovation center for science and technology in New South Wales.

CASE OF THE AUSTRALIA MULTI FUNCTION POLIS TECHNOLOGY PARK (MFP)

The Multi Function Polis Technology Park was founded in 1991, under the partnership of the Japanese and Australian Government to create the next generation of leading industries and a Smart Community. In 1993, The South Australian Government took initiatives and aims to promote local economic development, and capture competitive advantages in software development, multimedia, electronic services, IT education and satellite telecommunications. Still under project and seeking tenants, there are some participating companies such as Motorola, Vision System, and Vision Aerospace.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of the MFP
Area Attractiveness		×	No city amenities: North of the city of Adelaide, 20 minutes by car, futuristic and old fashioned urban settlement for people to live in and discourage informal interaction between them.
Educational Institutes		△	The local University is located next to the park. But no interaction is seen.
Policies	Partnership with the industry	×	
	Education program	×	
	Network creative events	×	
	Infrastructure development	△	The [Stage 1 Community] and the [Smart City Australia] project to create a world class business environment for the organizations and knowledge intensive industries in an area of 620 hectare.
	Telecommunication/electricity	◎	Under the [Smart City Australia], high-quality telecommunications links inside the Park, and to the rest of Australia and the world, is constructed.
	parking and transportation	△	
	Tax favors	×	
	Assistance for venture capital	△	There are facilities available for start-up firms, as well as funding to assist new firms in developing their business
	Subvention on rent	×	
	Supply of space	×	
	Support for NPOs	×	
Others		×	The amenity of the MFP did not meet the private corporation's expectancy. The place does not create nor enhances informal information exchange between location members

CASE OF JAPAN OKINAWA PREFECTURE

Under the Multimedia Island Concept (September 1998), announced by the Okinawa Prefectural Government, a plan was designed to develop Okinawa by expanding the information and communications industries. Its sales point is to produce multimedia contents and develop software by making the most of the features unique to Okinawa: including climate, culture, and proximity to Asia. Okinawa has developed three important areas: "Contents Production," "Software Development," and "Information Services." 100 information and communications industries have already settled in Okinawa, such as computer software companies and resource industries. They hire no less than 6,000 people. The Okinawa Prefecture, a Multimedia Island is still a project under development and the issue is under survey.

(◎Result was effective, △Effect under survey, ×No policy identified)

Factors			Case of Okinawa Prefecture
Area Attractiveness		◎	- Beautiful nature and living environment, convenient to refresh oneself and enjoy life. - Vicinity to Asia & major South East Asian cities - Active support and aid by both the central and prefectural governments for new implementation. - Okinawa people's characteristic to be open & with a high degree of adaptability. - Affordability of a large amount of young labor.
Educational Institutes		△	the Engineering Department of the University of the Ryukyus in Okinawa, offers high-level education, and conducts research and development in the information and communications area. Nevertheless, it is difficult to say that its staff lineup and scale of research and development are sufficient.
Policies	Partnership with the industry	×	
	Education program	△	-Improvement of Information Literacy and English Language Proficiency by the Central Government. -The local government will study the possibility of nurturing multimedia technicians by utilizing public facilities, including centers for development of vocational abilities. -The local government will study the possibility of setting up a multimedia-related department, a graduate school, and subsidiary research institutions to activate nurturing capable people and promote research and development in the area of digital art. -Establishment of Higher Educational Institutions (Universities with Graduate Schools) related to Multimedia
	Network creative events	×	
	Infrastructure development	△	The local government is to improve the infrastructure of locations with high potential of cluster: -the key location, equipped with modern digital studios for production of multimedia content, and the industrial complex for integrating call-centers. -other facilities, where business and recreational areas, as well as parking lots are located
	Telecommunication/electricity	△	
	parking and transportation	△	
	Tax favors	△	Preferential Tax System for the Development of the Information & Communication Industry: within Naha city and 23 other towns and communes in Okinawa, the system will offer Investment Tax Reduction and Corporate Tax Reduction.
	Assistance for venture capital	△	-The local government and other public institutions are trying, without simply relying on major industries, to give large development projects to joint venture groups composed of Okinawan companies. In order to promote private sector investment at the initial stage, the local government will expand and establish support systems, including investment associations and production funds, for securing the cost of producing multimedia content. -Support for Pioneer industries under the condition that industries which take the initiative in response to the call have insufficient knowledge of the business environment and support measures
	Subvention on rent	×	
	Supply of space	×	
	Support for NPOs	×	
Others		△	Incubation: -The existence of supporting industries: regarding the multimedia contents and software areas, the execution of tasks related to CG production, GIS matters and call center works had already started. -Call-Center Operations and Other Services to serve as the first step in inviting industries: Okinawa will promote efforts to find and integrate data processing jobs, including the functions to serve as a backup office or call-center for companies in Tokyo. -The local government will create Prefectural Research Institutions related to information and communications to stimulate the industry. -The local government and other public organizations will actively play a leading role in outsourcing their work. Following this, it will become possible to downsize the administrative bodies and, at the same time, integrate and activate various types of outsourcing companies in Okinawa. Secure human resources: the local government may establish a talent bank and secure highly-skilled people, who are capable of becoming a driving force, by inviting applicants from all over the world. Those who are registered with the talent bank would be sent to companies and other organizations setting up offices in Okinawa for a certain period of time during the initial start-up stage. By doing so, the status of the talented people is assured and, at the same time, companies setting up offices in Okinawa will be able to secure capable people.