

No. 108

THE KINGDOM OF THAILAND

**FINAL REPORT  
FOR  
THE STUDY ON THE LAEM CHABANG EPZ/GIE  
INDUSTRIAL PROMOTION  
IN  
THE KINGDOM OF THAILAND**

**[ANNEX]**

DECEMBER 1988

JAPAN INTERNATIONAL COOPERATION AGENCY

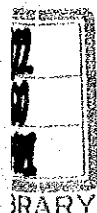
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INDUSTRIAL PROMOTION IN THE KINGDOM OF THAILAND (ANNEX)

DECEMBER 1988 JAPAN INTERNATIONAL COOPERATION AGENCY



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1. Import Duty Rate by Type of Goods in Thailand 1985



Table-1 Import Duty Rate by Type of Goods in Thailand 1985-1  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
200	8702 109	Passenger motor vehicles having less than 29 seats
200	8702 909	Passenger motor vehicles
200	8703 100	Motor cars and motor vehicles for special use
200	8703 210	; of a cylinder capacity not exceeding 1000cc
200	8703 229	; of a cylinder capacity 1500cc~3000cc
200	8703 239	; of a cylinder capacity exceeding 3000cc
200	8703 249 319 329 339	Other motor cars and motor vehicles
200	8703 900	Other motor vehicles having less than 10 seats
100	3303	Perfumes and toilet waters
100	3304	Beauty and make-up preparations for the care of the skin
100	3305	Preparations for use on hair
100	3306	Preparations for oral or dental hygiene
100	3307	Shaving, personal deodorants and other perfumery
100	4202	Cases, trunks, bags and boxes
100	4203	Articles of apparel and clothing accessories
100	4205	Other articles of leather or of composition leather
100	4303	Articles of apparel, clothing accessories and so on
100	4304 009	Other artificial fur and articles thereof
100	5701 ~ 5703, 5705	Carpets and other textile floor coverings
100	5804 ~ 5805	Special woven fabrics
100	5810	Embroidery in the piece, in strips or in motifs
100	6001 ~ 6002	Knitted or crocheted fabrics
100	6101	Men's and boys' overcoats, capes, cloaks, anoraks and so on
100	6102	Women's and girls' overcoats, capes, anoraks and so on
100	6103	Men's and boys' suits, jackets, blazers and so on
100	6104	Women's and girls' suits, jackets, blazers and so on
100	6105 ~ 6117	Apparel and clothing accessories, knitted or crocheted
100	6201 ~ 6217	Apparel and clothing accessories, not knitted or crocheted
100	6302 ~ 6304	Other made-up textile articles
100	6307 ~ 6308	Other made-up textile articles, sets
100	6401 ~ 6405	Footwear, gaiters and the like; parts of such articles
100	6503 ~ 6506	Headgear and parts thereof
100	6601	Umbrellas and sun umbrellas
100	6802	Walking-sticks, seat-sticks, whips and so on
100	8528 100	Colour television receivers
100	8703 222 232 242 312	Cars of jeep type with either flexible or hard top
100	322 332	including station-wagon type, and similar vehicles
100	8704 211 311 901	Van and pick-up trucks and similar vehicles
80	3401 111 191 200	Soap and organic surface-active products and preparations
80	3604	Fireworks, signalling flares and other pyrotechnic articles
80	4601 200	Mats, matting and screens of vegetable materials
80	5007	Woven fabrics of silk or of silk waste
80	5111	Woven fabrics of carded wool or of carded fine animal hair
80	5112	Woven fabrics of combed wool or of combed fine animal hair
80	5113	Woven fabrics of coarse animal hair or of horsehair
80	5208	Fabrics of cotton, containing 85%, not more than 200g/m <sup>2</sup>
80	5209	Woven fabrics of cotton, containing 85%, more than 200g/m <sup>2</sup>
80	5210	; containing less than 85%, not more than 200g/m <sup>2</sup>
80	5211	; containing less than 85%, more than 200g/m <sup>2</sup>
80	5212	Other woven fabrics of cotton
80	5309	Woven fabrics of flax
80	5310	Woven fabrics of jute or of other textile bast fibres
80	5311	Woven fabrics of other textile fibres
80	5407	Woven fabrics of synthetic filament yarn
80	5408	Woven fabrics of artificial filament yarn
80	5512	Woven fabrics of synthetic staple fibres, containing 85%
80	5513	; containing less than 85%, not exceeding 170g/m <sup>2</sup>
80	5514	; containing less than 85%, exceeding 170g/m <sup>2</sup>
80	5515	Other woven fabrics of synthetic staple fibres
80	5516	Woven fabrics of artificial staple fibres
80	5801	Woven pile fabrics and chenille fabrics
80	5802	Terry towelling and similar woven fabrics
80	5803	Gauze, other than narrow fabrics
80	5806	Narrow woven fabrics

Source: Customs Tariff and Business Tax

Table-2 Import Duty Rate by Type of Goods in Thailand 1985-2  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
80	5809	Woven fabrics of metal thread and metallised yarn
80	5811	Quilted textile products in the piece
80	6802	Worked monumental or building stone and articles thereof
80	6907	Unglazed ceramic flags and paving, hearth or wall tiles
80	6908	Glazed ceramic flags and paving, hearth or wall tiles
80	6910	Ceramic sinks, wash basins, baths, bidets and so on
80	6911	Tableware, kitchenware, other household articles and so on
80	6912	Ceramic tableware, kitchenware, other household articles
80	6913	Statuettes and other ornamental ceramic articles
80	6914	Other ceramic articles
80	7010 901	Preserving jars
80	7013	Glassware of a kind used for table, kitchen and office
80	7016	Paving blocks, slabs, bricks, squares and other articles
80	8414 510 600	Air or vacuum pumps, air or other gas compressor and fans
80	8450	Household or laundry-type washing machines
80	8451 210 901	Machinery for washing, cleaning, drying, ironing and so on
80		; each of a dry linen capacity not exceeding 10kg
80	8509	Electro-mechanical domestic appliances, with electric motor
80	8528 200	Television receivers of black and white or other monochrome
80	8706	Chassis fitted with engines, for the motor vehicles
80	8707	Parts and accessories for the motor vehicles
80	9401, 9403, 9404, 9406	Miscellaneous manufactured articles
80	9405 100 910	Miscellaneous manufactured articles
80	9501	Wheeled toys designed to be ridden by children
80	9502	Dolls representing only human beings
80	9503	Other toys; puzzles of all kinds and so on
70	4410	Particle board of wood or other ligneous materials
65	0409	Natural honey
65	1212 991	Locust beans, seaweeds and other algae; melon seeds
65	1701	Cane or beet sugar and chemically pure sucrose, in solid form
65	1702 200	Other sugars, including chemically pure lactose and glucose
65	1702 902	; other syrups and artificial honey
65	1703	Molasses resulting from the extraction or refining of sugar
60	0201 ~ 0210	Meat and edible meat offal
60	0301 ~ 0307	Fish and crustaceans,
		molluscs and other aquatic invertebrates
60	0405 009	Oils derived from milk
60	0406	Cheese and curd
60	0410 001	Edible products of animal origin; salanganes' nests
60	0511 992	Animal products; fish bladders
60	0601 ~ 0604	Live trees and other plants
60	0701 ~ 0714	Edible vegetables and certain roots and tubers
60	0801 ~ 0814	Edible fruit and nuts; peel of citrus fruit or melons
60	0902	Green tea in packings of a content not exceeding 3kg
60	0903	Mate
60	1201 001	Soya beans, whether or not broken; edible
60	1202 101 201	Ground-nuts, not roasted or otherwise cooked
60	1206 001	Sunflower seeds, whether or not broken; edible
60	1207 401	Other oils seeds and oleaginous fruits; edible
60	1208	Flours and meals of oil seeds or oleaginous fruits
60	1212 209	Locust beans, seaweeds and other algae
60	1601 ~ 1605	Prepared foodstuffs; beveraged, spirits, vinegar and so on
60	1704	Sugar confectionery, not containing cocoa
60	1806	Chocolate and other food preparations containing cocoa
60	1902 ~ 1905	Preparations of cereals, flour, starch or milk
60	2001 ~ 2009	Preparations of vegetables, fruit or other parts of plants
60	2101 ~ 2106	Miscellaneous edible preparations
60	2201 ~ 2209	Beverages, spirits and vinegar
60	2401 ~ 2403	Tabacco and manufactured tabacco substitutes
60	2922 421	Oxygen-function amino-compounds; glutamic acid and its salts
60	3402 111	Organic surface-actives agents (other than soap)
60	3605	Matches
60	3915 ~ 3926	Prastics

Source: Customs Tariff and Business Tax

Table-3 Import Duty Rate by Type of Goods in Thailand 1985-3  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
60	4008 111 191 211 291	Plates, sheets, strips, rods and profile shapes, of vulcanised rubber other than hard rubber
60	4016 101 911 991	Other articles of vulcanised rubber other than hard rubber
60	4017 001	Hard rubber in all forms; floor tiles, wall tiles
60	4201	Saddlery and harness for any animal
60	4412	Plywood, veneered, panels and similar laminated wood
60	4420 901	Wood marquetry and inlaid wood
60	4601 910 990	Basketware and wickerwork
60	4602	Basketware and wickerwork
60	4813	Cigarette paper
60	4814	Wallpaper and similar wall coverings
60	4815	Floor coverings on a base of paper or of paperboard
60	4818 401	Sanitary towels and tampons
60	4823 901	Joss paper
60	4909 009	Printed or illustrated postcards
60	4910 001	Calendars printed on paper or paperboard
60	5601 100 212 222 292	Wadding of textile materials and articles thereof
60	5608 199 909	Knotted netting of twine, cordage or rope
60	5905	Textile wall coverings
60	6301	Blankets and travelling rugs, of textile articles
60	6309	Worn clothing and other worn articles, of textile articles
60	6505 100	Hair-nets
60	6704	Wigs, false beards, eyebrows and eyelashes
60	6812 901	Floor tiles and wall tiles of stone, cement and the likes
60	7009	Glass mirrors including rear-view mirrors
60	7014	Signalling glassware and optical elements of glass
60	7018	Glass beads, imitation pearls and similar glass smallwares
60	7113	Articles of jewellery and parts with precious metal
60	7114	Articles of goldsmiths' or silversmiths' wares and parts
60	7115	Other articles of precious metal or of metal clad
60	7116	Articles of natural or cultured pearls and precious stones
60	7117	Imitation jewellery
60	7319 200	Safety pins of iron or steel
60	7319 300	Other pins of iron or steel
60	7321	Stoves, ranges, barbecues and so on, of iron or steel
60	7323	Household articles of iron or steel
60	7324	Sanitary ware and parts thereof, of iron or steel
60	7326 201	Iron or steel baskets and the likes coated with plastic
60	7417	Cooking and heating apparatus of copper
60	7418	Household articles and parts of copper
60	7508 001	Articles of nickel, a kind used for domestic purpose
60	7615	Household articles and parts of aluminium
60	7806 001	Articles of lead, a kind used for domestic purpose
60	7907 901	Articles of zinc, a kind used for domestic purpose
60	8007 001	Articles of tin, a kind used for domestic purpose
60	8211	Knives of base metal
60	8215	Spoons, forks and the likes, of base metal
60	8305	Office articles of base metal like letter-pins, paper-clips
60	8306	Statuettes and other ornaments, of base metal
60	8415	Machine for changing the temperature and humidity
60	8418	Refrigerators, freezers and other freezing equipment
60	8452 400	Furniture, bases and covers for sewing machines and parts
60	8507	Electric accumulators, including separators therefor
60	8513 100	Portable electric lamps
60	8518	Microphones and stands therefor
60	8519	Record-players and other sound reproducing apparatus
60	8520	Magnetic tape recorders and other sound recording apparatus
60	8521	Video recording or reproducing apparatus
60	8522	Parts and accessories of apparatus of record or cassette
60	8523	Prepared unrecorded media for sound recording
60	8524	Records, tapes and other recorded media for sound
60	8527	Reception apparatus for radio-telephony or radio-telegraphy
60	8529 102 902	Parts suitable for use solely or principally
60	8539 310	Electric filament or discharge lamps; fluorescent, cathode
60	8708	Parts and accessories of the motor vehicles
60	8711	Motorcycles and cycles fitted with an auxiliary motor

Source: Customs Tariff and Business Tax

Table-4 Import Duty Rate by Type of Goods in Thailand 1985-4  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
60	9003	Frames and mountings for spectacles, goggles and the like
60	9004	Binoculars, monoculars, other optical telescopes, mountings
60	9113	Watch straps, bands, and bracelets, and parts thereof
60	9405	Electric table, desk, bedside, lamps and lighting fittings
60	9504	Hand sieves and hand riddles
60	9505	Travel sets for personal toilet, sewing or shoe
60	9606	Buttons, press-fasteners, snap-fasteners and press-studs
60	9607	Slide fasteners, and parts thereof
60	9614	Smoking pipes and cigar or cigarette holders
60	9615 900	Combs, hair-slides and the like; hairpins and curling grips
60	9616 200	Powder-puffs and pads for the application of cosmetics
60	9617	Vacuum flasks and other vacuum vessels, complete with cases
60	9618	Tailors' dummies and other lay figures
60	9701 ~ 9703, 9706	Works of art, collectors' pieces and antiques
50	2523 210	White cement
50	2906	Cyclic alcohols and the halogenated or nitrated derivatives
50	3302	Essential oils, mixtures of odoriferous substances
50	3402 201	Organic surface-active agents; detergent
50	4001	Natural rubber, balata, gutta-percha, guayule and chicle
50	4002 192	Styrene-butadiene rubber in plates, sheets or strip
50	4002 202	Butadiene rubber in plates, sheets or strip
50	4002 312 392	Isobutene-isoprene rubber in plates, sheets or strip
50	4002 492	Chloroprene rubber in plates, sheets or strip
50	4002 592	Acrylonitrile-butadiene rubber in plates, sheets or strip
50	4002 602	Isoprene rubber in plates, sheets or strip
50	4002 702	EPDM (rubber) in plates, sheets or strip
50	4002 809	Mixtures of natural rubber latex with synthetic rubber latex
50	4002 992	Other rubber in plates, sheets or strip
50	4005	Compounded rubber
50	4006	Other forms and articles, of unvulcanized rubber
50	4007	Vulcanized rubber thread and cord
50	4008 119 199 219 299	Plates, sheets, strips, rods, and profile shapes, of vulcanized rubber other than hard rubber
50	4009	Tubes and pipes, of vulcanized rubber other than hard rubber
50	4010	Conveyer or transmission belts, of vulcanized rubber
50	4014	Hygienic or pharmaceutical articles, of vulcanized rubber
50	4015	Articles of apparel and accessories, of vulcanized rubber
50	4016 109	Wall tiles of vulcanized rubber
50	4016 919	Floor coverings and mats of vulcanized rubber
50	4016 920	Erasers of vulcanized rubber
50	4016 930	Gaskets, washers and other seals of vulcanized rubber
50	4016 940	Boat or dock fenders of vulcanized rubber
50	4016 950	Inflatable articles of vulcanized rubber
50	4016 999	Articles used for medical purpose of vulcanized rubber
50	4017 009	Hard rubber in all forms (for examples, ebonite)
50	4302	Leather; mink, rabbit, hare and so on
50	4304 001	Leather of artificial fur
50	5604 100	Rubber thread and cord, textile covered
50	5903	Textile fabrics impregnated, coated or covered with plastic
50	6802 100	Worked monumental or building stone (except slate)
50	7003	Cast glass and rolled glass
50	7004	Drawn glass and blown glass
50	7005 109 219 299 300	Float glass and surface ground or polished glass
50	7006 009	Glass of bent, edge-worked, engraved or drilled
50	7007	Safety glass, consisting of toughened or laminated glass
50	7008	Multiple-walled insulating units of glass
50	7012	Glass inners for vacuum flasks or for other vacuum vessels
50	8509 900	Parts of electro-mechanical domestic appliances
50	9103	Clocks with watch movements
50	9104	Instrument panel clocks for vehicles, aircraft or vessels
50	9105	Alarm clocks and wall clocks
50	9107	Time switches with clock or watch movement
50	9109	Clock movements, complete and assembled
50	9111 ~ 9112	Watch cases and parts thereof
50	9201	Pianos, including automatic pianos

Source: Customs Tariff and Business Tax



Table-5 Import Duty Rate by Type of Goods in Thailand 1985-5  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
50	9613	Cigarette lighters and other lighters
50	9616 100	Scent sprays and similar toilet sprays
45	5602	Felt
45	5704	Carpets and other textile floor coverings of felt
40	0101 ~ 0106	Live animals
40	0401	Milk and cream, not containing sweetening matter
40	0402 910 990	Milk and cream, containing sweetening matter
40	0403	Fermented or acidified milk and cream
40	0404 101 901	Whey, in liquid, including concentrated form
40	0901	Coffee
40	1101 ~ 1109	Products of the milling industry; malt; starches; inulin
40	1209	Seeds, fruit and spores, of a kind used for sowing
40	1210	Hop cones
40	1211	Plants and parts of plants including seeds and fruits
40	1212	Locust beans, seaweeds and other algae
40	1702 109	Lactose and lactose syrup
40	1702 309 400	Glucose and glucose syrup
40	1702 600	Other glucose and glucose syrup
40	1702 909	Other, including invert sugar
40	1901 200	Malt extract, mixes and doughs
40	3307 901	Contact lenses or artificial eye solution
40	3401 112 192	Soap and organic surface-active products and preparations
40	3402	Organic surface-active agents (other than soap)
40	3403	Lubricating preparations; oil or grease
40	3404	Artificial waxes and prepared waxes
40	3405	Polishes, creams and similar preparations
40	3406	Candles, tapers and the like
40	3407 009	Modelling pastes, including put up for children's amusement
40	3601	Propellent powders
40	3602	Prepared explosives, other than propellent powders
40	3603	Safety fuses, detonating fuses, igniters and so on
40	3606	Ferro-cerium and other pyrophoric alloys in all forms
40	3701 ~ 3705	Photographic or cinematographic goods
40	3901 ~ 3915	Plastics and articles thereof
40	4104 101	Whole bovine skin leather; alum tanned, parchment dressed
40	4104 210	Bovine leather, vegetable pre-tanned
40	4104 221 291	Bovine and equine leather; alum tanned
40	4104 310 390	Full grains, grain splits and other
40	4105 121 191	Sheep or lamb skin leather; alum tanned
40	4105 200	Sheep or lamb skin leather; parchment-dressed after tanning
40	4106 121 191	Goat or kid skin leather; alum tanned
40	4106 200	Goat or kid skin leather; parchment-dressed after tanning
40	4107 101 291 901	Leather of animals; alum tanned, parchment-dressed or dyed
40	4108	Chamois (including combination chamois) leather
40	4109	Patent leather and patent laminated leather
40	4202 199 999	Travel goods, handbags and similar containers of leather
40	4407 101 211 221 231 911 921 991	Wood sawn or chipped lengthwise, planed, sanded or finger-jointed, of a thickness
40	4408	Veneer sheets and sheets for plywood or the like
40	4409	Wood continuously shaped along any of its edges or faces
40	4411	Fibreswood of wood or other ligneous materials
40	4414	Wooden frames for paintings, photographs and mirrors
40	4415	Packing cases, boxes crates, drums and the like, of wood
40	4416	Casks, barrels, vats, tubs and other coppers' products
40	4417	Tools, tool bodies and handles, blush bodies and handles
40	4418	Builders' joinery and carpentry of wood
40	4419	Tableware and kitchenware, of wood
40	4420 100	Statuettes and other ornaments, of wood
40	4420 909	Caskets and cases for jewellery or cutlery, of wood
40	4421	Articles of wood; clothes hangers, toothpicks
40	4504 901	Agglomerated cork; gasket
40	4816 ~ 4823	Articles of paper pulp, of paper or of paperboard
40	4901	Printed books, brochures, leaflets or similar printed matter

Source: Customs Tariff and Business Tax

Table-6 Import Duty Rate by Type of Goods in Thailand 1985-6  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
40	4907	Stamp-impressed paper, cheque forms or documents of titles
40	4908	Transfers (decalcomanias)
40	4909 001	Postcards not printed
40	4910 009	Calendars not printed on paper or paperboard
40	4911	Printed matter, including printed pictures and photographs
40	5106	Yarn of carded wool, not put up for retail sale
40	5107	Yarn of combed wool, not put up for retail sale
40	5108	Yarn of fine animal hair, not put up for retail sale
40	5109	Yarn of wool or fine animal hair, not put up for retail sale
40	5110	Yarn of coarse animal hair or of horsehair
40	5508	Sewing thread of man-made staple fibres
40	5509	Yarn of synthetic staple fibres, not put up for retail sale
40	5510	Yarn of Artificial staple fibres, not put up for retail sale
40	5511	Yarn of man-made staple fibres, not put up for retail sale
40	5604 200	High tenacity yarn of polyesters, of nylon or viscose rayon
40	5604 900	Rubber thread or cord
40	5605	Metallised yarn
40	5606	Gimped yarn, chenille yarn or loop wale-yarn
40	5607	Twine, cordage, rope and cables
40	5807	Labels, badges and similar articles of textile materials
40	5808	Braids in the piece, tassels, pompons and similar articles
40	5902	Tyre cord fabrics of high tenacity yarn of nylon or rayon
40	5904	Linoleum, floor coverings
40	5906	Rubberised textile fabrics
40	5907	Textile fabrics otherwise impregnated, coated or covered
40	6306	Tarpaulins, sails for boats, awnings and camping goods
40	6406	Parts of footwear
40	6603	Parts of trimmings and accessories of umbrellas or sticks
40	6701	Skins and other parts of birds with their feathers or down
40	6702	Artificial flowers, foliage and fruit
40	6703	Human hair, dressed, thinned, bleached or otherwise worked
40	6801, 6803 ~ 6804 6807 ~ 6815	Articles made of feathers or of down, artificial flowers, articles of human hair
40	6904	Ceramic building bricks, flooring blocks and the like
40	6905	Roofing tiles, chimney-pots and other constructional goods
40	6906	Ceramic pipes, conduits, guttering and pipe fitting
40	7019 200	Woven fabrics, including narrow fabrics
40	7020	Articles of glass; floats for use in fishery
40	7118	Coin
40	8210	Hand-operated mechanical appliances, of food or drink
40	8211 940	Knives with cutting blades
40	8212	Razors and razor blades
40	8213	Scissors, tailors' shears and similar shears, and blades
40	8214	Cutlery, manicure or pedicure sets and instruments
40	8301	Padlocks and locks of base metal
40	8302	Base metal mountings, fittings and similar articles
40	8303	Armoured or reinforced safes, boxes and doors, of base metal
40	8304	Office or desk equipment, staples in strips, of base metal
40	8306 100	Bells, gongs and the like, of base metal
40	8308	Clasps, buckles, hooks, eyelets and the like, of base metal
40	8310	Sign-plate, name-plate, address-plates and the like
40	8311	Wire, rods, tubes, plates and electrodes, of base metal
40	8469	Typewriters and word-processing machines
40	8470	Calculating machines
40	8471	Automatic date processing machines and units thereof
40	8472	Other office machines
40	8473	Parts and accessories of office machines
40	8506	Primary cells and primary batteries
40	8510	Shavers and hair clippers, with electric motor
40	8513 900	Parts of portable electric lamps
40	8516	Electric heating apparatus and radiators
40	8517	Electrical apparatus for line telephony or line telegraphy
40	8526	Radar, radio navigational aid and remote control apparatus
40	8529 109 909	Parts suitable for electric apparatus
40	8531	Electrical sound or visual signalling apparatus
40	8539	Electric filament or discharge lamps

Source: Customs Tariff and Business Tax

Table-7 Import. Duty Rate by Type of Goods in Thailand 1985-7  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
40	8543	Electrical machines and apparatus, with individual functions
40	8544	Insulated wire, cable and other electric conductors
40	8702 101 901	Public-transport type passenger motor vehicles
40	8704	Motor vehicles for the transport of goods
40	8705	Special purpose motor vehicles; crane lorries and the like
40	8712	Bicycles and other cycles, not motorised
40	8714	Parts and accessories of vehicles
40	8716	Trailers and semi-trailers
40	9005	Binoculars, monoculars, optical telescopes, and mountings
40	9006	Photographic (other than cinematographic) cameras
40	9007	Cinematographic cameras and projectors
40	9008	Image projectors, other than cinematographic
40	9009	Photo-copying apparatus incorporating an optical system
40	9010	Apparatus and equipment for photographic laboratories
40	9101, 9102	Wrist-watches, pocket-watches and other watches
40	9106	Time of day recording apparatus
40	9108	Watch movements, complete and assembled
40	9110	Complete watch or clock movements
40	9114	Other clock or watch parts
40	9202 ~ 9209	Musical instruments
40	9302 ~ 9307	Arms and ammunition
40	9405 300	Lighting sets of a kind uses for Christmas trees
40	9504	Articles for funfair, table or parlour games
40	9505	Festive, carnival or other entertainment articles
40	9507	Fishing rods, fish-hooks and other line fishing tackle
40	9508	Roundabouts, swings and other fairground amusements
40	9601	Worked ivory, bone, horn and other animal carving materials
40	9602	Worked vegetable or mineral carving material and articles
40	9603 902	Prepared knots and tufts for broom or brush making
40	9604	Hand sieves and hand riddles
40	9608	Ball pens, fountain pens, stylograph pens, and the like
40	9609	Pencil, Crayons, pastels, drawing charcoals, and the like
40	9610	Slates and boards, with writing or drawing surfaces
40	9611	Date, sealing or numbering stamps, and the like
40	9612	Ribbons of typewriter and similar ribbons
40	9615	Combs, hair-sliders and the like
40	9704	Postage or revenue stamps, stamp-postmarks, and the like
40	9705	Collections pieces of zoological, historical (etc), interest
35	0410 009	Edible products of animal origin
35	0501 ~ 0511	Products of animal origin
35	1201 009	Soya beans, not edible
35	1202 109	Ground-nuts in shell, not edible
35	1202 209	Ground-nuts, shelled, not edible
35	1204	Linseed
35	1205	Rape or colza seeds
35	1206 009	Sunflower seeds, not edible
35	1207	Other oil seeds and oleaginous fruits
35	1401 ~ 1404	Vegetable plaiting materials
35	1519	Industrial monocarboxylic fatty acids, alcohols or acid oils
35	1520	Glycerol waters and glycerol lyes
35	1901 901	Malt extract
35	2712	Petroleum jelly, paraffin waxes and other similar waxes
35	3301	Essential oils of citrus fruit
35	3501	Casein, caseinates and other casein derivatives
35	3502	Albumins, albuminates and other albumin derivatives
35	3504	Peptones and their derivative, hide powder
35	3505	Dextrins, other modified starches and glues
35	3801 300	Carbonaceous pastes for electrodes and furnace linings
35	3801 900	Preparations based on graphite or other carbon
35	3812 200	Compound plasticisers for rubber or plastic
35	3812 300	Anti-oxidising preparations for rubber or plastics
35	3815	Reaction initiators, accelerators and catalytic preparations
35	3816	Refractory cements, mortars and concretes
35	3817	Mixed alkylbenzenes and mixed alkyl-naphthalenes
35	3818	Chemical elements and compounds doped for use in electronics

Source: Customs Tariff and Business Tax

**Table-8 Import Duty Rate by Type of Goods in Thailand 1985-8**  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
35	3819	Hydraulic brake fluids for hydraulic transmission
35	3820	Anti-freezing preparations and prepared de-icing fluids
35	3822	Composite diagnostic or laboratory reagents
35	3823	Prepared binders for foundry moulds or cores
35	4011	New pneumatic tyres, of rubber
35	4012 102 109	Retreaded tyres of rubber
35	4012 202 209	Used pneumatic tyres of rubber
35	4012 909	Interchangeable tyre treads and tyres flaps, of rubber
35	4013	Inner tubes, of rubber
35	4802 100	Hand-made paper and paperboard
35	4802 200	Paper and paperboard, as a base for photo, heat and other
35	4802 300	Carbonising base paper
35	4802 400	Wallpaper base
35	4803 009	Toilet or facial tissue stock, towel or napkin stock
35	4804, 4805	Uncoated kraft paper and paperboard, in rolls or sheets
35	4806	Glazed transparent or translucent papers, in rolls or sheets
35	4807	Composite paper and paperboard
35	4808	Corrugated paper and paperboard, sack kraft paper
35	4809	Carbon paper and other copying or transfer paper
35	4810	Paper and paperboard used for printing or graphic purposes
35	4811	Paper, cellulose wadding and webs of cellulose fibres
35	5603	Nonwovens, whether or not impregnated, covered or laminated
35	5608	Knotted netting of twine, cordage or rope
35	5609	Articles of yarn, strip, twine, cordage, rope or cables
35	5901	Textile fabrics coated with gum or amylose substances
35	5911	Textile products and articles, for technical uses
35	6806	Slag wool, rock wool and similar mineral wools
35	6901	Bricks, block, tiles and other ceramic goods
35	6902, 6903	Refractory ceramic constructional goods
35	6909	Ceramic wares for laboratory, chemical and technical uses
35	7005 101 211 291	Optic glass
35	7006 001	Optic glass
35	7019	Glass fibres and articles thereof
35	7106	Silver including silver plated with gold or platinum
35	7107	Base metal clad with silver
35	7108	Gold including gold plated with platinum
35	7109	Base metals or silver, clad with gold
35	7110	Platinum
35	7111	Base metals, silver or gold, clad with platinum
35	7112	Waste and scrap of precious metal or of metal clad
35	7217 120 220	Wire of iron or non-alloy steel; plated or coated with zinc
35	7217 131 231	Wire of iron or non-alloy steel; plated or coated with tin
35	7217 320	Wire of iron or non-alloy steel; plated or coated with zinc
35	7217 331	Wire of iron or non-alloy steel; plated or coated with tin
35	7303 ~ 7307	Tubes, pipes and hollow profiles, of iron or steel
35	7310	Tanks, casks, drums and similar containers, of iron or steel
35	7312	Stranded wire, ropes, cables and the like, of iron or steel
35	7313	Barbed wire of iron or steel
35	7314	Woven products and expanded metal of iron or steel
35	7315 110 120 190	Articulated link chain and parts, of iron or steel
35	7316	Anchors, grapnels and parts thereof, of iron or steel
35	7317	Nails, tacks, staples and similar articles, of iron or steel
35	7318	Bolts, nuts, rivets and similar articles, of iron or steel
35	7320	Springs and leaves for springs, of iron or steel
35	7322	Radiators for central heating and parts, of iron or steel
35	7323 100	Household articles; iron or steel wool
35	7325	Cast articles of iron or steel
35	7326	Other articles of iron or steel
35	7413	Stranded wire, cables, plaited bands and the like, of copper
35	7415	Nails, tacks, staples and the like, of copper, iron or steel
35	7416	Copper springs
35	7419	Chain and parts thereof, other articles of copper
35	7508 009	Articles of nickel, of a kind not used for domestic purpose
35	7606	Aluminium plates, sheets and strip, of a thickness
35	7607	Aluminium foil of a thickness
35	7610	Aluminium structures and parts of structures

Source: Customs Tariff and Business Tax

Table-9 Import Duty Rate by Type of Goods in Thailand 1985-9  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
35	7611	Aluminium reservoirs, tanks, vats and similar containers
35	7612	Aluminium casks, drums, cans, boxes and similar containers
35	7614	Stranded wire, plaited bands and the like of aluminium
35	7616	Nails, bolts, nuts, Washers and similar articles of aluminium
35	7806 009	Containers, normally used for containing goods, of lead
35	7907	Gutters, roof capping, skylight and the like, of zinc
35	8007 009	Containers, normally used for containing goods, of tin
35	8101	Tungsten; bars, rods, wire and the like
35	8102	Molybdenum; bars, rods, wire and the like
35	8103 900	Tantalum and articles thereof; except unwrought tantalum
35	8104 300	Magnesium; raspings, turnings and granules
35	8104 900	; except unwrought magnesium
35	8105 900	Cobalt and articles thereof; except unwrought cobalt
35	8106 900	Bismuth and articles thereof; except unwrought bismuth
35	8107 900	Cadmium and articles thereof; except unwrought cadmium
35	8108 900	Titanium and articles thereof; except unwrought titanium
35	8109 900	Zirconium and articles thereof; except unwrought zirconium
35	8110 900	Antimony and articles thereof; except unwrought antimony
35	8111 900	Magnanese and articles thereof; except unwrought magnanese
35	8112 190	Beryllium and articles thereof; except unwrought beryllium
35	8112 209	Chromium and articles thereof; except unwrought chromium
35	8112 309	Germanium and articles thereof; except unwrought germanium
35	8112 409	Vanadium and articles thereof; except unwrought vanadium
35	8112 990	Other base metal and articles thereof; except unwrought
35	8113 009	Cermets and articles thereof; except unwrought cermets
35	8307	Flexible tubing of base metal, with or without fittings
35	8309	Stoppers, caps or lids for packing accessories of base metal
35	8419	Machinery, plant or laboratory equipment
35	8421	Centrifuges, includig centrifugal dryers
35	8451 909	Parts of machines; wringing, dressing, finishing and other
35	8452	Sewing machines and parts thereof
35	8501	Electric motors and generators
35	8502	Electric generating sets and rotary converters
35	8503	Parts suitable for use solely or principally
35	8504	Electrical transformers, static converters and inductors
35	8511	Electrical ignition or starting equipment
35	8512	Electrical lighting or signalling equipment
35	8532	Electrical capacitors, fixed, variable or adjustable
35	8533	Electrical resistors, other than heating resistors
35	8534	Printed circuits
35	8535, 8536	Electrical apparatus for switching or protecting electrical circuits or of making connections.
35	8537	Boards, panels, desks and cabinets, of electric control
35	8538	Parts suitable for use solely or principally; 8535~8537
35	8539 100	Electrical sealed beam lamp units
35	8539 901	Electrical parts of sealed beam lamp units
35	8540	Thermionic, cold cathode or photo-cathode valves and tubes
35	8541	Diodes, transistors and similar semi-conductor devices
35	8542	Electronic integrated circuits and microassemblies
35	8545	Carbon electrodes and brushes, lamp and battery carbons
35	8546	Electrical insulators of any material
35	8547	Insulating fittings for electrical machines or equipment
35	8548	Electrical parts and machinery or apparatus
35	8901 ~ 8907	Ships, boats and floating structures
35	9001, 9002	Optical elements, of any elements, unmounted
35	9003 900	Parts of frames and mountings for spectacles or goggles
35	9013	Liquid crystal devices and other optical instruments
35	9017	Instruments for measuring length
35	9024	Machines and appliances for testing hardness or strength
35	9025	Hydrometers and similar floating instruments or thermometers
35	9026, 9027	Instruments and apparatus for measuring or checking
35	9028	Gas, liquid or electricity supply or production meters
35	9029	Counters, meters, indicators and tachometers of all kinds
35	9030	Oscilloscopes, spectrum analysers for measuring or checking
35	9031	Measuring or checking instruments, appliances and machines
35	9032	Automatic regulating or controlling instruments or apparatus
35	9405 500	Non-electrical lamps and lighting fittings

Source: Customs Tariff and Business Tax

Table-10 Import Duty Rate by Type of Goods in Thailand 1985-10  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
30	0407	Birds' eggs, in shell, fresh, preserved or cooked
30	0408	Birds' eggs and egg yolks by steaming or boiling in water
30	0904	Pepper of the genus Piper
30	0905	Vanilla
30	0906	Cinamon and cinamon-tree flowers
30	0907	Cloves (whole fruit, cloves and stems)
30	0908	Nutmeg, mace and cardamoms
30	0909	Seeds of anise, badian, fennel, cumin, caraway or juniper
30	0910	Ginger, saffron, turmeric, thyme, bay leaves and curry
30	1213	Cereal straw and hucks
30	1214	Swedes, mangolds, fodder roots, hay, sainfoin and vetches
30	1302	Vegetable saps and extracts
30	1501 ~ 1506	Animal or vegetable fats, oils and their cleavage products
30	1512 ~ 1518	Animal or vegetable fats, oils and their cleavage products
30	1521 ~ 1522	Animal or vegetable fats, oils and their cleavage products
30	1702 101	Confectionery; chemically pure lactose and luctose syrup
30	1702 301	; chemically pure glucose and gulcose syrup
30	1702 500	; chemically pure fructose
30	1702 901	; chemically pure maltose and malotse syrup
30	1801 ~ 1805	Cocoa and Cocoa preparations
30	2523	Portland cement, aluminous cement, slug cement and so on
30	2705	Coal gas, water gas, producer gas and similar gases
30	2707	Oils and other products of the distillation of coal tar
30	2710 009	Petroleum oils and oils obtained from bituminous minerals
30	2801 ~ 2851	Inorganic chemicals; of rare-earth metals, precious metals
30	2901 ~ 2942	Organic chemicals
30	3003 ~ 3004	Medicaments
30	3005	Wadding, gauze, bantages and similar articles
30	3006	Blood-grouping reagents and other pharmaceutical goods
30	3102 ~ 3105	Fertilisers
30	3204	Synthetic organic colouring matter
30	3206	Inorganic colouring matter of a kind used as luminophores
30	3207	Prepared pigments, opacifiers and vitrifiable enamels
30	3208 ~ 3210	Paints and varnishes including enamels and lacquers
30	3211	Prepared driers
30	3212	Pigments; stamping foils, dyes and other colouring matter
30	3213	Artists', students' or signboard painters' colours
30	3214	Glaziers' putty, grafting putty, resin cements and mastics
30	3507	Enzymes prepared enzymes not elsewhere specified or included
30	3701 100	Photographic plates and film in the flat for X-ray
30	3702 100	Photographic film in rolls for X-ray
30	3705	Cinematograph film, exposed and developed
30	3707	Chemical preparations for photographic uses
30	3801 100	Artificial graphite
30	3801 200	Colloidal or semi-colloidal graphite
30	3802	Activated carbon; animal black, including spent animal black
30	3803	Tall oil, whether or not refined
30	3804	Residual lyes from the manufacture of wood pulp
30	3805	Gum, wood or sulphate turpentine and other terpenic oils
30	3807	Wood tar, tar oils, creosote, naphtha and vegetable pitch
30	3808	Sulphurtreated bands, wicks and candles, and fly-papers
30	3809	Dressings and mordants
30	3810	Pickling preparations for metal surfaces
30	3811	Anti-knock preparations, oxidation and gum inhibitors
30	3812 100	Prepared rubber accelerators
30	3814	Organic composite solvents and thinners
30	3821	Prepared culture media for development of micro-organisms
30	4002 110 191 201 311 391 410 491 510 591 601 701 910 991	Synthetic rubber and factice derived from oils, in primary forms
30	4003	Reclaimed rubber in primary forms or in plates
30	4004	Waste, parings and scrap of rubber, powders and granules
30	4101	Raw hides and skins of bovine or equine animals
30	4102	Raw skins of sheep or lambs
30	4103	Other raw hides and skins

Source: Customs Tariff and Business Tax

Table-II Import Duty Rate by Type of Goods in Thailand 1985-11  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
30	4204	Articles of leather or of composition leather, and so on
30	4206	Articles of gut, of goldbeater's skin, and so on
30	4301	Raw furskins, other than raw hides and skins
30	4501 ~ 4504	Cork and articles of cork
30	4601 100	Plaits and similar products of plaiting materials
30	4801	Newsprints, in rolls or sheets
30	4802 510 520 530 600	Paper and paperboard
30	5006 001	Silk yarn and yarn spun from silk waste; silk-worm gut
30	5101	Wool, carded or combed
30	5102	Fine or coarse animal hair, not carded or combed
30	5103	Waste of Wool or of Fine or coarse animal hair
30	5104	Garnetted stock of wool or of fine or coarse animal hair
30	5105	Wool and fine or coarse animal hair, carded or combed
30	5204	Cotton sewing thread, whether or not put up for retail sale
30	5205	Cotton yarn, containing 85% or more by weight of cotton
30	5206	Cotton yarn, containing less than 85% by weight of cotton
30	5207	Cotton yarn put up for retail sale
30	5301 ~ 5308	Paper yarn and woven fabrics of paper yarn
30	5401	Sewing thread of man-made filaments
30	5402	Synthetic filament yarn other than sewing thread
30	5403	Artificial filament yarn other than sewing thread
30	5404, 5405	Synthetic monofilament; artificial straw
30	5406	Man-made filament yarn other than sewing thread
30	5501	Synthetic filament tow
30	5502	Artificial filament tow
30	5503, 5506	Synthetic staple fibres
30	5504, 5507	Artificial staple fibres
30	5505	Waste of man-made fibres
30	5601 211	Wadding of textile materials and articles of cotton
30	5601 221	Wadding of textile materials and articles of man-made fibres
30	5601 291	Other wadding of textile materials and articles
30	5601 300	Wadding of textile flock and dust and mill neps
30	5908	Textile wicks, woven, plaited or knitting for lumps, etc
30	5910	Transmission or conveyor belts, of textile materials
30	6305	Snacks and bags, of a kind used for the packlg of goods
30	6406 991	Parts of footwear; gaiters, legging and similar articles
30	6501	Hat-forms, hat hoodies and hoods of felt
30	6502	Hat-shapes, made by assembling strips of any material
30	6507	Head-bands, linings, hat frames and chinstraps for headgear
30	7002	Glass in balls, rods or tubes, unworked
30	7010 909	Bottles, jars and pots of glass
30	7011	Glass envelopes, open, and glass parts thereof
30	7015 900	Watch glasses and similar glasses
30	7301	Sheet piling of iron or steel
30	7302	Railway or tramway track construction of iron or steel
30	7308	Structures and parts of structures, of iron or steel
30	7319 100	Sewing, darning or embroidery needles
30	7319 900	Needles or pins for use in the hand, of iron or steel
30	7604	Aluminium bars, rods and profiles
30	7605	Aluminium wire
30	8401 ~ 8468	Nuclear reactors, boilers, machinery
30	8474 ~ 8485	and mechanical appliances; parts thereof
30	8505	Electro-magnets
30	8508	Electro-mechanical tools for working in the hand
30	8514	Industrial or laboratory electric furnaces and ovens
30	8515	Electric machines and apparatus for hot spraying of metals
30	8530	Electric signalling, safety or traffic control equipment
30	8608 001	Electro-mechanical traffic control equipment
30	8701	Tractors
30	8703 221	Motor car and motor vehicles(spark-ignition); 1000cc-1500cc
30	8703 231	: 1500cc-3000cc
30	8703 241	: exceeding 3000cc
30	8703 311	(compression-ignition); not exceeding 1500cc
30	8703 321	: 1500cc-2500cc
30	8703 331	: exceeding 2500cc
30	8713	Invalid carriages

Source: Customs Tariff and Business Tax

Table-12 Import Duty Rate by Type of Goods in Thailand 1985-12  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
30	8715	Baby carriages and parts thereof
30	9018	Instruments used in medical, dental or veterinary sciences
30	9019	Mechano-therapy appliances
30	9020	Breathing appliances and gas masks
30	9021	Orthopaedic appliances
30	9022	Apparatus based on the use of X-rays, $\alpha$ , $\beta$ , $\gamma$ radiations
30	9023	Instruments and models designed for demonstrational purposes
30	9603 901	Hand-operated mechanical floor sweepers, not motorised
30	9608 910	Parts of pen; pen nibs and nib points
25	0402 100 219 290	Sweetening matter in powder, granules or other solid forms
25	0404 109 909	Whey in not liquid, including concentrated forms
25	0405 001	Butter and other fats and oils derived from milk
25	2701	Mineral fuels and oils; coal
25	2702	: lignite
25	2703	: peat
25	2704	: coke and semi-coke
25	2708	: pitch and pitch coke
25	2709	: petroleum oils
25	2710 005	Benzine, kerosene, diesel, heavy fuel and other oils
25	3001	Glands and other organs for organo-therapeutic uses
25	3002	Human or animal blood, antisera and other blood fractions
25	4404	Hoopwood, split poles, piles, pickets and stakes of wood
25	6310	Used or new rags, scrap twine, cordage, rope and cables
25	6805	Natural or artificial abrasive powder or grain
25	7901	Cullet and other waste and scrap of glass; glass in the mass
25	7019 901	Glass fibres including glass wool
25	7101	Natural or cultured pearls
25	7204 500	Remelting scrap ingots of iron or steel
25	7206	Iron and non-alloy steel in ingots or other primary forms
25	7207	Semi-finished products of iron or non-alloy steel
25	7213 ~ 7215	Bars and rods, hot-rolled of iron or non-alloy steel
25	7217 110 210 310	Wire of iron or non-alloy steel; not plated or coated
	139 239 339	
	190 290 390	
25	7218	Stainless steel in ingots or other primary forms
25	7222	Bars and rods of stainless steel
25	7223	Wire of stainless steel
25	7224	Alloy steel in ingots or other primary forms
25	7227, 7228	Bars and rods, hot-rolled, in irregularly wound coils
25	7229	Wire of alloy steel
25	7406	Copper powders and flakes
25	7410 210	Copper foil backed with paper, of refined copper
25	7410 220	Copper foil backed with paper, of copper alloys
25	7504	Nickel powders and flakes
25	7506 101	Foil, of nickel not alloyed, with backing material
25	7506 201	Foil, of nickel alloys, with backing material
25	7603	Aluminium powders and flakes
25	7804 111	Lead foil with backing material
25	7804 200	Lead powders and flakes
25	7903	Zinc dust, powders and flakes
25	7905 001	Zinc foil with backing material
25	8005	Tin foil with-backing material
25	8202 ~ 8208	Hand-tools; of base metal
25	8209	Plates, sticks, tips and the like for tools
25	8709	Works trucks, tractors and parts of foregoing vehicles
20	3806	Gum, wood or sulphate turpentine and other terpenic oils
20	4011 991	New pneumatic tyres, of rubber
20	4012 101 201	Retreaded or used pneumatic tyres of rubber
20	4012 901	: solid or cushion tyres
20	4104 109 221 229 299	Leather of bovine or equine animals, without hair on
20	4105 110 129 199	Sheep or lamb skin leather, without wool on
20	4106 110 129 199	Goat or kid skin leather, without hair on
20	4107 109 210 299 909	Leather of other animals, without hair on
20	4110	Parings and other waste of leather or of composition leather

Source: Customs Tariff and Business Tax



**Table-13 Import Duty Rate by Type of Goods in Thailand 1985-13**  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
20	4111	Composition leather with a basis of leather or its fibre
20	4406	Railway and tramway sleepers of (cross-ties) wood
20	4407 109 219 229 239 919 929 999	Wood sawn or chipped lengthwise, of thickness
20	7010 100	Ampoules of glass
20	7015 100	Glasses for corrective spectacles
20	7017	Laboratory, hygienic or pharmaceutical glassware
20	7102	Diamonds, not mounted or set
20	7103	Precious or semi-precious stones other than diamonds
20	7104	Synthetic or reconstructed precious or semi-precious stones
20	7105	Dust and powder of natural or synthetic precious stones
20	7901	Unwrought zinc
20	7902	Zinc waste and scrap
20	7904 009	Zinc Bars, rods and wire
20	7905 009	Zinc plates, sheets and strip
20	7906	Zinc tubes, pipes and tube or pipe fitting
20	8201	Hand tools; spades, shovels, mattocks, forks and so on
20	9402	Revolvers and pistols
17	7210, 7212	Flat-rolled products of iron or non-alloy steel
17	7309	Reservoirs, tanks and similar containers of iron or steel
17	7311	Containers for compressed or liquefied gas, of iron or steel
17	7407	Copper bars, rods and profiles
17	7408	Copper wire
17	7409	Copper plates, sheets and strip
17	7410 110	Copper foil not backed of refined copper
17	7410 120	Copper foil backed of copper alloys
17	7411	Copper tubes and pipes
17	7412	Copper tube or pipe fittings
17	7414	Cloth, grills and netting, of copper wire
17	7505	Nickel bars, rods, profiles and wire
17	7506 109	Nickel plates, sheets and strip, of nickel, not alloyed
17	7506 209	Nickel plates, sheets and strip, of nickel, alloys
17	7507	Nickel tubes, pipes and tube or pipe fittings
17	7608	Aluminium tubes and pipes
17	7609	Aluminium tube or pipe fittings
17	7612 101	Aluminium tubes for containing tooth-paste or the like
17	7613	Aluminium containers for compressed or liquefied gas
17	7616 901	Articles of aluminium; expanded metal
17	7803	Lead bars, rods, profiles and wire
17	7804 119	Lead plates, sheets and strip with backing material
17	7804 190	Lead plates, sheets and strip, not of a thickness
17	7805	Lead tubes, pipes and tube or pipe fittings
17	8003	Tin bars, rods, profiles and wire
17	8004	Tin plates, sheets and strip of a thickness
17	8005 109	Tin foil of a thickness not with-backing material
17	8006	Tin tubes, pipes and tube or pipe fittings
15	1301	Lac; natural gums, resins, gum-resins and balsams
15	2501 ~ 2522	Salts; sulphur; earths and stone;
15	2524 ~ 2530	plastering materials, lime and cement
15	2714	Bitumen and asphalt, oil shale and tar sands and so on
15	2715	Bituminous mixtures based on natural asphalt
15	3201	Tanning extracts of vegetable origin
15	3202	Synthetic organic and inorganic tanning, and of preparation
15	3203	Colouring matter of vegetable or animal origin
15	3205	Colour lakes; food colours, dyes for textiles and other
15	4405	Wood wool; wood flour
15	4413	Densified wood, in blocks, plates, strips or profile shapes
15	4803 001	Cellulose wadding not further worked than being coloured
15	4812	Filter blocks, slabs and plates, of paper pulp
15	4823 902	Cellulose wadding and webs of cellulose fibres
15	7106 921	Precious metals; silver
15	9011	Compound optical microscopes
15	9012	Microscopes other than optical microscopes
15	9014	Direction finding compasses

Source: Customs Tariff and Business Tax

Table-14 Import Duty Rate by Type of Goods in Thailand 1985-14  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
15	9015	Meteorological or geophysical instruments and appliances
15	9016	Balances of sensitivity of 5 cg or better
12	7208	Flat-rolled products of iron or non-alloy steel
12	7219	Flat-rolled products of stainless steel
12	7225	Flat-rolled products of silicon-electrical, high speed steel
12	7315	Chain and parts thereof, of iron or steel
12	7405	Master alloys of copper
12	7501	Nickel mattes, nickel oxide sinters, intermediate products
12	7502	Unwrought nickel
12	7503	Nickel waste and scrap
12	7801	Unwrought lead
12	7802	Lead waste and scrap
12	8001	Unwrought tin
12	8002	Tin waste and scrap
12	8101 100	Tungsten (wolfram) and articles thereof; powders
12	8101 910	; other unwrought tungsten
12	8102 100	Molybdenum and articles thereof; powders
12	8102 910	; other unwrought molybdenum
12	8103 100	Tantalum and articles thereof; unwrought tantalum
12	8104 100	Magnesium and articles thereof; unwrought magnesium
12	8105 100	Cobalt mattes and other intermediate products
12	8106 100	Bismuth and articles thereof; unwrought bismuth
12	8107 100	Cadmium and articles thereof; unwrought cadmium
12	8108 100	Titanium and articles thereof; unwrought titanium
12	8109 100	Zirconium and articles thereof; unwrought zirconium
12	8110 100	Antimony and articles thereof; unwrought antimony
12	8111 100	Manganese and articles thereof; unwrought manganese
12	8112 110	Unwrought beryllium; waste and scrap; powders
12	8112 201	Unwrought chromium; waste and scrap; powders
12	8112 301	Unwrought germanium; waste and scrap; powders
12	8112 401	Unwrought vanadium; waste and scrap; powders
12	8112 910	Other unwrought metals; waste and scrap; powders
12	8113 001	Unwrought cermets; waste and scrap; powders
10	0402 211	Milk and cream, not containing added sugar
10	1901 101	Preparations for infant use; milkfood
10	1901 902	Infant milkfood
10	2301 ~ 2309	Residues and waste from the food industries
10	2601 ~ 2621	Ores, slag and ash
10	2713	Petroleum coke, petroleum bitumen and other residues
10	4203 210	Articles of apparel and clothing accessories for sports
10	4401	Fuel wood and wood in chips or particles
10	4402	Wood charcoal, whether or not agglomerated
10	4403	Wood in the rough
10	4701 ~ 4707	Pulp of wood or of other fibrous cellulosic material
10	5001	Silk-worm cocoons suitable for reeling
10	5002	Raw silk (not thrown)
10	5003	Silk waste
10	5004	Silk yarn (other than yarn spun from silk waste)
10	5005	Yarn spun from silk waste
10	5006 009	Silk yarn and yarn spun from silk waste
10	5909	Textile hosepiping and similar textile tubing
10	9005 100	Binoculars
10	9005 901	Parts and accessories of astronomical instrument
10	9506	Articles and equipment for gymnastic, athletics; all sports
6	7201	Pig iron and spiegeleisen in pigs, blocks or primary forms
6	7202	Ferro-alloys
6	7203	Ferrous products obtained by direct reduction of iron ore
6	7204	Ferrous waste and scrap
6	7205	Granules and powders of iron or steel
6	7401	Copper mattes and cement copper
6	7402	Unrefined copper; copper anodes for electrolytic refining
6	7403	Refined copper and copper alloys, unwrought
6	7404	Copper waste and scrap

Source: Customs Tariff and Business Tax

Table-15. Import Duty Rate by Type of Goods in Thailand 1985-15  
(Order of the Higher Rate)

Rate of duty	Heading No.	Goods
6	7601	Unwrought aluminium
6	7602	Aluminium waste and scrap
5	0101	Live horses, asses, mules and hinnies
5	1211 901	Plants and parts of plants; pyrethrum
5	1404 200	Vegetable products; cotton linters
5	2520 201	Plasters, used in dentistry
5	3215	Printing ink, writing or drawing ink and other ink
5	3407 001	Preparations for use in dentistry, with a basis of plaster
5	4902	Newspapers, journals and periodicals
5	4903	Children's picture, drawing or colouring books
5	4904	Music, printed or in manuscript
5	4905	Maps and hydrographic or similar charts of all kinds
5	4906	Plants and drawing for architectural, engineering purposes
5	5201	Cotton, not carded or combed
5	5202	Cotton waste
5	5203	Cotton, carded or combed
5	7904 001	Zinc bars, profiles and wire; telegraph or telephone wire
5	8525	Transmission apparatus for radio or television
5	8529 101 901	Parts suitable for use with transmission or other apparatus
5	8601	Rail locomotives powered from a source of electricity
5	8602	Rail locomotive tenders
5	8603	Self-propelled railway or tramway coaches, vans and trucks
5	8604	Railway or tramway maintenance or service vehicles
5	8605	Railway or tramway passenger coaches, not self-propelled
5	8606	Railway or tramway goods vans and wagons; not self-propelled
5	8607	Parts of railway or tramway locomotives or rolling-stock
5	8608 009	Railway or tramway track fixtures and fittings
5	8609	Containers specially designed and equipped for carriage
5	8801 ~ 8805	Aircraft, spacecraft, and parts thereof
5	8908	Vessels and other floating structures for breaking up
5	9507 200	Fish-hooks, whether or not snelled

Source: Customs Tariff and Business Tax



## 2. Degree of Labor Intensiveness by Types of Manufacturing Industry in Japan 1985



Table-16 Degree of Labor Intensiveness by Types of Manufacturing Industry  
in Japan 1985 (Order of the Higher Degree)-1

Number of persons engaged per book value of fixed assets (Persons / 100 Mill Baht)		Amount paid ratio to value added (%)
1	15 Apparel and other finished products	470
2	24 Leather tanning and its products	244
3	14 Textile and its products	151
4	17 Furniture and fixtures	143
5	32 Precision instruments and machinery	138
6	34 Miscellaneous manufacturing industries	128
7	16 Lumber and wood products	114
8	30 Electrical machinery equipment and supplies	114
9	33 Ordnance	107
10	12 Food products	105
11	19 Publishing, printing and allies industries	102
12	23 Rubber products	101
13	29 General machinery	95
14	28 Fabricated metal products	92
15	22 Plastic products	83
16	31 Transportation equipment	75
17	25 Ceramic, stone and clay products	60
18	18 Pulp, paper and paper products	42
19	27 Non-ferrous metals and products	41
20	20 Chemicals and allied products	35
21	13 Beverage, feed and tobacco products	31
22	26 Iron and steel	24
23	21 Petroleum and coal products	8
1	33 Ordnance	57.2
2	15 Apparel and other finished products	53.2
3	24 Leather tanning and products and fur skin	48.5
4	14 Textile mill products	48.5
5	16 Lumber and wood products except furniture	46.3
6	23 Rubber products	43.8
7	32 Precision instruments and machinery	43.7
8	17 Furniture and fixtures	41.7
9	29 General machinery	41.1
10	19 Publishing printong and allies industries	41.0
11	28 Fabricated metal products	40.9
12	27 Non-ferrous metals and products	40.1
13	31 Transportation equipment	39.3
14	18 Pulp paper and paper products	37.1
15	22 Plastic products not elsewhere classified	36.8
16	25 Ceramic stone and clay products	35.6
17	30 Electrical machinery equipment and supplies	35.5
18	34 Miscellaneous manufacturing industries	35.3
19	26 Iron and steel	34.2
20	12 Food manufacturing	34.0
21	20 Chemical and allied products	21.9
22	13 Beverage feed and tobacco	21.1
23	21 Petroleum and coal products	16.3

Source: Report of the 1985 Japan Industrial Survey (Establishment more than 30 persons)

Remark: 1 Baht = 5 Yen

Table-17 Degree of Labor Intensiveness by Types of Manufacturing Industry  
in Japan 1985 (Order of the Higher Degree)-2

Number of persons engaged per book value of fixed assets (Persons / 100 Mill Baht)		Amount paid ratio to value added (%)	
TOTAL	74	TOTAL	36.0
1	152	1	153
2	151	2	141
3	155	3	134
4	243	4	213
5	245	5	243
6	247	6	152
7	154	7	216
8	232	8	195
9	145	9	345
10	246	10	151
11	153	11	194
12	244	12	163
13	346	13	312
14	348	14	215
15	163	15	232
16	172	16	279
17	322	17	266
18	248	18	155
19	159	19	147
20	345	20	241
21	123	21	142
22	194	22	146
23	173	23	244
24	122	24	145
25	141	25	254
26	301	26	325
27	324	27	314
28	303	28	273
29	321	29	286
30	325	30	289
31	312	31	295
32	326	32	346
33	344	33	173
34	343	34	301
35	147	35	233
36	171	36	285
37	142	37	247
38	241	38	193
39	129	39	221
40	254	40	255
	TOTAL		TOTAL
	White shirts and underwear		Hats
	Outer garment except Japanese style		Silk reeling plants
	Miscellaneous textile, apparel, etc.		Manufactured ice
	Boot and shoe cut stock and findings		Coke
	Leather gloves and mittens		Boot and shoe cut stock and findings
	Handbags and small leather goods		White shirts and underwear
	Fur apparel and apparel accessories		Briquettes and briquette balls
	Rubber and plastic footwear		Book-binding and printed matters
	Knitting mills		Costume jewelry, etc.
	Luggage		Outer garment except Japanese style
	Hats		Plate making for printing
	Leather footwear		Wooden containers
	Lacquer ware		Railroad equipment and parts
	Other manufacturing 1		Paving materials
	Wooden containers		Rubber and plastic footwear
	Furniture for religious purposes		Miscellaneous non-ferrous metal products
	Surveying instruments		Steel forgings and casting
	Fur skins		Miscellaneous textile, apparel, etc.
	Miscellaneous fabricated textile products		Ropes and nettings
	Costume jewelry, etc.		Leather tanning and finishing
	Canned and preserved fruit and vegetable		Spinning mills
	Plate making for printing		Dyed and finished textiles
	Sliding doors and screens		Leather footwear
	Seafood processing		Knitting mills
	Silk reeling plants		Pottery and related products
	Electrical generator, etc.		Optical instruments and lenses
	Physical and chemical instruments		Ship building and repair and marine engines
	Electric bulbs and lighting fixtures		Non-ferrous metals rolling mills
	Measuring instruments, etc.		Powder metallurgy, plating and heat treating
	Optical instruments and lenses		Miscellaneous fabricated metal products
	Railroad equipment and parts		Textile machinery
	Ophthalmic goods including frames		Lacquer ware
	Pens, pencils and stationery		Sliding doors and screens
	Toys and sporting goods		Electrical generators, etc.
	Ropes and nettings		Industrial rubber products
	Furniture		Stamped and pressed products
	Spinning mills		Handbags and small leather goods
	Leather tanning and finishing		Printing except micrograph printing
	Miscellaneous food and related products		Plastic plates, bars, pipes, tubes, etc.
	Pottery and related products		Clay refractories

Source: Report of the 1985 Japan Industrial Survey (Establishment more than 30 persons)

Remark: 1 Baht = 5 Yen







Table-20 Degree of Labor Intensiveness by Types of Manufacturing Industry  
in Japan 1985 (Order of the Higher Degree)-5

Number of persons engaged per book value of fixed assets (persons / 100 Mill Baht)		Amount paid ratio to value added (%)	
121	48	121	342
122	46	122	Musical instruments and phonograph records
123	47	123	Industrial inorganic chemicals
124	47	124	202 Compounding plastic materials
125	40	125	225 Carbon and graphite materials
126	38	126	256 Carbon and graphite products
127	38	127	262 Iron smelting without blast furnaces
128	36	128	219 Miscellaneous petroleum and coal products
129	36	129	192 Publishing industry
130	36	130	341 Precious metal products
131	36	131	343 Toys and sporting goods
132	33	132	261 Iron industries with blast furnaces
133	32	133	302 Household electric appliances
134	32	134	281 Tin cans and other plated sheet products
135	31	135	201 Chemical fertilizers
136	30	136	305 Computer equipment and accessories
137	29	137	251 Glass and its products
138	26	138	212 Lubricating oils and greases
139	25	139	125 Sugar processing
140	25	140	205 Soaps, detergents, paints, etc.
141	23	141	306 Electronic equipment
142	23	142	126 Flour and grainmill products
143	22	143	124 Seasonings
144	22	144	135 Prepared animal foods and organic fertilizers
145	22	145	203 Industrial organic chemicals
146	22	146	131 Soft drinks and carbonated water
147	19	147	209 Miscellaneous chemical and allied products
148	14	148	206 Drugs and medicines
149	8	149	128 Animal and vegetable oils and fats
150	8	150	132 Alcoholic beverage
151	7	151	211 Petroleum refining
152	x	152	164 Wooden footwear
153	x	153	169 Miscellaneous wood products
154	x	154	242 Mechanical leather products
155	x	155	249 Miscellaneous leather products
156	x	156	199 Service industries related to printing trade
157	x	157	342 Musical instruments and phonograph records
158	x	158	202 Industrial inorganic chemicals
159	x	159	225 Compounding plastic materials
160	x	160	256 Carbon and graphite products
161	x	161	262 Iron smelting without blast furnaces
162	x	162	219 Miscellaneous petroleum and coal products
163	x	163	192 Publishing industry
164	x	164	341 Precious metal products
165	x	165	343 Toys and sporting goods
166	x	166	261 Iron industries with blast furnaces
167	x	167	302 Household electric appliances
168	x	168	281 Tin cans and other plated sheet products
169	x	169	201 Chemical fertilizers
170	x	170	305 Computer equipment and accessories
171	x	171	251 Glass and its products
172	x	172	212 Lubricating oils and greases
173	x	173	125 Sugar processing
174	x	174	205 Soaps, detergents, paints, etc.
175	x	175	306 Electronic equipment
176	x	176	126 Flour and grainmill products
177	x	177	124 Seasonings
178	x	178	135 Prepared animal foods and organic fertilizers
179	x	179	203 Industrial organic chemicals
180	x	180	131 Soft drinks and carbonated water
181	x	181	209 Miscellaneous chemical and allied products
182	x	182	206 Drugs and medicines
183	x	183	128 Animal and vegetable oils and fats
184	x	184	132 Alcoholic beverage
185	x	185	211 Petroleum refining
186	x	186	164 Wooden footwear
187	x	187	169 Miscellaneous wood products
188	x	188	242 Mechanical leather products
189	x	189	249 Miscellaneous leather products
190	x	190	199 Service industries related to printing trade

Source: Report of the 1985 Japan Industrial Survey (Establishment more than 30 persons)

Remark: 1 Baht = 5 Yen



### 3. Manufacturing industries in Bangkok Area 1984



Table—21 Manufacturing industries in Bangkok Area 1984  
(Industries Ranked under 51 place by Scale of Person Engaged)

(Remark:Accum. = Accumulated percentage adding a percentage of the following Industries)

	Code		Number of persons engaged	Percentage to total amount	
				(%)	Accum.
51	38310	Electrical industrial machinery and apparatus	4,336	0.4	92.9
52	38292	Airconditioning machines	4,220	0.4	93.3
53	38500	Precision instruments and machinery	4,047	0.4	93.7
54	35231	Soap and cleaning preparation	3,988	0.4	94.2
55	38110	Cutlery, hand tools and general hardware	3,537	0.4	94.5
56	31111	Slaughtering	3,314	0.3	94.9
57	35210	Paints, varnishes and lacquers	3,101	0.3	95.2
58	38192	Wire and wire products	3,001	0.3	95.5
59	35111	Basic industrial chemicals	2,923	0.3	95.8
60	31219	Other food products	2,876	0.3	96.1
61	31122	Milk factories	2,779	0.3	96.4
62	39011	Cutting and polishing of gem stones	2,513	0.3	96.6
63	31139	Fruit and vegetables products	2,133	0.2	96.8
64	31142	Fish sauce	1,946	0.2	97.0
65	32118	Textile finishing	1,938	0.2	97.2
66	32380	Leather and leather substitutes products	1,811	0.2	97.4
67	38220	Agricultural machinery and equipment	1,781	0.2	97.6
68	32113	Spinning of cotton and man-made fibres	1,764	0.2	97.8
69	38411	Building and repairing of steel ships	1,711	0.2	98.0
70	38393	Electrical lamps	1,519	0.2	98.1
71	31411	Tobacco curing	1,244	0.1	98.2
72	33202	Rattan furniture	1,227	0.1	98.4
73	35601	Plastic containers	1,225	0.1	98.5
74	35299	Other chemical products	1,139	0.1	98.6
75	31212	Manufactured ice	886	0.1	98.7
76	35130	Synthetic resins, plastic materials and artificial fibres	958	0.1	98.8
77	31181	Sugar factories	900	0.1	98.9
78	39012	Jewellery	880	0.1	99.0
79	31121	Dairies	864	0.1	99.1
80	31190	Confectionery	841	0.1	99.2
81	37200	Non-ferrous metal basic industries	776	0.1	99.2
82	35292	Glues	770	0.1	99.3
83	35294	Matches	770	0.1	99.4
84	33120	Wooden and cane containers, etc.	610	0.1	99.5
85	38240	Special industrial machinery and equipment	572	0.1	99.5
86	39030	Sporting and athletic goods	519	0.1	99.6
87	31161	Rice mills	515	0.1	99.6
88	36922	Lime and plaster	420	0.0	99.7
89	39013	Silverware and nielloware	396	0.0	99.7
90	31172	Biscuits	369	0.0	99.7
91	38298	Repair shops	324	0.0	99.8
92	32112	Cotton ginning	322	0.0	99.8
93	31119	Other meat products	288	0.0	99.8
94	38412	Building and repairing of wooden boats	264	0.0	99.9
95	38419	Other shipbuilding and repairing	231	0.0	99.9
96	32203	Headgear	66	0.0	99.9
97	31132	Soy sauce and soy curds	D	D	99.9
98	35300	Petroleum refineries	D	D	99.9

Source: Report of the 1985 Industrial Survey (Establishment more than 20 persons)

Table-22 Manufacturing industries in Bangkok Area 1984  
(Industries Ranked under 51 place by Scale of Gross Output)

(Remark:Accum. = Accumulated percentage adding a percentage of the following industries)  
[Unit:Mill. Baht]

	Code	Types of Industry	Value of gross output	Percentage to total amount	
				(%)	Accm.
51	37120	Iron and steel foundries	2,000	0.3	90.9
52	39011	Cutting and polishing of gem stones	1,884	0.3	91.1
53	34204	Printing other printed matters	1,746	0.2	91.4
54	31139	Fruit and vegetables products	1,730	0.2	91.6
55	31121	Dairies	1,702	0.2	91.9
56	34207	Printing	1,697	0.2	92.1
57	33111	Sawmills and planing mills	1,667	0.2	92.3
58	32150	Cordage, rope and twine	1,651	0.2	92.5
59	31111	Slaughtering	1,419	0.2	92.7
60	35599	Other rubber products	1,330	0.2	92.9
61	32117	Textile printing	1,322	0.2	93.1
62	35299	Other chemical products	1,129	0.2	93.3
63	31181	Sugar factories	962	0.1	93.4
64	34201	Printing and publishing of newspaper	961	0.1	93.5
65	36100	Pottery	820	0.1	93.6
66	35292	Glues	716	0.1	93.7
67	32118	Textile fishing	694	0.1	93.8
68	31142	Fish sauce	642	0.1	93.9
69	39012	Jewellery	602	0.1	94.0
70	31172	Biscuits	524	0.1	94.1
71	38110	Cutlery, hand tools and general hardware	502	0.1	94.2
72	38411	Building and repairing of steel ships	478	0.1	94.2
73	38500	Precision instruments and machinery	434	0.1	94.3
74	32390	Leather and leather substitutes products	388	0.1	94.3
75	31212	Manufactured ice	380	0.1	94.4
76	32113	Spinning of cotton and man-made fibres	359	0.0	94.4
77	38393	Electrical lamps	339	0.0	94.5
78	31411	Tobacco curing	338	0.0	94.5
79	31190	Confectionery	321	0.0	94.6
80	38240	Special industrial machinery and equipment	297	0.0	94.6
81	32112	Cotton ginning	261	0.0	94.7
82	39013	Silverware and nielloware	245	0.0	94.7
83	31119	Other meat products	235	0.0	94.7
84	35601	Plastic containers	233	0.0	94.8
85	37200	Non-ferrous metal basic industries	230	0.0	94.8
86	38220	Agricultural machinery and equipment	214	0.0	94.8
87	35294	Matches	174	0.0	94.8
88	33202	Rattan furniture	163	0.0	94.9
89	31161	Rice mills	136	0.0	94.9
90	33120	Wooden and cane containers, etc.	101	0.0	94.9
91	39030	Sporting and athletic goods	99	0.0	94.9
92	38298	Repair shops	79	0.0	94.9
93	38412	Building and repairing of wooden boats	55	0.0	94.9
94	36922	Lime and plaster	54	0.0	94.9
95	38419	Other shipbuilding and repairing	41	0.0	94.9
96	32203	Headgear	4	0.0	94.9
97	31132	Soy sauce and soy curds	D	D	
98	35300	Petroleum refineries	D	D	

Source: Report of the 1985 Industrial Survey (Establishment more than 20 persons)



#### 4. Bangkok Area's Share in Manufacturing industries of Whole Kingdom 1984



Table-23 Bangkok Area's Share in Manufacturing industries of Whole Kingdom 1984

(Ranked by Scale of Person Engaged) - 1

(Remark: Accum. = Accumulated percentage adding a percentage of the following industries)

Rank	Code	Types of Industry	Bangkok / Whole Kingdom (%)	Number of persons engaged	Percentage to total amount	
					(%)	Accum.
	TOTAL		76.5	978,059	100.0	100.0
1	31111	Slaughtering	100.0	3,314	0.3	0.3
2	31122	Milk factories	100.0	2,779	0.3	0.6
3	31190	Confectionery	100.0	841	0.1	0.7
4	31340	Soft drinks and carbonated waters	100.0	58,785	6.0	6.7
5	32118	Textile finishing	100.0	1,938	0.2	6.9
6	32139	Knitting mills	100.0	8,669	0.9	7.8
7	32150	Cordage, rope and twine	100.0	6,473	0.7	8.5
8	32202	Women's, girls' and infants clothes	100.0	14,652	1.5	10.0
9	32203	Headgear	100.0	66	0.0	10.0
10	32209	Other wearing apparel and accessories	100.0	131,924	13.5	23.5
11	32310	Tanneries, leather finishing, fur dressing	100.0	4,820	0.5	24.0
12	32330	Leather and leather substitutes products	100.0	1,611	0.2	24.1
13	33120	Wooden and cane containers, etc.	100.0	610	0.1	24.2
14	33202	Rattan furniture	100.0	1,227	0.1	24.3
15	34120	Containers and boxes of paper and paperboard	100.0	12,480	1.3	25.6
16	34190	Pulp, paper and paperboard articles	100.0	5,850	0.6	26.2
17	34201	Printing and publishing of newspaper	100.0	5,312	0.5	26.7
18	34207	Printing	100.0	6,014	0.6	27.4
19	35111	Basic industrial chemicals	100.0	2,923	0.3	27.7
20	35231	Soap and cleaning preparation	100.0	3,988	0.4	28.1
21	35292	Glues	100.0	770	0.1	28.1
22	35299	Other chemical products	100.0	1,139	0.1	28.3
23	35601	Plastic containers	100.0	1,225	0.1	28.4
24	36200	Glass and glass products	100.0	17,338	1.8	30.2
25	36921	Cement	100.0	17,634	1.8	32.0
26	36922	Lime and plaster	100.0	420	0.0	32.0
27	37110	Iron and steel works and rolling mills	100.0	26,620	2.7	34.7
28	38110	Cutlery, hand tools and general hardware	100.0	9,537	0.4	35.1
29	38130	Structural metal products	100.0	8,622	0.9	36.0
30	38191	Metal cans and shipping containers	100.0	14,038	1.4	37.4
31	38192	Wire and wire products	100.0	3,001	0.3	37.7
32	38198	Coating, engraving and allied services	100.0	6,389	0.7	38.4
33	38292	Airconditioning machines	100.0	4,220	0.4	38.8
34	38298	Repair shops	100.0	324	0.0	38.8
35	38310	Electrical industrial machinery and apparatus	100.0	4,336	0.4	39.3
36	38320	Radio, television and communication equipment and apparatus	100.0	6,811	0.7	40.0
37	38330	Electrical appliances and housewares	100.0	9,627	1.0	41.0
38	38392	Electric accumulators and batteries	100.0	4,848	0.5	41.4
39	38393	Electrical lamps	100.0	1,519	0.2	41.6
40	38399	Other electrical apparatus and supplies	100.0	10,030	1.0	42.6
41	38411	Building and repairing of steel ships	100.0	1,711	0.2	42.8
42	38419	Other shipbuilding and repairing	100.0	231	0.0	42.8
43	38431	Assembly of automobiles	100.0	12,112	1.2	44.1
44	38439	Other motor vehicle industries	100.0	9,855	1.0	45.1
45	38500	Precision instruments and machinery	100.0	4,047	0.4	45.5
46	39012	Jewellery	100.0	880	0.1	45.6
47	39013	Silverware and holloware	100.0	396	0.0	45.6
48	39030	Sporting and athletic goods	100.0	519	0.1	45.7
49	39090	Industries not elsewhere classified	100.0	14,228	1.5	47.1
50	31123	Ice-cream	99.4	5,388	0.6	47.7
51	39011	Cutting and polishing of gem stones	99.2	2,513	0.3	48.0
52	38440	Motorcycles, tricycles and bicycles	98.9	7,344	0.8	48.7
53	36992	Asbestos-cement products	98.8	5,506	0.6	49.3
54	35220	Drugs and medicine	98.6	25,566	2.6	51.9
55	34204	Printing other printed matters than newspapers	98.2	7,792	0.8	52.7
56	35120	Fertilizers and pesticides	97.7	9,040	0.9	53.6
57	31420	Tobacco products	97.0	22,223	2.3	55.9
58	33112	Veneer, plywood and veneered panel	96.7	13,736	1.4	57.3
59	38120	Furniture and fixture primarily of metal	96.3	9,093	0.9	58.2
60	33201	Wood furniture, fixture and flooring	91.5	10,024	1.0	59.2

Source: Report of the 1984 Industrial Survey (Establishment more than 20 persons)

Table-24. Bangkok Area's Share in Manufacturing Industries of Whole Kingdom 1984

(Ranked by Scale of Person Engaged) - 2

(Remark: Accum. = Accumulated percentage adding a percentage of the following industries)

	Code	Types of Industry	Bangkok / Whole Kingdom (%)	Number of persons engaged	Percentage to total amount	
					(%)	Accum.
61	37120	Iron and steel foundries	91.1	6,962	0.7	59.9
62	38240	Special industrial machinery and equipment	90.5	572	0.1	60.0
63	32115	Weaving of cotton and man-made fibres	89.9	176,594	18.1	78.1
64	31121	Dairies	87.5	864	0.1	78.1
65	35592	Rubber footwear	87.1	19,817	2.0	80.2
66	31220	Prepared animal feeds	87.0	23,425	2.4	82.6
67	37200	Non-ferrous metal basic industries	87.0	776	0.1	82.6
68	35210	Paints, varnishes and lacquers	85.0	3,101	0.3	83.0
69	32120	Made-up textile goods	84.1	14,338	1.5	84.4
70	35510	Tyre and tube industries	83.7	22,606	2.3	86.7
71	31142	Fish sauce	81.9	1,946	0.2	86.9
72	38199	Other fabricated metal products	81.5	9,979	1.0	88.0
73	34111	Pulp, paper and paperboard by machine	81.3	10,676	1.1	89.1
74	36100	Pottery	78.8	7,776	0.8	89.8
75	32117	Textile printing	78.6	4,472	0.5	90.3
76	35609	Other plastic products	74.2	20,315	2.1	92.4
77	31219	Other food products	74.0	2,876	0.3	92.7
78	35599	Other rubber products	73.4	5,636	0.6	93.3
79	31310	Distilling, rectifying and blending spirits	73.2	23,170	2.4	95.6
80	31119	Other meat products	72.0	288	0.0	95.7
81	38220	Agricultural machinery and equipment	69.6	1,781	0.2	95.8
82	36991	Concrete products	65.2	10,194	1.0	96.9
83	31172	Biscuits	64.7	369	0.0	96.9
84	38412	Building and repairing of wooden boats	57.4	264	0.0	96.9
85	31139	Fruit and vegetables products	46.4	2,133	0.2	97.2
86	31151	Oils and fats	42.8	4,465	0.5	97.6
87	31149	Other sea foods products	41.8	8,761	0.9	98.5
88	31212	Manufactured ice	39.0	986	0.1	98.6
89	35130	Synthetic resins, plastic materials and artificial fibres	35.2	958	0.1	98.7
90	35294	Matches	33.6	770	0.1	98.8
91	33111	Sawmills and planing mills	22.3	6,078	0.6	99.4
92	32113	Spinning of cotton and man-made fibres	15.2	1,764	0.2	99.6
93	32112	Cotton ginning	11.4	322	0.0	99.6
94	31161	Rice mills	5.9	515	0.1	99.7
95	31411	Tobacco curing	3.1	1,244	0.1	99.8
96	31181	Sugar factories	2.1	900	0.1	99.9
97	31132	Soy sauce and soy curds	D	D		
98	35300	Petroleum refineries	D	D		
99	31131	Canning of fruit and vegetables	-	-		
100	31141	Canning of fish	-	-		
101	31164	Tapioca mills	-	-		
102	31171	Bakeries	-	-		
103	31173	Noodles and similar products	-	-		
104	32114	Silk weaving	-	-		
105	32116	Jute mills	-	-		
106	32119	Other spinning and weaving	-	-		
107	32201	Men's and boys' clothes	-	-		
108	35112	Charcoal	-	-		
109	35591	Rubber sheets and block rubber	-	-		
110	36910	Structural clay products	-	-		
111	36999	Other non-metallic mineral products	-	-		
112	38299	Other machinery except electrical	-	-		
113	38432	Motor vehicle bodies	-	-		
114	31162	Drying of maize	-	-		
115	32111	Silk reeling	-	-		

Source: Report of the 1984 Industrial Survey (Establishment more than 20 persons)

Table-25 Bangkok Area's Share in Manufacturing industries of Whole Kingdom 1984

(Ranked by Scale of Gross Output) - 1

(Remark:Accum. = Accumulated percentage adding a percentage of the following industries)  
(Unit: Mill. Baht)

Rank	Code	Types of Industry	Bangkok /Whole Kingdom (%)	Value of gross output	Percentage to total amount	
					(%)	Accum.
	TOTAL		77.5	722,003	100.0	100.0
1	31111	Slaughtering	100.0	1,419	0.2	0.2
2	31122	Milk factories	100.0	5,459	0.8	1.0
3	31123	Ice-cream	100.0	3,843	0.5	1.5
4	31190	Confectionery	100.0	321	0.0	1.5
5	31420	Tobacco products	100.0	54,838	7.6	9.1
6	32118	Textile finishing	100.0	694	0.1	9.2
7	32130	Knitting mills	100.0	2,033	0.3	9.5
8	32150	Cordage, rope and twine	100.0	1,651	0.2	9.7
9	32202	Women's, girls' and infants clothes	100.0	3,169	0.4	10.2
10	32203	Headgear	100.0	4	0.0	10.2
11	32209	Other wearing apparel and accessories	100.0	30,550	4.2	14.4
12	32310	Tanneries, leather finishing, fur dressing	100.0	3,096	0.4	14.8
13	32330	Leather and leather substitutes products	100.0	388	0.1	14.9
14	33120	Wooden and cane containers, etc.	100.0	101	0.0	14.9
15	33202	Rattan furniture	100.0	163	0.0	14.9
16	34120	Containers and boxes of paper and paperboard	100.0	2,450	0.3	15.3
17	34190	Pulp, paper and paperboard articles	100.0	5,349	0.7	16.0
18	34201	Printing and publishing of newspaper	100.0	961	0.1	16.1
19	34207	Printing	100.0	1,697	0.2	16.4
20	35111	Basic industrial chemicals	100.0	2,975	0.4	16.8
21	35231	Soap and cleaning preparation	100.0	9,696	1.3	18.1
22	35292	Glues	100.0	716	0.1	18.2
23	35299	Other chemical products	100.0	1,129	0.2	18.4
24	35601	Plastic containers	100.0	233	0.0	18.4
25	36200	Glass and glass products	100.0	6,091	0.8	19.3
26	36921	Cement	100.0	29,937	4.1	23.4
27	36922	Lime and plaster	100.0	54	0.0	23.4
28	36992	Asbestos-cement products	100.0	6,521	0.9	24.3
29	37110	Iron and steel works and rolling mills	100.0	29,717	4.1	28.4
30	38110	Cutlery, hand tools and general hardware	100.0	502	0.1	28.5
31	38130	Structural metal products	100.0	4,288	0.6	29.1
32	38191	Metal cans and shipping containers	100.0	10,119	1.4	30.5
33	38192	Wire and wire products	100.0	2,913	0.4	30.9
34	38198	Coating, engraving and allied services	100.0	6,865	1.0	31.8
35	38292	Airconditioning machines	100.0	2,866	0.4	32.2
36	38298	Repair shops	100.0	79	0.0	32.3
37	38320	Radio, television and communication equipment and apparatus	100.0	2,473	0.3	32.6
38	38330	Electrical appliances and housewares	100.0	6,568	0.9	33.5
39	38392	Electric accumulators and batteries	100.0	2,519	0.3	33.9
40	38393	Electrical lamps	100.0	339	0.0	33.9
41	38399	Other electrical apparatus and supplies	100.0	14,418	2.0	35.9
42	38411	Building and repairing of steel ships	100.0	448	0.1	36.0
43	38419	Other shipbuilding and repairing	100.0	41	0.0	36.0
44	38431	Assembly of automobiles	100.0	9,353	1.3	37.3
45	38439	Other motor vehicle industries	100.0	8,966	1.2	38.5
46	38500	Precision instruments and machinery	100.0	434	0.1	38.6
47	39011	Cutting and polishing of gem stones	100.0	1,884	0.3	38.8
48	39012	Jewellery	100.0	602	0.1	38.9
49	39013	Silverware and ntelloware	100.0	245	0.0	38.9
50	39030	Sporting and athletic goods	100.0	99	0.0	39.0
51	39090	Industries not elsewhere classified	100.0	3,380	0.5	39.4
52	35220	Drugs and medicine	99.9	18,768	2.6	42.0
53	38440	Motorcycles, tricycles and bicycles	99.9	10,174	1.4	43.4
54	33112	Veneer, plywood and veneered panel	99.7	5,494	0.8	44.2
55	34204	Printing other printed matters than newspapers	99.6	1,746	0.2	44.4
56	35510	Tyre and tube industries	99.0	37,769	5.2	49.7
57	35120	Fertilizers and pesticides	98.5	19,063	2.6	52.3
58	38240	Special industrial machinery and equipment	98.5	297	0.0	52.4
59	31219	Other food products	98.4	3,336	0.5	52.8
60	37120	Iron and steel foundries	97.6	2,000	0.3	53.1

Source: Report of the 1984 Industrial Survey (Establishment more than 20 persons)

Table-26 Bangkok Area's Share in Manufacturing industries of Whole Kingdom 1984

(Ranked by Scale of Gross Output) - 2

(Remark:Accum. = Accumulated percentage adding a percentage of the following industries)  
(Unit: Mill. Baht)

Rank	Code	Types of Industry	Bangkok /Whole Kingdom (%)	Value of gross output	Percentage to total amount	
					(%)	Accum.
61	31119	Other meat products	97.5	235	0.0	53.1
62	38199	Other fabricated metal products	97.3	5,018	0.7	53.8
63	39201	Wood furniture, fixture and flooring	96.8	2,879	0.4	54.2
64	31220	Prepared animal feeds	96.5	60,521	8.4	62.6
65	38120	Furniture and fixture primarily of metal	95.1	2,870	0.4	63.0
66	31142	Fish sauce	94.6	642	0.1	63.1
67	36100	Pottery	93.5	820	0.1	63.2
68	37200	Non-ferrous metal basic industries	93.3	230	0.0	63.2
69	32115	Weaving of cotton and man-made fibres	92.4	68,516	9.5	72.7
70	32117	Textile printing	92.4	1,322	0.2	72.9
71	31340	Soft drinks and carbonated waters	91.6	32,521	4.5	77.4
72	31172	Biscuits	91.3	524	0.1	77.5
73	31310	Distilling, rectifying and blending spirits	90.9	45,307	6.3	83.7
74	38412	Building and repairing of wooden boats	89.0	55	0.0	83.7
75	35609	Other plastic products	88.9	30,104	4.2	87.9
76	31121	Dairies	85.8	1,702	0.2	88.1
77	38220	Agricultural machinery and equipment	83.3	214	0.0	88.2
78	35210	Paints, varnishes and lacquers	83.1	3,212	0.4	88.6
79	35592	Rubber footwear	82.5	2,842	0.4	89.0
80	32120	Made-up textile goods	80.3	2,526	0.3	89.4
81	36991	Concrete products	77.7	4,304	0.6	90.0
82	31139	Fruit and vegetables products	74.9	1,730	0.2	90.2
83	38310	Electrical industrial machinery and apparatus	71.4	2,496	0.3	90.5
84	34111	Pulp, paper and paperboard by machine	62.7	7,064	1.0	91.5
85	31149	Other sea foods products	54.7	4,662	0.6	92.2
86	31151	Oils and fats	52.1	10,933	1.5	93.7
87	31212	Manufactured ice	48.5	380	0.1	93.7
88	35294	Matches	39.5	174	0.0	93.8
89	35130	Synthetic resins, plastic materials and artificial fibres	38.5	3,551	0.5	94.2
90	35599	Other rubber products	27.6	1,330	0.2	94.4
91	33111	Sawmills and planing mills	26.6	1,667	0.2	94.7
92	32112	Cotton ginning	19.3	261	0.0	94.7
93	31411	Tobacco curing	14.2	338	0.0	94.7
94	32113	Spinning of cotton and man-made fibres	7.9	359	0.0	94.8
95	31181	Sugar factories	3.5	962	0.1	94.9
96	31161	Rice mills	2.7	196	0.0	94.9
97	31132	Soy sauce and soy curds	D	D		
98	35300	Petroleum refineries	D	D		
99	31131	Canning of fruit and vegetables	-	-		
100	31141	Canning of fish	-	-		
101	31162	Drying of maize	-	-		
102	31164	Tapioca mills	-	-		
103	31171	Bakeries	-	-		
104	31173	Noodles and similar products	-	-		
105	32111	Silk reeling	-	-		
106	32114	Silk weaving	-	-		
107	32116	Jute mills	-	-		
108	32119	Other spinning and weaving	-	-		
109	32201	Men's and boys' clothes	-	-		
110	35112	Charcoal	-	-		
111	35591	Rubber sheets and block rubber	-	-		
112	36910	Structural clay products	-	-		
113	36999	Other non-metallic mineral products	-	-		
114	38299	Other machinery except electrical	-	-		
115	38432	Motor vehicle bodies	-	-		

Source: Report of the 1984 Industrial Survey (Establishment more than 20 persons)

## 5. Questionnaire Survey





Table-27 Problems facing at overseas direct investment by Japanese companies

	<u>No.</u>	<u>%</u>
1.Shortage of the local market information	66	44.3%
2.Shortage of the local technology information	79	53.0%
3.Shortage of the industrial location information	86	57.7%
4.Shortage of the local counterpart information	73	49.0%
5.Shortage of other information related to investment	57	38.3%
6.Insufficiency of the policy support to overseas direct investment by Japanese Government	36	24.2%
7.Restriction of the reexport to the third country	21	14.1%
8.Deference of the tax systems between Japan and other countries	41	27.5%
9.Restriction/barrier such as duties and quota	32	21.5%
10.Time gap to the related companies concerning to investment	16	10.7%
11.Others	8	5.4%

\*)notes:multiple answers,percentage ratio of answers is derived by deviding by the total of 149 companies

Table-28 The location conditions required by potential investors

	<u>No.</u>	<u>%</u>
1.Access to international sea port	54	36.2%
2.Access to other sea port	31	20.8%
3.Access to international air port	19	12.8%
4.Access to international air network	9	6.0%
5.Access to domestic air port	2	1.3%
6.Access to domestic air network	1	0.7%
7.Access to transportation arteries(express ways)	46	30.9%
8.Access to railway artery	8	5.4%
9.Availability of electricity	98	65.8%
10.Availability of industrial water	56	37.6%
11.Availability of communication	76	51.0%
12.Quantity/quality of labor force	117	78.5%
13.Agglomeration of supported industries	74	49.7%
14.Agglomeration of urban facilities	15	10.1%
15.Availability of R&D functions	8	5.4%
16.Quality of life	26	17.5%
17.Others	3	2.0%

Table-29 Incentives required by potential investors(GIE)

	Japan		Thailand	
	No.	%	No.	%
1.Financial incentives, such as low interest loan	54	36.2%	45	70.3%
2.Exemption or deduction of various taxes	98	65.8%	57	89.1%
3.Investment subsidies	60	40.3%	22	34.4%
4.Wage subsidies	17	11.4%	3	4.7%
5.On-the-job training subsidies	21	14.1%	2	3.1%
6.Corporate income tax deduction	56	37.6%	27	42.2%
7.Free permission to take out or remit foreign currency	51	34.2%	9	14.1%
8.A 10% reduction in electricity rates	7	4.7%	15	23.4%
9.Reductions in transportation charges	35	23.5%	8	12.5%

Table-30 Incentives in EPZ

	Japan		Thailand	
	No.	%	No.	%
1.Exemption from customs inspection procedure	88	59.1%	27	42.2%
2.Exception of import restriction	30	20.1%	14	21.9%
3.Extension of bonded term for stock cargos	16	10.7%	16	25.0%
4.Exemption or deduction of charges for bonded facility	21	14.1%	16	25.0%
5.Improvement of customs system such that tariff on a product is lower than the component raw-materials, and import processing is possible in EPZ.	38	25.5%	29	45.3%
6.Faster tax rebate	19	12.8%	32	50.0%
7.Simpler, and faster customs clearance	65	43.6%	40	62.5%
8.Set up the computerized business center	5	3.4%	-	-
9.Exception of inspection of exportable goods	31	20.8%	-	-
10.Exemption from export-tax	36	24.2%	-	-
11.Relaxation of working permission for foreigners	25	16.8%	-	-

Table-31 Supporting services required by potential investors

	Japan		Thailand	
	No.	%	No.	%
1. Contacting service with government for various licenses and procedures	121	81.2%	48	75.0%
2. Land development and construction service	86	57.2%	24	37.5%
3. Financial services such as direct funding for preparation, expansion and purchase by installments	55	36.9%	45	70.3%
4. Labor service providing direct access to labor supply, on-going consultation on labor issues, and personnel development seminars	114	76.5%	33	51.6%
5. Marketing, advertising, and sales service by a specialist or a mediator	12	8.1%	19	29.7%
6. Industrial consulting services such as design, engineering, machinery installation, and waste water treatment	26	17.5%	26	40.6%
7. Mediating services, such as introducing a partner for J/V, a subcontractor, and vender	84	56.4%	18	28.1%
8. Other supporting service for promoting technology transfer	12	8.1%	16	25.0%
9. Commuter service by mass transport system	31	20.8%	15	23.4%
10. Rental service of parking space	1	0.7%	2	3.1%
11. Data base service of industrial information	25	16.8%	15	23.4%
12. Others	1	0.7%	0	0.0%

Table-32 Supporting facilities provided in and around the Estate

	Japan		Thailand	
	No.	%	No.	%
1.Branch office of banks	115	77.2%	52	81.3%
2.Municipal office	78	52.4%	7	10.9%
3.Retail stores or shopping centers	55	36.9%	23	35.9%
4.Restaurants	59	39.6%	34	53.1%
5.Hotels	58	38.9%	19	29.7%
6.Meeting or conference facilities	13	8.7%	6	9.4%
7.Exhibition or display facilities	5	3.4%	16	25.0%
8.Job training facilities	36	24.2%	16	25.0%
9.Industrial research and development institute	28	18.8%	20	31.3%
10.Industrial organization for measuring,weighing and inspection	22	14.8%	4	6.3%
11.Public library	0	0.0%	7	10.9%
12.Industrial information center	31	20.8%	28	43.8%
13.Computer data processing center	6	4.0%	15	23.4%
14.Software laboratory	1	0.7%	4	6.3%
15.Trading company office	8	5.4%	15	23.4%
16.Tool shop	56	37.6%	14	21.9%
17.Machine and equipment leasing agent	23	15.4%	7	10.9%
18.Travel agent	15	10.1%	7	10.9%
19.Customs clearance agent	77	51.7%	43	67.2%
20.Warehousing	44	29.5%	26	40.6%
21.Distribution facilities	25	16.8%	8	12.5%
22.Wrapping, packing facilities	15	10.1%	6	9.4%
23.Law offices	29	19.5%	8	12.5%
24.Secretarial services	5	3.4%	1	1.6%
25.Translation services	26	17.5%	6	9.4%
26.Language school	9	6.0%	2	3.1%
27.Hospitals	101	67.8%	48	75.0%
28.Fire stations	40	26.9%	32	50.0%
29.Security services	13	8.7%	33	51.6%
30.Industrial waste disposal facilities	51	34.2%	30	46.9%
31.Recreation and sports facilities	20	13.4%	13	20.3%
32.Low cost worker housing	66	44.3%	43	67.2%
33.VIP housing for business purposes	14	9.4%	6	9.4%
34.Housing for Japanese staff	79	53.0%	-	-
35.Japanese school	52	34.9%	-	-
36.Others	0	0.0%	1	1.6%

\*)In Japanese version items of no.34 and 35 are added.

Table-33 Leasing system and its period

1.Too short	4	3.3%
2.Reasonable	66	55.0%
3.Too long	6	5.0%
4.Require to land for sale in lots	22	18.3%
5.N.A.	22	18.3%

## 6. Location Specifications for Model Plant



# LAEM CHABANG INDUSTRIAL ESTATE

## INVESTOR INFORMATION SURVEY FORM

**Office of the Eastern Seaboard  
Development Committee**

No. of questionnaire

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Thailand in general and Laem Chabang Industrial Estate (LCIE) in particular offer an extraordinary attractive investment setting for businesses from all over the world. Abundant natural resources, cost-effective labor, a large domestic market, political stability, and favorable government promotional policies offer a vista of successful, profitable operations far into the future.

LCIE is part of a major private-public initiative called the Eastern Seaboard Development Project. This giant, long-term project benefits from a number of advantages this southeastern region of Thailand has to offer : a deep-water port : easy transportation access to Bangkok : and large, contiguous agricultural lands, among others.

While existing plans for LCIE are comprehensive, we are very much interested in allowing them to continue to evolve with the expressed needs of those companies interested in establishing operations within the Estate.

By completing and returning this form to us by **August 20, 1988**, you can benefit your company and assist in meeting your needs.

All responses for **internal use only** and will be kept **confidential**.  
We thank you in advance for your cooperation.

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Should you have any questions, please contact us;

**Industrial Estate Authority of Thailand (IEAT)**  
**Planning & Analysis Division**

*IEAT Building. : 618 Nikom Makkasan Road. Bangkok 10400*  
*Telephone No. : 253-0561 (ext. 303)*

# 1. COMPANY OUTLINE

Please fill in the following items or indicate as much as possible.  
If there are any items you would not like to answer, skip to the next item.

1) Company name : \_\_\_\_\_

2) Chief executive : \_\_\_\_\_

3) Year established : \_\_\_\_\_

4) Head office address \_\_\_\_\_

5) Principal products or lines of business :

1.  Foods

2.  Garments, Textiles

3.  Machines

4.  Electrical/Electronic

5.  Metals/Alloys

6.  Non-Metal

7.  Chemicals

8.  Jewelry, Stoneware, Silverware

9.  Wholesale trade

10.  Warehousing/transport

11.  Other ( \_\_\_\_\_ )

6) Paid-up capital : \_\_\_\_\_ (million Baht)

7) Character of company:  Joint venture

Wholly owned

8) If a joint venture, please indicate paid-up capital by country origin:

· Thailand (      )%

· Japan (      )%

· USA (      )%

· England (      )%

· Hong Kong (      )%

· Taiwan (      )%

· Other countries (      )%

9) Total 1987 sales: \_\_\_\_\_ (million Baht)

10) Export ratio: \_\_\_\_\_ % (Export/Total sales × 100)

11) Import ratio: \_\_\_\_\_ % (Import/Raw materials × 100)

12) Employees:      -- total: \_\_\_\_\_

                            -- production: \_\_\_\_\_

13) The person completing this form:

Name; \_\_\_\_\_

Title; \_\_\_\_\_

Department ; \_\_\_\_\_

Tel. No.; \_\_\_\_\_ Fax. No. ; \_\_\_\_\_ Tex. No. ; \_\_\_\_\_

14) Section responsible for investment decisions (if other than in # 13 above.)



## 2. SITE SELECTION FACTORS

There are many factors in relation to appropriate location of industrial facility. What are the most important factors on selecting a site for factory, warehouse and so on?  
Please indicate the following factors of your choice.

### CHOOSE UP TO 3 ITEMS

1.  Availability of raw materials and resources
2.  Access to a substantial domestic market
3.  Availability of labour (skilled & unskilled)
4.  Access to transportation arteries
5.  Access to deep-water port
6.  Availability of utilities and communications
7.  Others (Please specify : \_\_\_\_\_)

## 3. INVESTMENT PLANS

Industrial investment is now very active in Thailand.  
Is your company planning any investments in the next 10 years?

1.  Yes (Please indicate.)

2.  No (Skip to 4)

(1) Do you have plans to expand your existing operation?

1.  Yes

Underway

Within 5 years

With 6 to 10 years

2.  No

(2) Do you have plans to construct a new factory or warehouse?

1.  Yes

Underway

Within 5 years

With 6 to 10 years

2.  No

## 4. INCENTIVES

### (1) GENERAL INDUSTRIAL ESTATE

*Various incentives will be prepared for inducing enterprises to invest in the Laem Chabang Industrial Estate.*

***What incentives are the most attractive to you?***

*Please choose to the most important three items in the following ;*

#### **CHOOSE UP TO 3 ITEMS**

1.  Financial incentives, such as low interest loan
2.  Exemption or deduction of various taxes
3.  Investment subsidies
4.  Wage subsidies
5.  On-the-job training subsidies
6.  Corporate income tax deductions
7.  Free permission to take out or remit foreign currency
8.  A10-percent reduction in electricity rates
9.  Reductions in transportation charges

### (2) EXPORT PROCESSING ZONE

*EPZ guarantees the bonded business for re-export, as shown in the enclosed pamphlet. However, more incentives and improvement are under examination to attract enterprises.*

***What should be added and improved?***

*Please choose to the most important three items in the following ;*

#### **CHOOSE UP TO 3 ITEMS**

1.  Exemption from customs inspection procedure
2.  Exception of import restrictions
3.  Extension of bonded term for stock cargos
4.  Exemption or deduction of charges for bonded facility
5.  Improvement of customs system such that tariff on a product is lower than the component raw-materials, and import processing is possible in EPZ.
6.  Faster tax rebate
7.  Simpler, and faster customs clearance

## 5. SUPPORTING SERVICES

*The Industrial Estate Authority of Thailand will provide good support services for business activities.*

**What kind of service is the most important and useful to you?**  
*Please choose to the most important five items in the following ;*

### CHOOSE UP TO 5 ITEMS

1.  Contacting service with government for various licenses and procedures
2.  Land development and construction service
3.  Financial services such as direct funding for operation, expansion and purchase by installments
4.  Labour service providing direct access to labour supply, on-going consultation on labour issues, and personnel development seminars
5.  Marketing, advertising, and sales service by a specialist or a mediator
6.  Industrial consulting services such as design, engineering, machinery installation, and waste water treatment
7.  Mediating services, such as introducing a partner for joint-venture, a subcontractor, and a vender
8.  Other supporting service for promoting technology transfer
9.  Computer service by mass transport system
10.  Rental service of parking space
11.  Data base service of industrial information
12.  Others (Please specify:) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## 6. SUPPORTING FACILITIES

Laem Chabang Industrial Estate will provide a full range of facilities as shown in the enclosed pamphlet.

However, it may be desirable to have other facilities to improve conditions for business activities.

**What kind of facilities should be provided in or around the Estate?**

Please indicate the following items of your preference.





### CHOOSE UP TO 10 ITEMS





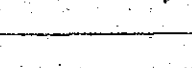

1.  Branch office of banks
2.  Municipal offices
3.  Retail stores or shopping centers
4.  Restaurants
5.  Hotels
6.  Meeting or conference facilities
7.  Exhibition or display facilities
8.  Job training facility
9.  Industrial research and development institute
10.  Industrial organization for measuring, weighing and inspection
11.  Public library
12.  Industrial information center
13.  Computer data processing center
14.  Software laboratory
15.  Trading company office
16.  Tool shop
17.  Machine and equipment leasing agent
18.  Travel agent
19.  Customs clearance agent
20.  Warehousing
21.  Distribution facilities
22.  Wrapping, packing facilities
23.  Law offices
24.  Secretarial services
25.  Translation services
26.  Language schools
27.  Hospitals
28.  Fire stations
29.  Security services
30.  Industrial waste disposal facilities
31.  Recreation and sports facilities
32.  Low cost worker housing
33.  VIP housing for business purposes
34.  Others (Please specify: \_\_\_\_\_)

## 7. INVESTING AT LAEM CHABANG

This estate, comprising 2,312 rai, or 370 ha. of GIE, 1,098 rai, or 175 ha. of EPZ, and a 146 rai, or 23 ha. commercial district, is scheduled to be completed in 1991 (the first stage: in 1990), as shown in the enclosed pamphlet.

### (1) What is your company's interest in Laem Chabang Industrial Estate?

As for GIE: 1.  Plan to invest  Facility  1.  Factory  
2.  High interest  2.  Warehouse  
3.  Moderate interest  3.  Other (Please specify)  
4.  No interest

As for EPZ: 1.  Plan to invest  Facility  1.  Factory  
2.  High interest  2.  Warehouse  
3.  Moderate interest  3.  Other (Please specify)  
4.  No interest  Skip to 8 

### (2) If you have any interest in Laem Chabang Industrial Estate, please specify.

- (a) Year of initial investment: from \_\_\_\_\_ to \_\_\_\_\_  
(b) Land area: \_\_\_\_\_ rai. (or \_\_\_\_\_ m<sup>2</sup>)

### (3) Please choose to the type of investment.

1.  Wholly owned
2.  Joint venture with Thai capital
3.  Joint venture with foreign capital
4.  Others or undecided (Please specify: \_\_\_\_\_)

### (4) Standard Factory (810 m<sup>2</sup> of only one floor, 2600 m<sup>2</sup> of three floors and other types) is available in LAEM CHABANG. Would you choose one?

1.  Yes
2.  No

### (5) Do you have a plan to move or establish your head office in LAEM CHABANG INDUSTRIAL ESTATE?

1.  Yes
2.  No

**(6) If the following Systems were available at Laem Chabang Industrial Estate, Please indicate which would you use?**

**CHOOSE UP TO 3 ITEMS**

- 1.  Leased Circuit Data Communication Services
- 2.  Packet-Switched Data Communication Services
- 3.  Data Communication Services, such as Sales Inventory Management System
- 4.  Data-base Access Services
- 5.  Cellular Mobile Telephone Services
- 6.  Radio Paging Service
- 7.  International Video Conference Services
- 8.  Videotex Services
- 9.  Personal Computer Communication Network Services
- 10.  Others (Please specify: ) \_\_\_\_\_  
\_\_\_\_\_

**8. Thank you for your cooperation with this questionnaire. More promotional activities for LAEM CHABANG INDUSTRIAL ESTATE are scheduled and a seminar will be to hold in the middle of November. Please indicate the following and any additional requirements items you may have ;**

- 1.  Require more detailed information for examination to establish facilities in LAEM CHABANG.
- 2.  Require an invitation letter for the seminar.
- 3.  Others (Please specify, including any suggestions for the LAEM CHABANG project.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Table-34 Location Specifications for Model Plant(JAPAN)

Location Specifications for Model Plant (1)

Item	Oil refinery	Petrochemical	Electrolytic soda
1. Capacity of model plant	Amount of crude oil to be processed B.P.S.D. 250,000	Ethylene 400,000 ton/year	Caustic soda 180,000 ton/year
2. Classification of utilization of plant site			
Area for:			
Production facilities	200,000 m <sup>2</sup>	500,000 m <sup>2</sup>	20,000 m <sup>2</sup>
Storage facility	1,000,000 m <sup>2</sup>	200,000 m <sup>2</sup>	10,000 m <sup>2</sup>
Transport facility			
(Port facility)	}	160,000 m <sup>2</sup>	2,000 m <sup>2</sup>
(Railroad facility)		110,000 m <sup>2</sup>	2,000 m <sup>2</sup>
(Trucking facility)		50,000 m <sup>2</sup>	1,000 m <sup>2</sup>
Pollution prevention facility		140,000 m <sup>2</sup>	2,000 m <sup>2</sup>
Administration		100,000 m <sup>2</sup>	1,000 m <sup>2</sup>
Area for environmental facility	500,000 m <sup>2</sup>	500,000 m <sup>2</sup>	17,000 m <sup>2</sup>
Road (including parking space)		240,000 m <sup>2</sup>	15,000 m <sup>2</sup>
Other space		100,000 m <sup>2</sup>	5,000 m <sup>2</sup>
Total	2,000,000 m <sup>2</sup>	2,100,000 m <sup>2</sup>	75,000 m <sup>2</sup>
3. Power facilities			
Contract power	20,000 KW	100,000 KW	40,000 KW
Common generating station (Amount of power received)	(-)	(-)	(-)
Private power generating station	20,000 KW	75,000 KW	20,000 KW
Total	40,000 KW	175,000 KW	60,000 KW
4. Employees			
Regular employees	600 ( 60)	2,300 (200)	50 (2)
Temporary employees (No. of part timer)	(-)	(-)	(-)
Sub-contract employees	400 ( 40)	300 (100)	10 (0)
Total	1,000 (100)	2,600 (300)	60 (2)
5. Amount of industrial water used			
Amount of fresh water used (Recycled water)	25,500 m <sup>3</sup> /day (24,000 m <sup>3</sup> /day)	750,000 m <sup>3</sup> /day (690,000 m <sup>3</sup> /day)	4,500 m <sup>3</sup> /day (1,500 m <sup>3</sup> /day)
Amount of sea water used	144,000 m <sup>3</sup> /day	1,000,000 m <sup>3</sup> /day	150,000 m <sup>3</sup> /day
6. Transport facilities			
Port facility			
Depth of water x No. of berth	-25 m x 2B -10 m x 10B	-14 m x 1B -10 m x 10B	-14 m x 1B - 8 m x 1B
Material to be handled	Crude oil, oil products	Naphtha, products	Raw material salt, products
Railroad cargo loading & unloading facility	Necessary	Necessary	Necessary
Truck loading & unloading facility	Necessary	Necessary	Necessary
7. Amount of cargo transported			
Ship	ton/year Crude oil 11,200,000 Products 8,960,000	550,000 ton/year 790,000 ton/year	288,000 ton/year 80,000 ton/year
Railroad		45,000 ton/year	80,000 ton/year
Truck	Products 2,240,000 ton/ year	65,000 ton/year	1,500 ton/year 60,000 ton/year

Location Specifications for Model Plant (2)

Synthetic detergent (I)	Synthetic detergent (II)	Synthetic textile (Nylon)	Synthetic textile (Polyester)
ton/month Grain detergent: 5,000 Liquid detergent: 2,000	ton/month Power detergent: 5,000 Liquid detergent: 2,500 Washing agent: 2,500	Nylon filament 120 ton/day	Polyester staple 100 ton/day
7,000 m <sup>2</sup> 13,000 m <sup>2</sup>	5,000 m <sup>2</sup> 7,000 m <sup>2</sup>	50,000 m <sup>2</sup> 10,000 m <sup>2</sup>	20,000 m <sup>2</sup> 10,000 m <sup>2</sup>
1,000 m <sup>2</sup> (Included in area for road)	1,000 m <sup>2</sup> 1,500 m <sup>2</sup> 1,000 m <sup>2</sup>	— 2,000 m <sup>2</sup> 2,000 m <sup>2</sup>	— 2,000 m <sup>2</sup> 1,000 m <sup>2</sup>
2,000 m <sup>2</sup> 1,000 m <sup>2</sup> 17,000 m <sup>2</sup> 20,000 m <sup>2</sup> 4,000 m <sup>2</sup> 65,000 m <sup>2</sup>	3,000 m <sup>2</sup> 1,500 m <sup>2</sup> 13,000 m <sup>2</sup> 16,000 m <sup>2</sup> 1,000 m <sup>2</sup> 50,000 m <sup>2</sup>	5,000 m <sup>2</sup> 3,000 m <sup>2</sup> 80,000 m <sup>2</sup> 28,000 m <sup>2</sup> 20,000 m <sup>2</sup> 200,000 m <sup>2</sup>	3,000 m <sup>2</sup> 3,000 m <sup>2</sup> 23,000 m <sup>2</sup> 18,000 m <sup>2</sup> 10,000 m <sup>2</sup> 90,000 m <sup>2</sup>
3,000 KW (—) — 3,000 KW	3,000 KW (—) — 3,000 KW	20,000 KW (—) 10,000 KW 30,000 KW	10,000 KW (—) — 10,000 KW
230 (45 ) (—) 20 (5 ) 250 (50 )	180 (50 ) (—) 60 (20 ) 240 (70 )	800 (250 ) (—) 200 (50 ) 1,000 (300 )	265 (15 ) (—) 35 (5 ) 300 (20 )
7,700 m <sup>3</sup> /day (7,000 m <sup>3</sup> /day)	12,000 m <sup>3</sup> /day (11,500 m <sup>3</sup> /day)	110,000 m <sup>3</sup> /day (90,000 m <sup>3</sup> /day)	70,000 m <sup>3</sup> /day (56,000 m <sup>3</sup> /day)
— —6 m x 1B	— —5 m x 1B	— Unnecessary	— Unnecessary
Alkyl benzen and other Unnecessary Necessary	Alkyl benzen and other Necessary Necessary	Necessary Necessary	Necessary Necessary
32,000 ton/year — — 30,000 ton/year 84,000 ton/year	19,000 ton/year — 16,000 ton/year 30,000 ton/year 40,000 ton/year 70,000 ton/year	— — 23,000 ton/year — 23,000 ton/year 43,800 ton/year	— — 21,000 ton/year — 34,000 ton/year 36,500 ton/year



Location Specification for Model Plant (3)

Item	Iron and steel, Consistent production	Special steel	Copper refinery
1. Capacity of model plant	Crude steel 12,000,000 ton/year	Crude steel 36,500 ton/month	Electrolytic copper 100,000 ton/year Sulfuric acid 359,000 ton/year
2. Classification of utilization of plant site			
Area for:			
Production facilities	2,700,000 m <sup>2</sup>	129,400 m <sup>2</sup>	55,700 m <sup>2</sup>
Storage facility	1,350,000 m <sup>2</sup>	30,000 m <sup>2</sup>	33,400 m <sup>2</sup>
Transport facility			
(Port facility)	} 675,000 m <sup>2</sup>	7,000 m <sup>2</sup>	4,800 m <sup>2</sup>
(Railroad facility)		20,000 m <sup>2</sup>	-
(Trucking facility)		-	4,500 m <sup>2</sup>
Pollution prevention facility	675,000 m <sup>2</sup>	15,000 m <sup>2</sup>	2,600 m <sup>2</sup>
Administration		27,400 m <sup>2</sup>	4,500 m <sup>2</sup>
Area for environmental facility	3,375,000 m <sup>2</sup>	102,000 m <sup>2</sup>	16,700 m <sup>2</sup>
Road (including parking space)	1,350,000 m <sup>2</sup>	73,100 m <sup>2</sup>	32,200 m <sup>2</sup>
Other space	3,370,000 m <sup>2</sup>	26,100 m <sup>2</sup>	15,900 m <sup>2</sup>
Total	13,500,000 m <sup>2</sup>	430,000 m <sup>2</sup>	170,300 m <sup>2</sup>
3. Power facilities			
Contract power	300,000 KW	60,000 KW	18,000 KW
Common generating station (Amount of power received)	1,200,000 KW (600,000 KW)	-	-
Private power generating station	-	-	2,500 KW
Total	900,000 KW	60,000 KW	20,500 KW
4. Employees			
Regular employees	7,500 (..)	1,000 (..)	225 (20 )
Temporary employees (No. of part timer)	(-)	(-)	(-)
Sub-contract employees	7,500 (..)	1,000 (..)	25 (10 )
Total	15,000 (..)	2,000 (..)	280 (30 )
5. Amount of industrial water used			
Amount of fresh water used (Recycled water)	4,600,000 m <sup>3</sup> /day (4,370,000 m <sup>3</sup> /day)	138,000 m <sup>3</sup> /day (120,000 m <sup>3</sup> /day)	5,900 m <sup>3</sup> /day (4,000 m <sup>3</sup> /day)
Amount of sea water used	4,300,000 m <sup>3</sup> /day	-	130,000 m <sup>3</sup> /day
6. Transport facilities			
Port facility			
Depth of water x No. of berth	-23m x 2B } For export -19m x 2B } trade -13m x 10B } -9m x 1B } For domes- -7.5m x 13B } tic trade	-6 m x 2B	-10m x 1B -6m x 2B
Material to be handled			
Railroad cargo loading & unloading facility	Necessary	Unnecessary	Unnecessary
Truck loading & unloading facility	Necessary	Necessary	Necessary
7. Amount of cargo transported			
Ship	Raw material 12,500,000 ton/year Products 10,800,000 ton/year	30,000 ton/year 300,000 ton/year	494,800 ton/year 729,900 ton/year
Railroad	Raw material - Products -	- -	- -
Truck	Raw material - Products -	400,000 ton/year 60,000 ton/year	26,550 ton/year -

Location Specifications for Model Plant (4)

Aluminum refinery	Aluminum rolling (rolling)	Aluminum rolling (extruding)	Electric wire (large)	Electric wire (small)
Aluminum raw metal 165,000 ton/year	Rolled aluminum products 30,000 ton/month	Aluminum extruded products: 5,000 ton/month	Copper coarse wire: 10,000 ton/month Winding: 1,417 ton/month Covered wire cable: 625 ton/month	Covered electric wire: 800 ton/month
136,000 m <sup>2</sup> 18,000 m <sup>2</sup>	150,000 m <sup>2</sup> --	70,000 m <sup>2</sup> 10,000 m <sup>2</sup>	60,000 m <sup>2</sup> 25,000 m <sup>2</sup>	21,000 m <sup>2</sup> 7,000 m <sup>2</sup>
-- -- --	-- -- 15,000 m <sup>2</sup>	-- -- 5,000 m <sup>2</sup>	-- -- (Included in areas for storage facility) 2,000 m <sup>2</sup>	-- -- 1,400 m <sup>2</sup> 1,400 m <sup>2</sup>
42,000 m <sup>2</sup> 2,000 m <sup>2</sup>	15,000 m <sup>2</sup> 15,000 m <sup>2</sup>	10,000 m <sup>2</sup> 50,000 m <sup>2</sup>	21,000 m <sup>2</sup> 72,000 m <sup>2</sup>	1,400 m <sup>2</sup> 21,000 m <sup>2</sup>
200,000 m <sup>2</sup> 65,000 m <sup>2</sup>	150,000 m <sup>2</sup> 100,000 m <sup>2</sup>	40,000 m <sup>2</sup> 15,000 m <sup>2</sup>	60,000 m <sup>2</sup> 123,000 m <sup>2</sup>	10,500 m <sup>2</sup> 6,300 m <sup>2</sup>
137,000 m <sup>2</sup> 600,000 m <sup>2</sup>	55,000 m <sup>2</sup> 500,000 m <sup>2</sup>	200,000 m <sup>2</sup>	363,000 m <sup>2</sup>	70,000 m <sup>2</sup>
-- -- --	70,000 kW -- --	15,000 kW -- --	6,000 kW -- (For emergency) 3,000 kW	3,000 kW -- --
330,000 kW 330,000 kW	-- 70,000 kW	-- 15,000 kW	6,000 kW	3,000 kW
900 (40 ) -- (-) 300 (10 ) 1,200 (50 )	1,300 (250 ) -- (-) 200 1,500 (250 )	1,100 (100 ) 300 (100 ) -- (-) 1,400 (200 )	630 (95 ) -- (-) 60 (15 ) 690 (110 )	320 (70 ) 80 (30 ) -- (-) 400 (100 )
6,000 m <sup>3</sup> /day ( -- )	360,000 m <sup>3</sup> /day (330,000 m <sup>3</sup> /day)	80,000 m <sup>3</sup> /day (72,000 m <sup>3</sup> /day)	58,000 m <sup>3</sup> /day (56,000 m <sup>3</sup> /day)	10,000 m <sup>3</sup> /day (9,000 m <sup>3</sup> /day)
--	--	--	--	--
Unnecessary	Unnecessary	Unnecessary	Unnecessary	Unnecessary
Unnecessary	Unnecessary	Unnecessary	Unnecessary	Unnecessary
Unnecessary	Necessary	Necessary	Necessary	Unnecessary
Alumina 332,800 ton/year 93,000 ton/year	-- --	-- --	-- --	-- --
coal 660,000 ton/year	--	--	--	--
--	--	--	--	--
cokes 200,000 ton/year 72,000 ton/year	500,000 ton/year 360,000 ton/year	112,500 ton/year 60,000 ton/year	155,000 ton/year 144,500 ton/year	13,650 ton/year 12,600 ton/year

Location Specification for Model Plant (5)

Item	Construction machine	Agricultural machine	Plant
1. Capacity of model plant	Bulldozer: (17 ton type); 340 units/month Power shovel (11 ton type); 300 units/month	Tractor 5,000 units/month	Chemical machine 13,000 ton/year Wind power machine 90 unit/year Turbine (15,000kW) 6 units/year Boiler (100 ton/HI); 20 can/year
2. Classification of utilization of plant site			
Area for:			
Production facilities	250,000 m <sup>2</sup>	50,000 m <sup>2</sup>	340,000 m <sup>2</sup>
Storage facility	20,000 m <sup>2</sup>	-	60,000 m <sup>2</sup>
Transport facility			
(Port facility)	-	-	16,000 m <sup>2</sup>
(Railroad facility)	-	-	-
(Trucking facility)	5,000 m <sup>2</sup>	-	-
Pollution prevention facility	(Included in environmental facility)	20,000 m <sup>2</sup>	30,000 m <sup>2</sup>
Administration	75,000 m <sup>2</sup>	10,000 m <sup>2</sup>	80,000 m <sup>2</sup>
Area for environmental facility	150,000 m <sup>2</sup>	20,000 m <sup>2</sup>	200,000 m <sup>2</sup>
Road (including parking area)	70,000 m <sup>2</sup>	20,000 m <sup>2</sup>	60,000 m <sup>2</sup>
Other space			
Total	570,000 m <sup>2</sup>	120,000 m <sup>2</sup>	786,000 m <sup>2</sup>
3. Power facilities			
Contract power	12,000 kW	4,500 kW	15,000 kW
Common generating station (Amount of power received)	(-)	(-)	(-)
Private power generating station	-	-	-
Total	12,000 kW	4,500 kW	15,000 kW
4. Employees			
Regular employees	1,500 (80 )	500 (50 )	3,600 (300 )
Temporary employees (No. of part timer)	(-)	(-)	(-)
Sub-contract employees	-	-	400 (40 )
Total	1,500 (80 )	500 (50 )	4,000 (340 )
5. Amount of industrial water used			
Amount of fresh water used (Recycled water)	3,000 m <sup>3</sup> /day (1,000 m <sup>3</sup> /day)	500 m <sup>3</sup> /day (-)	8,700 m <sup>3</sup> /day (6,500 m <sup>3</sup> /day)
Amount of sea water used	-	-	-
6. Transport facilities			
Port facility			
Depth of water x No. of berth	Unnecessary	Unnecessary	-4m x 1B
Material to be handled			
Railroad cargo loading & unloading facility	Unnecessary	Unnecessary	Unnecessary
Truck loading & unloading facility	Necessary	Unnecessar	Unnecessary
7. Amount of cargo transported			
Ship			
Raw material	-	-	15,600 ton/year
Products	-	-	20,500 ton/year
Railroad			
Raw material	-	-	-
Products	-	-	-
Truck			
Raw material	120,000 ton/year	64,000 ton/year	70,000 ton/year
Products	110,000 ton/year	60,000 ton/year	30,150 ton/year

Location Specifications for Model Plant (6)

Pollution prevention equipment (Air system)	Pollution prevention equipment (Water quality system)	Copying machine	Heavy electric machine	Color television set
Bag filter filtering area: 3,600 m <sup>2</sup> /month	Plant waste water disposal system: 80 Units/year Living waste water disposal system: 20 Units/year	Copying machine 5,000 units/month	Large scale transformer ¥2,000,000,000/month	Color television receiver 60,000 units/month
6,000 m <sup>2</sup> 2,000 m <sup>2</sup> — — — 20 m <sup>2</sup> 1,730 m <sup>2</sup> 7,440 m <sup>2</sup> 4,980 m <sup>2</sup> 14,830 m <sup>2</sup> 37,000 m <sup>2</sup>	2,500 m <sup>2</sup> 500 m <sup>2</sup> — — 500 m <sup>2</sup> 500 m <sup>2</sup> — 500 m <sup>2</sup> 500 m <sup>2</sup> — 5,000 m <sup>2</sup>	5,000 m <sup>2</sup> — — — 1,000 m <sup>2</sup> 1,000 m <sup>2</sup> 5,000 m <sup>2</sup> 8,000 m <sup>2</sup> — 20,000 m <sup>2</sup>	44,000 m <sup>2</sup> 11,000 m <sup>2</sup> — 1,000 m <sup>2</sup> 8,000 m <sup>2</sup> 1,000 m <sup>2</sup> 3,000 m <sup>2</sup> 2,000 m <sup>2</sup> 70,000 m <sup>2</sup> 35,000 m <sup>2</sup> 75,000 m <sup>2</sup> 250,000 m <sup>2</sup>	85,000 m <sup>2</sup> 3,000 m <sup>2</sup> — — 400 m <sup>2</sup> 100 m <sup>2</sup> 1,500 m <sup>2</sup> 20,000 m <sup>2</sup> 20,000 m <sup>2</sup> — 130,000 m <sup>2</sup>
398 kW — (—) — 398 kW	3,000 kW — (—) — 3,000 kW	6,500 kW — (—) — 6,500 kW	12,000 kW — (—) — 12,000 kW	5,000 kW — (—) — 500 kW 5,500 kW
150 (25 ) — (—) 4 (—) 154 (25 )	200 (20 ) — (—) 50 (—) 250 (20 )	150 (50 ) 50 (50 ) (50 (50 ) — 200 (100 )	730 (50 ) — (—) 20 (—) 750 (50 )	1,880 (1,080 ) 120 (120 ) (120 (120 ) — 2,000 (1,200 )
180 m <sup>3</sup> /day (17 m <sup>3</sup> /day)	100 m <sup>3</sup> /day ( — )	100 m <sup>3</sup> /day ( — )	900 m <sup>3</sup> /day (400 m <sup>3</sup> /day)	600 m <sup>3</sup> /day (100 m <sup>3</sup> /day)
Unnecessary	Unnecessary	Unnecessary	—5 m x 1B	Unnecessary
Unnecessary	Unnecessary	Unnecessary	Necessary	Unnecessary
Necessary	Necessary	Necessary	Necessary	Necessary
— — —	— — —	— — —	8,000 ton/year — 5,000 ton/year	— — —
11,000 ton/year 10,000 ton/year	1,000 ton/year 500 ton/year	2,800 ton/year 4,300 ton/year	20,000 ton/year 2,000 ton/year	720,000 units/year 720,000 units/year

Location Specification for Model Plant (7)

Item	Room air-conditioner	Tape recorder	Electric refrigerator
1. Capacity of model plant	Room air-conditioner 500,000 units/year	Tape recorder 20,000 units/month	Less than 150g 200,000 units/year More than 150g 800,000 units/year
2. Classification of utilization of plant site			
Area for:			
Production facilities	30,000 m <sup>2</sup>	5,000 m <sup>2</sup>	61,000 m <sup>2</sup>
Storage facility	2,000 m <sup>2</sup>	300 m <sup>2</sup>	5,000 m <sup>2</sup>
Transport facility			
(Port facility)	—	—	—
(Railroad facility)	3,000 m <sup>2</sup>	—	—
(Trucking facility)	2,000 m <sup>2</sup>	200 m <sup>2</sup>	7,000 m <sup>2</sup>
Pollution prevention facility	2,000 m <sup>2</sup>	100 m <sup>2</sup>	6,000 m <sup>2</sup>
Administration	1,500 m <sup>2</sup>	200 m <sup>2</sup>	20,000 m <sup>2</sup>
Area for environmental facility	23,000 m <sup>2</sup>	500 m <sup>2</sup>	63,000 m <sup>2</sup>
Road (including parking space)	27,000 m <sup>2</sup>	1,000 m <sup>2</sup>	30,000 m <sup>2</sup>
Other space	—	—	8,000 m <sup>2</sup>
Total	90,000 m <sup>2</sup>	7,300 m <sup>2</sup>	200,000 m <sup>2</sup>
3. Power facilities			
Contract power	3,500 kW	300 kW	10,000 kW
Common generating station (Amount of power received)	—	—	—
Private power generating station	300 kW	—	—
Total	3,800 kW	300 kW	10,000 kW
4. Employees			
Regular employees	900 (300 )	150 (120 )	2,700 (400 )
Temporary employees (No. of part timer)	80 ( 60 ) [30 ( 30 )]	50 ( 50 ) [50 ( 50 )]	— [—]
Sub-contract employees	20 ( 10 )	—	30 ( 10 )
Total	1,000 (370 )	200 (170 )	2,730 (410 )
5. Amount of industrial water used			
Amount of fresh water used (Recycle water)	2,000 m <sup>3</sup> /day (1,000 m <sup>3</sup> /day)	60 m <sup>3</sup> /day (—)	5,500 m <sup>3</sup> /day (2,500 m <sup>3</sup> /day)
Amount of sea water used	—	—	—
6. Transport facilities			
Port facility			
Depth of water x No. of berth	Unnecessary	Unnecessary	Unnecessary
Material to be handled			
Railroad cargo loading & unloading facility	Necessary	Unnecessary	Unnecessary
Truck loading & unloading facility	Necessary	Necessary	Necessary
7. Amount of cargo transported			
Ship			
Raw material	—	—	—
Products	—	—	—
Railroad			
Raw material	—	—	—
Products	200,000 units/year	—	—
Truck			
Raw material	500,000 units/year	120,000 units/year	66,000 ton/year
Products	200,000 units/year	120,000 units/year	64,000 ton/year

Location Specifications for Model Plant (8)

Electronic computers	Telephone exchange	Industrial measuring instrument	Automobile (Passenger car)	Automobile (Truck)
Large scale computer: 20 units/month Medium scale computer: 20 units/month	Automatic exchange: ¥35,000,000,000/year (Electronic exchange: About 80 stations)	Power receiving adjusting meter: ¥6,000,000,000/year Converter, ¥2,500,000,000/year Detector, auxiliary device: ¥1,500,000,000/year	Passenger car: 30,000 units/month	Medium size truck: 2,500 units/month Large size truck: 6~8 ton; 1,000 units/ 10~12ton; 1,500 month
25,000 m <sup>2</sup> (Included in area for production facilities)	44,000 m <sup>2</sup> 3,000 m <sup>2</sup>	6,600 m <sup>2</sup> 990 m <sup>2</sup>	380,000 m <sup>2</sup> 20,000 m <sup>2</sup>	290,000 m <sup>2</sup> 15,000 m <sup>2</sup>
-	-	-	} 300,000 m <sup>2</sup>	-
-	-	330 m <sup>2</sup>		70,000 m <sup>2</sup>
2,000 m <sup>2</sup>	1,500 m <sup>2</sup>	660 m <sup>2</sup>	40,000 m <sup>2</sup>	30,000 m <sup>2</sup>
2,000 m <sup>2</sup>	1,500 m <sup>2</sup>	3,300 m <sup>2</sup>	5,000 m <sup>2</sup>	4,000 m <sup>2</sup>
18,000 m <sup>2</sup>	130,000 m <sup>2</sup>	19,800 m <sup>2</sup>	380,000 m <sup>2</sup>	253,000 m <sup>2</sup>
13,000 m <sup>2</sup>	30,000 m <sup>2</sup>	7,920 m <sup>2</sup>	220,000 m <sup>2</sup>	200,000 m <sup>2</sup>
10,000 m <sup>2</sup>	10,000 m <sup>2</sup>	-	150,000 m <sup>2</sup>	150,000 m <sup>2</sup>
70,000 m <sup>2</sup>	370,000 m <sup>2</sup>	39,600 m <sup>2</sup>	1,495,000 m <sup>2</sup>	1,012,000 m <sup>2</sup>
7,000 kW	13,000 kW	1,500 kW	80,000 kW	32,000 kW
(-)	(-)	(-)	(-)	(-)
1,000 kW	1,000 kW	-	4,000 kW	2,000 kW
8,000 kW	14,000 kW	1,500 kW	84,000 kW	34,000 kW
1,900 (900 )	2,400 (900 )	600 (150 )	10,000 (200 )	4,600 (100 )
100 (100 )	-	70 ( 60 )	-	-
[ 50 (50 ) ]	[ - ]	[ 55 ( 55 ) ]	[ - ]	[ - ]
-	30 (150 )	10 ( 5 )	100 ( 50 )	50 ( 20 )
2,000 (1,000 )	2,700 (1,050 )	680 (215 )	10,100 (250 )	4,650 (120 )
1,500 m <sup>3</sup> /day ( 700 m <sup>3</sup> /day)	36,000 m <sup>3</sup> /day (35,000 m <sup>3</sup> /day)	500 m <sup>3</sup> /day ( - )	165,000 m <sup>3</sup> /day (150,000 m <sup>3</sup> /day)	125,000 m <sup>3</sup> /day (115,000 m <sup>3</sup> /day)
-	-	-	-	-
Unnecessary	Unnecessary	Unnecessary	-10 m x 1B - 7 m x 2B	Unnecessary
Unnecessary	Unnecessary	Unnecessary	Necessary	Unnecessary
Unnecessary	Necessary	Necessary	Necessary	Necessary
-	-	-	50,000 ton/year 255,000 ton/year	-
-	-	-	-	-
-	-	-	20,000 ton/year	-
7,000 ton/year 7,000 ton/year	2,200 ton/year 2,000 ton/year	550 ton/year 480 ton/year	400,000 ton/year 95,000 ton/year	490,000 ton/year 334,000 ton/year 80,000 ton/year

Location Specifications for Model Plant (9)

Item	Motorcycle	Shipbuilding	Wrist watch (1)
1. Capacity of model plant	Less than 50cc: 20,000 units/month 51~125 cc: 26,000 units/month 126~250 cc: 4,000 units/month	Large tanker: (ships/year) 300,000 DWT x 4 Freighter: 30,000 DWT x 10 Vessel for repair: 2,600,000 DWT x 33	Wrist watch 100,000 units/month
2. Classification of utilization of plant site			
Area for:			
Production facilities	66,000 m <sup>2</sup>	300,000 m <sup>2</sup>	5,000 m <sup>2</sup>
Storage facility	10,000 m <sup>2</sup>	65,000 m <sup>2</sup>	100 m <sup>2</sup>
Transport facility			
(Port facility)	-	-	-
(Railroad facility)	-	-	-
(Trucking facility)	-	-	100 m <sup>2</sup>
Pollution prevention facility	10,000 m <sup>2</sup>	52,000 m <sup>2</sup>	200 m <sup>2</sup>
Administration	3,000 m <sup>2</sup>	20,000 m <sup>2</sup>	150 m <sup>2</sup>
Area for environmental facility	56,000 m <sup>2</sup>	250,000 m <sup>2</sup>	50,000 m <sup>2</sup>
Road (including parking space)	40,000 m <sup>2</sup>	120,000 m <sup>2</sup>	2,000 m <sup>2</sup>
Other space	37,000 m <sup>2</sup>	193,000 m <sup>2</sup>	-
Total	222,000 m <sup>2</sup>	1,000,000 m <sup>2</sup>	57,550 m <sup>2</sup>
3. Power facilities			
Contract power	12,000 kW	10,000 kW	1,000 kW
Common generating station (Amount of power received)	(-)	(-)	(-)
Private power generating	1,000 kW	-	-
Total	13,000 kW	10,000 kW	1,000 kW
4. Employees			
Regular employees	1,500 (300 )	1,260 (50 )	270 (170 )
Temporary employees (No. of part timer)	250 ( 50 ) (-)	- (-)	50 ( 50 ) [50 ( 50 )]
Sub-contract employees	30 ( 10 )	540 (20 )	100 ( 70 )
Total	1,770 (360 )	1,800 (70 )	420 (290 )
5. Amount of industrial water used			
Amount of fresh water used (Recycled water)	26,500 m <sup>3</sup> /day (24,000 m <sup>3</sup> /day)	2,400 m <sup>3</sup> /day ( 120 m <sup>3</sup> /day)	500 m <sup>3</sup> /day (100 m <sup>3</sup> /day)
Amount of sea water used	-	1,500 m <sup>3</sup> /day	-
6. Transport facilities			
Port facility			
Depth of water x No. of berth	Unnecessary	-6m x 2B	Unnecessary
Material to handled			
Railroad cargo loading & unloading facility	Unnecessary	Unnecessary	Unnecessary
Truck loading & unloading facility	Necessary	Necessary	Necessary
7. Amount of cargo transported			
Ship		222,000 ton/year	-
Raw material	-	-	-
Products	-	-	-
Railroad		-	-
Raw material	-	-	-
Products	-	-	-
Truck	95,000 ton/year 51,000 ton/year	30,500 ton/year	300 ton/year 150 ton/year

Location Specifications for Model Plant (10)

Wrist watch (II)	Camera	Medical treatment equipment (I)	Medical treatment equipment (II)
Wrist watch (Quartz type) 400,000 units/month	Camera 50,000 units/month	Large scale equipment: 100 units/month Pathological equipment: 200 units/month Other: 200 units/month	Obstetrics and gynecology, pediatric equipment: ¥4,000,000,000/year
11,500 m <sup>2</sup> 50 m <sup>2</sup>	19,000 m <sup>2</sup> 4,000 m <sup>2</sup>	16,500 m <sup>2</sup>	5,000 m <sup>2</sup>
-	-	-	-
-	-	-	-
-	500 m <sup>2</sup>	-	-
1,400 m <sup>2</sup>	1,000 m <sup>2</sup>	165 m <sup>2</sup>	-
4,550 m <sup>2</sup>	1,200 m <sup>2</sup>	1,650 m <sup>2</sup>	1,000 m <sup>2</sup>
16,700 m <sup>2</sup>	40,500 m <sup>2</sup>	7,300 m <sup>2</sup>	1,500 m <sup>2</sup>
7,700 m <sup>2</sup>	3,800 m <sup>2</sup>	2,000 m <sup>2</sup>	1,000 m <sup>2</sup>
6,000 m <sup>2</sup>	30,000 m <sup>2</sup>	990 m <sup>2</sup>	-
47,900 m <sup>2</sup>	100,000 m <sup>2</sup>	29,205 m <sup>2</sup>	8,500 m <sup>2</sup>
1,950 kW	2,500 kW	500 kW	300 kW
-	-	-	-
(-)	(-)	(-)	(-)
400 kW	-	-	-
2,350 kW	2,500 kW	500 kW	300 kW
870 (230 )	1,000 (600 )	284 (44 )	140 (20 )
450 (400 )	100 (100 )	16 ( 6 )	60 (50 )
(-)	( 100 (100 )	(16 ( 6 )	(45 (45 )
-	40 ( 10 )	-	-
1,320 (630 )	1,140 (710 )	300 (50 )	200 (70 )
830 m <sup>3</sup> /day (-)	600 m <sup>3</sup> /day (200 m <sup>3</sup> /day)	200 m <sup>3</sup> /day (160 m <sup>3</sup> /day)	60 m <sup>3</sup> /day (-)
-	-	-	-
Unnecessary	Unnecessary	Unnecessary	Unnecessary
Unnecessary	Unnecessary	Unnecessary	Unnecessary
Necessary	Necessary	Unnecessary	Unnecessary
-	-	-	-
-	-	-	-
-	-	-	-
-	-	720 ton/year	-
400 ton/year 190 ton/year	700 ton/year 600,000 ton/year	1,440 ton/year 720 ton/year	500 ton/year 500 ton/year



## **7. Industrial Estate, its facilities and Services**



Table-35 Laem Chabang New Town Community Plan

1. Master Plan

To construct a new community for workers who will increase in LCB industrial area and manage community services such as school, hospital, health center and police station.

2. Housing Demand Estimation in LCB New Town

Estimated number of laborers which is expected to increase:

- Directly increasing laborers

	Total labour	Labour at new town
Export Processing Zone (EPZ)	5,430	
General Industrial Estate (GIE)	4,040	9,540
Port	7,200	
- Additional effects	8,130	2,560
- TORC, ESSO, SRI	3,000	400
Total	27,800	12,600

Remarks - Not include the government officials and state enterprise officials who may increase.

- People at new town =  $12,600 \times 1.92 = 24,000$   
persons.

The number of labour at new town is 12,600 persons, dwelling demand of which amounts to 5,133 units, which will be classified by income level, home style, kind of rent/purchase and size as shown in the following.

### 3. Demand of Housing Needed

Number of labour in new town is 12,600. Housing needed are about 5,133 units.

Details are as follows:

Target Group	Domestic Income (baht/month)	Type of Housing			Remarks
		Purchase	Rent	Total	
- Administrator	over 9,000	330	-	330	
- Technician	5,000 -9,000	755	548	1,303	
- Non-skilled labour	under 5,000	1,120	2,380	3,500	
<b>Total</b>		<b>2,205</b>	<b>2,928</b>	<b>5,133</b>	

### 4. Demand of Land and Housing Style Divided

Estimated land expropriation for new town is about 380 rai. which will be used for housing, public utility and infrastructure.

Target Group	Size of Land (rai)	Home Style	No. Re- (unit) marks
- Administrator	180	- single 2 floors	1,085
		- double 2 floors	
- Technician		- row 2 floors	
		- commercial bldg	
- Non-skilled labor	200	- flat 5 floors	2,928
		- row 1 floor	1,120
<b>Total</b>	<b>380</b>		<b>5,133</b>

## 5. Project Investment

- Land: National Housing Authority (NHA) will arrange the project of 380 rai expropriation. The project will be divided into 2 sectors:  
Rent Project (200 rai) and Purchase Project (180 rai)
- Public Utility: For low income group, 80% of the budget comes from NHA and 20% is provided by government subsidy. For middle and high income group, total budget comes from NHA.
- Infrastructure: The budget for stadium community center, school and health center construction comes from the government budget and implementing agencies.
- Building Construction: The total budget for building construction comes from NHA's budget.
- Financial Sources: Local loan and mobile fund from income of NHA (10%).
- Investment Reimbursement: 70% of building is rented to low income group and the investment cost for building construction is expected to get from long-term rent. The rent will be adjusted every 10 years. Other 30% is purchased with the price to be paid at a premium within 15 - 20 years.

## 6. Process

The process of NHA is divided into 3 stages.

- First stage : 1988 - 1990 1,012 units
  - Second stage: 1990 - 1991 1,012 units
  - Third stage : 1991 - 1993 3,109 units
- (Total 5,133 untis)

Table-36 Outline of Example of Industrial Park in Japan

Outline of Kanazawa Industrial Park

- Location: Relaimed area No. 3, Kanagawa-chisaki, Yokohama City, Kanagawa Prefecture
- Area: 227 ha
- Main line of firms located: Machinery/metal-affiliated manufacture, chemicals and construction work
- Main facilities: a) Park center (Yokohama City Kanazawa Industrial Promotion Center)
- Main center:  
exhibition room, post office, banking organ, management consulting room, center office, clinic and rental offices, etc.
  - Sports center:  
Gymnasium, training room, dressing room, meeting room, etc.
  - Service center:  
Restaurant, shops, tea room, conference room, study and training room
  - Three sport grounds:  
Equipped with night lighting fixtures
  - Two tennis courts:  
Equipped with night lighting fixtures, for the use at any weather

- Club house:

Dressing room, shower room and locker

- Garden:

- b) Industrial wasted water disposal place
- c) Park in the park
- d) Others, including bus stop

Main facilities  
in the adjacent  
area outside  
the park:

- a) Sewage facilities
- b) Cleaning plant
- c) Reclamation plant
- d) Housing complex, including school, and shopping center

Management and  
Operation body:

- a) Yokohama city Kanazawa Industrial Promotion Center (foundation); Control and management of park center
- b) Yokohama City:  
Maintenance of roads, park and other public facilities in the park

Other characteristics:

- a) The Kanazawa Industrial Park Liaison Council has been established by the invited firms to engage in the negotiations and contacts between the invited firms and public organizations concerned, the information exchange and contacts between the firms and the presentation of requests to the organizations concerned.
- b) The park center is used not only for the benefit of the invited firms in the park but also for the promotion of minor firms in Yokohama City and the welfare of their employees.
- c) The park center is financed by the subsidies from Yokohama City and Kanagawa Prefecture, loan from Yokohama City, membership fee of firms and athletic facility use fees.

Outline of Keiyo Foods Industrial Park

Location: Funabashi City, Chiba Prefecture (adjacent to the harbor)

Area: 67.5 ha

Main line of firms located: Food processing industry

Main facilities:

- a) Piers for exclusive use ... 12m and 6m deep
- b) Rack for joint use ... 1,700m long
- c) Disaster prevention center



d) Park center (Keiyo Foods Industrial Park Hall)

- Office of Keiyo Foods Industrial Park Council (corporation)

- Exhibition room

- Research room

- Office of Keiyo Utility Co., Ltd.

- Conference room for joint use

#### Management and

Operation body: a) Keiyo Foods Industrial Park Council (corporation): in charge of soft service, This council is a non-profit foundation joined by all of the invited firms

- Adjustment of relations between the invited firms

- Negotiations with government offices

- Research of food quality control and safety control

- Guidance to food consumers

b) Keyo Utility Co., Ltd.: in charge of hard service.

This company is a private organization invested by all of the invited firms

- Boiler-type independent power plant

- Special high-voltage power receiving and transformer substation
- Industrial water disposal facilities
- Wasted water disposal facilities
- Industrial wastes disposal facilities
- Rack facilities for joint use
- Disaster prevention center, equipped with computer and TV camera

Other

- characteristics:
- a) Transportation and package companies as supporting firms are located in the park.
  - b) Keiyo Utility Co., Ltd. manufactures fertilizers by dehydrating and drying sludge in the wasted water from the plants. Sales of the fertilizers are part of the working funds of the company.
  - c) An agreement is concluded on the green ground in the compounds of firms.

Outline of Sapporo Techno Park

Location: Sapporo City, Hokkaido Inland-type, adjacent to the airport

Area: 10.1 ha

Main line of

firms located: Electronics-related firms --  
research/development firms of soft-ware  
technology or system technology for computer  
and micro processor or those firms which have  
this kind of research/development divisions

Main

facilities: a) Park center (Sapporo Electronics Center)

- Test room opened to the citizens
- Terminal room opened to the citizens
- CAD room
- Micro soft test room
- Information data room
- Exhibition room
- Multi-purpose hall for exhibition and  
other events
- Constant temperature and moisture testing  
room
- Restaurant and tea room
- Cash dispenser
- Auditorium for various lectures,  
association and sports activities
- Shower room

- Barbershop
- Study and training room, conference room and resting room (for recess and doze)
- Copy center
- Technology development room for rent (available for 24 hours)
- Warehouse

b) park (approximately 4.2 ha)

c) LAN in the park:

Established by Sapporo City.

Underground wiring was constructed at the expenses of firms.

Management and  
Operation body:

a) Sapporo Electronics Center (foundation):  
Control and management of the park center

b) Sapporo City:  
Maintenance of roads, park and other public facilities in the park

Other

characteristics: a) Sapporo Electronics Center issues a monthly COMPLEX NEWS to introduce newly-established firm, exchange information between firms and promote the use of facilities.

- b) To keep beautiful appearance of the park, have been concluded. Agreements on the buildings and green grounds in the park.
- c) Green places and park account for approximately 40 percent of the park total area. In the area adjacent to the park, there are tennis courts, baseball ground, athletic track and field and swimming pool with warmed water.
- d) Sapporo Techno Park, which is close to the center of Sapporo City, is suitable enough for workes to lrave their residence, go shopping and have any amusement.

Table-37 Modes of Free Trade Regions

Mode	Objectives	Functions	Characteristics	Administration	Example
Free District, Transit Zone	Promotion of transit trade	The Free District recognizes processing remodeling, sorting, etc.) of cargoes in custody, while the Transit Zone simply recognizes transit trade.	<ul style="list-style-type: none"> <li>* The zone is narrow, so administration is accomplished with ease.</li> <li>* Since processing and manufacturing are not permitted, imbalance with domestic industries is averted.</li> </ul>	City, port authorities, etc.	Transit Zone: Thailand, India, etc., 14 countries and 37 ports. Free District: Yemden, West Germany, etc., 3 countries, 4 ports.
Free Port Area	Promotion of transit and processing trade	Remodeling, sorting, also mixing, processing, manufacture, sample display, etc., are per- mitted) (In general, processing and manufacture are placed under super- vision of customs authorities. Domestic transactions of products possible.)	<ul style="list-style-type: none"> <li>* The zone is narrow, so administration is accomplished with ease.</li> <li>* Residence not recognized, so there is no discrimi- nation of ideologies between nationals.</li> </ul>	States, cities, port authorities, etc.	Bremen, Hamburg (West Germany), etc., 4 countries and 7 ports.
Free Port City	Benefit of transit trade	Recognized in addition to Free Port Area characteristics are individual residence and tariff-free consumption of foreign commodities. (Even with a Free Port City, import is restricted and tariffs are imposed on some items, so no complete Free Port City exists.)	<ul style="list-style-type: none"> <li>* The Free Port City itself thrives.</li> <li>* Wide region makes administration difficult.</li> <li>* Big influence exerted to other domestic ports and to residents outside the region.</li> </ul>		Hong Kong (U.K.), Singapore, etc., 5 countries and 6 ports.

Mode	Objectives	Functions	Characteristics	Administration	Example
Export Processing Zone	Promotion of export processing trade	Prohibits passage and transit trade, permits export-oriented storage, display, remodeling, processing, etc. (Domestic use of goods prohibited, and customs clearance required for conveyance of raw materials to other regions and for reshipment of products.)	* Conduces to promotion of exports, creation of job opportunities, technology transfer, etc.	Export Processing Zone authorities, etc.	Musan (ROK) Gaoxiang, etc., 5 countries and 21 ports.
Foreign Trade Zone (U.S.)	Promotion of international and interstate trade	Permits cargo handling, storage, processing, manufacture and display for passage, transit and processing trade. (Processing and manufacturing operations are not limited to processing for export and for domestic use, but are normally supervised by customs authorities.)	* Conduces to creation of job opportunities and promotion of regional economies.	Cities, etc.	New York City, New Orleans, etc., 45 zones.

Source: Japan Tariff Association

Table-38 Characteristics of Free Trade Zones of Various Countries

Country/Zone	Objectives, State of Utilization	Benefits to Enterprises	Controls and Limitations
ROK (Masan, Export Processing Zone 174 ha)	Entry from foreign countries accepted favorably for increasing employment for technical improvement. Permits storage, re-creating, processing and manufacture for export.	Clearance procedures are simplified conspicuously, and corporate as well as income taxes reduced with respect to foreign currencies and technologies introduced by venturing companies and their supporting companies.	Commodities conveyed inside or products manufactured inside cannot be conveyed into the domestic regions.
Taiwan (Gaoxiong, Taizhong, etc.)	Export Processing Zone designed to increase employment and technical improvement. Being utilized for storage, display, and also for processing and manufacture for export.	Exemption of import duties and commodity taxes for facilities, machinery and raw materials used by venturing companies. Period of commodity storage unlimited.	Cannot be utilized simply for import into Taiwan or for transit purpose for export to third countries.
Hong Kong	All of Hong Kong is a Free Port Area enabling commodity storage, sorting, re-creating, display, sale, loading and unloading.	All commodities tariff-free excepting for some specific items.	Tariff imposed on some items such as alcoholic beverages and tobacco. Strategic commodities require import permits.
Singapore	Tariff-imposed items are increasing due to industrialization and need to protect domestic products, but the entire country is still a so-called completely free port.	Import duties and other trade controls suppressed at minimum.	Special restrictions on carrying-in, operation and storage of hazardous items. Permit of customs authorities necessary in case of tariff-impossible items.



Country/Zone	Objectives, State of Utilization	Benefits to Enterprises	Controls and Limitations
U.K. (North Ireland, etc., 6 places)	Aim is to vitalize regional economy. Being utilized for storage, manufacture and processing.	Tariff and value added tax exempted inside the compounds.	Tariff imposed when shipping into EC countries.
Panama	Being utilized for storage, display, manufacture and processing.	Exemption of federal and regional taxes, and reduction of income tax.	Retailing in compounds prohibited.
United States	Aims are to vitalize regional economy and to promote trade. Being utilized for processing for export and for deliveries to the domestic market.	Tariff payments can be extended during storage, and processed products exported to third countries are tariff-exempt. When shipping to the domestic market the lower between the tax rates for products and for imported parts can be selected optionally.	

Table-39 Examples of Industrial Parks in Asian Countries:

Outline of Hsinchu Science-Based Industrial Park, Taiwan

Location:	Hsinchu City, Hsin-chu Prefecture, Taiwan Inland-type and adjacent to the airport
Area:	264 ha
Main line of firms located:	High technology industries, including computer, semiconductor and precise machinery. As of May, 1987, 59 companies are located in the park.
Main facilities:	a) Park control center (Park Control Bureau office) b) Standard plants (410-674 m <sup>2</sup> ) c) Housing complex (for single person, two persons and family) d) Branches of governmental offices and commercial enterprises in Hsinchu Prefecture  - Security guard companies - Bank and post office - Computer center - Customs house and taxation office - Bonded warehouses

- Land administration office
- School and clinic
- Electric power company office and airline company office
- Shopping center, sports and recreational facilities
- National Employment Center

Management and

Operation body: a) Hsinchu Science-based Park Administration:  
Engaged in the following services in cooperation with the local agencies of the government

- Acceptance of application for investment
- Taxation, postal and communication services
- Employment agency
- Aid to plant construction
- Acceptance of application for company registration
- Exchange education
- Foreign currency treatment
- Export/import procedures

- Financing

- Offer of hygienic and lodging facilities

- Warehouse storage and transportation

Other

characteristics: a) This park is Taiwan's only high technology industrial park. In Taiwan, the supply of industrial parks is larger than the demand for them. As of October, 1986, 76 industrial parks have been established ... total area is 10,646 ha.

b) Most of the invited firms are based on the overseas Chinese and U.S. capital.

c) For those firms whose inroads are especially welcomed, land rent is exempted for five years, and other aid steps are taken.

#### Outline of Mansan Free Export Zone

Location: Mansan, the Republic of Korea, Adjacent to the harbor

Area: 81.4 ha

Main line of firms located: Labor-intensive light industry, including electric, electronics, metal and precise machinery  
As of December, 1986, 76 companies are located in this free zone. Most of them are based on the Japanese capital.

**Main**

**facilities:**

- a) Mansan Export Free Zone Control Office
  
- b) Governmental organizations and facilities supporting the firms:
  - Customs house
  - Labor Department office
  - Central heating/cooling facilities
  - Post office
  - Quarantine office
  - Oil supply office
  - Telegram and telephone office
  - Police station
  - Clinic
  - Immigration office
  - Fire station
  - Restaurant
  
- c) Private organizations supporting the firms:
  - Bank
  - Travel agency
  - Insurance company

- Transportation, warehouse, loading and packaging companies
- Customhouse broker
- Shops exclusively for foreigners
- Machine repairing companies

Main facilities  
outside the  
park:

- a) Apartment houses for foreigners
- b) Domestic-produced materials information center
- c) Golf links

Management and  
Operation body:

Mansan Free Export Zone Control Center:  
This center is given a power to handle all matters without intervention of the central government.

Other  
characteristics:

Powers of heads of various governmental organizations on the foreign currency, foreign trade and foreign exchange are assigned to the Mansan Free Export Zone Control Center. This center functions as a small government and works to simplify and quicken various administrative procedures.

Table-40 : Foreign Trade Zone in the United States and Its System

General

Purpose of FTZ system:	Economic development of the area through the expansion of firms, location and the increase of employment opportunities
Business organization (Those who can get approval for the FTZ system application):	Local self-government or public organizations
Businesses allowed:	To engage in keeping in the storage, processing, inspecting, exhibiting and saling of goods with approval from the customhouse in the designated area.
Those granting approval:	Foreign Trade Area Committee (governmental organization)
Favorable treatments granted in connection with customs:	<ul style="list-style-type: none"><li>- In principle, the goods storage period is unlimited.</li><li>- During the storage period, payment of custom duties is exempted.</li><li>- No taxes are levied on the export of processed goods to third countries.</li></ul>

- When the goods are shipped within the country, it is possible to select tariff of products or tariff of imported parts, whichever lower.

#### Management and

Operation body of

FTZ: In principle, the control and management is independent. There are three forms of management and operation ...

- 1) led by public organizations,
- 2) led by private organizations and
- 3) jointly led by the public and private organizations.

#### Form of Management and Operation

##### 1. Public organization:

a) Business organization: Local government or public organizations

b) Management and operation body: Local government or public organizations

##### c) Characteristics:

About half of the existing free trade zones belong to this form. This form is apt to lack services for firms. In many cases where actual management and operation is entrusted to the specialist private companies, this form proves successful.



2. Private organization:

a) Business organization: Local government or public organizations

b) Management and operation body: Private companies

c) Characteristics:  
This form, which is operated on the economic principle, can be carried out smoothly. In some cases, a transportation company, which is entrusted by firms with the transportation of goods, is engaged in the control and management of the free trade zone.

3. Jointly by public and private organizations:

a) Business organization: Non-profit corporation consisting of local self-government and private companies

b) Management and operation body: Non-profit corporation consisting of local self-government and private companies

c) Characteristics:  
A non-profit corporation is formed jointly by the local self-government and private companies of the area. This corporation is engaged in the management with the approval from the authorities. In many cases, the management and operation body is engaged in the presentation on information to firms and the business procedures for the central government while the actual management and operation businesses are entrusted to the specialist private companies.

### Conditions for FTZ

1. It is necessary that the management and operation body itself should have ample knowledge and knowhow about the customhouse business procedures and the preparation of documents to be submitted to the customhosue and the Department of Commerce.
2. It is required to establish a data control system (both hardware and software) which is capable of correctly grasping, by using the computer, the incoming, outgoing, storage and other flows of goods.
3. It is desirable to complete wide and careful business supporting services to firms, including consulting services for firms, goods storage and delivery services, computer control of orders received and placed and interpretation services while the business is negotiated.

### FTN's characteristics and incentive for firms

1. Local self-government or public organizations receive the FTN designation or approval, but in principle, the management and operation is carried out independently by firms.
2. In the FIN, firms in place of customhouse can engage in the storage, processing, exhibition, sales and inspection of goods.
3. Customhouse officers carry out the calculation of tariff and custom duties on the goods and non-periodical spot inspections but are not permanently stationed in the FTN.
4. The control organization in place of the customhouse keeps a correct record of the receiving, shipping and storage of goods in accordance with the customs law.

5. Thanks to the favorable treatment in connection with the custom duties, firms can expect easy financing and a cut in the commodity distribution expenses. Through the independent control of receiving, shipping, storage and processing of goods, firms can carry out their export/import businesses almost as they wish.

Table-41 Summary of interviews with some firms currently operating in the Thailand industrial complexes (their opinions on the management and operation of parks)

Name of industrial park	Interviewee	Firms' opinions, desires and requests
Nava Nakorn Industrial Estate	Manufacturer, Company A	<ul style="list-style-type: none"> <li>- It is inconvenient that city buses do not go through the industrial park. The company itself possesses a bus to transport the employees.</li> <li>- In case of sea transportation, the customhouse procedures are too complicated. Even in case of air transportation, recently it takes longer to finish the procedures.</li> <li>- Water pressure of water supply is low. In light of expansion of the park in the future, we are afraid of uneasy supply of electricity.</li> <li>- Firm steps should be taken for the repair of roads and the maintenance of public facilities.</li> <li>- Recently it has become difficult to obtain appropriate labor power.</li> <li>- It is desirable that there should be more apartment houses and lodging facilities in the vicinity of the park.</li> </ul>

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Name of industrial park	Interviewee	Firms' opinions, desires and requests
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Lat Kraban Industrial Estate	Copany B, auto- mobile assembly industry	<ul style="list-style-type: none"> <li>- More efforts should be made for the security and disaster prevention services and the maintenance of public facilities</li> <li>- It is desirable that there should be public mass transportation means, including bus.</li> <li>- There should be independent power supply service at the time of suspension of electric power or lowering of voltage.</li> <li>- Introduction of material/parts suppliers or workers is desirable.</li> <li>- Tele-communication facilities are not satisfactory.</li> <li>- Services for procurement of working capital are required.</li> <li>- It is requested that customhouse procedures should be simplified and quickened.</li> <li>- Procedures for immigration and residence approval should be simplified or quickened.</li> <li>- The management and operation body should quickly response to the firms' requests for improvement.</li> </ul>
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Name of industrial park	Interviewee	Firms' opinions, desires and requests
Lat Kraban Industrial Estate	Company C, chemicals manufacturer	<ul style="list-style-type: none"> <li>- It is desirable that there should be a soccer field equipped with night lighting fixtures.</li> <li>- Customhouse procedures should be simplified or quickened.</li> <li>- An electric supply system without suspension of power is desirable.</li> <li>- Introduction of those companies for entrusted orders is desirable.</li> <li>- Services for coordination of labor-management relations are requested.</li> <li>- Supply of information by the management and operation body to firms is not satisfactory.</li> </ul>
Lat Kraban Industrial Estate	Automobile assembly plant	<ul style="list-style-type: none"> <li>- It is desirable that there should be facilities to weight and inspect products.</li> <li>- It is requested that there should be professional training facilities, meeting places and amusement facilities inside and outside the park.</li> <li>- There should be a bus which can be jointly used by other companies.</li> <li>- Stable electric power supply system should be established.</li> </ul>

Name of industrial park	Interviewee	Firms' opinions, desires and requests
(Cont'd)		- Documentation procedures should be simplified or quickened.
Other enterprises		<ul style="list-style-type: none"> <li>- Thai labor power is comparatively good. But Thai lacks staff of group leader level and engineers.</li> <li>- Generally speaking, maintenance of roads and sewage facilities in the park is not good.</li> <li>- Construction of facilities is not carried out as planned. In some cases, firms are forced to construct access roads by themselves.</li> <li>- It is imperative that banks, restaurants, amusement centers and recreation facilities should be constructed in the park.</li> <li>- Generally speaking, tele-communication facilities are not good.</li> <li>- It takes too long to finish customhouse procedures. Lots of goods are left untreated in the customhouse. May be an increasing number of parts and materials with which customhouse officers are not familiarized are imported.</li> <li>- It is desirable that surveillance staff should be sent by the customhouse to the bonded warehouse.</li> </ul>

Table-42 Outline of Industrial Parks in Thailand (Based on the data of JETRO Bangkok Center)

Name of park	Development organization	Location	Total area	Merits	Demerits
Industrial parks developed by public organizations,	National Industrial Housing Authority	Bangplee District, Samut Prakarn P.	4465 rai (phase 1 - 3)	This park is close to Bangkok City. Conditions of location are good. Prices of land in lots are comparatively cheap.	Ground conditions are not good. This park has once suffered from floods.
Industrial parks developed by private organizations	Northern Region Industrial Estate	Muang District, Lamphun Province	1780 rai	Various special favorable treatments are given to those firms making an inroad into the EPZ. This park is close to the railway stations and airport.	Sale of land in lots is not promoted.
Industrial Estate	Map Ta Pud Industrial Estate	Muang District, Rayong Province	8070 rai	Close to the harbor.	



Name of park	Development organization	Location	Total area	Merits	Demerits
(Cont'd)					
Nava	Joint venture by five organizations including NHA.	Nava Nakorn New Town, 20km north of the Don Muang Airport	500 rai	Close to the airport. Comparatively close to Bangkok.	It is difficult to expand the industrial park. There is a problem of public pollution in the nearby housing area.
Nakorn New Town and Investment Promotion Zone (phase 4)					
Bangpoo Industrial Estate	I.E.A.T. and Thailand Industrial Real Estate Development Co.	Sukhumvit road by the Sukhumvit road	5330 rai	Comparatively close to Bangkok. Conditions of location are good. EPZ enjoys good reputation.	Maintenance of access roads to the park is not good. As the authorities were hasty in selling the land in lots, they were not prudent in selecting kinds of firms to be located. In the park, there are plants arising a problem of contamination.

Name of park	Development organization	Location	Total area	Merits	Demerits
Sriracha Industrial Park	Saha Pathana Inter-Holding Co.	Sriracha District, Chonburi Province	1200 rai	Assistance services to firms are good.	Only those firms affiliated to the Saha group are allowed into this park.
Lat Kraban Industrial Estate Phase 3	Inter-national Resources Development Co.	Min Buri District, Bangkok	1103 rai	Close to Bangkok. Conditions of location are good. 30km to the harbor and 35km to the airport.	Ground conditions are not good.
Bangkadi Industrial Park	Bangkadi Industrial Park Co.	Muang District, Pathum Thani P.	1023 rai	Comparatively close to Bangkok (40km).	A plan to construct a housing area has been suspended.

Name of park	Development organization	Location	Total area	Merits	Demerits
Bangpakong Industrial Park	Bangpakong Industrial Park Co.	52km southeast of Bangkok. 1 - 3)	1440 rai (phase	Firms can obtain financing from a private bank which is one of the members of the development organization. Conditions of location are also good.	Quantity of water supply is a problem.
Suranaree Industrial Zone	Suranaree Industrial Zone Co.	Tambon Hua Talay, Muang District	756 rai	This park is a BOI-designated promotion area. Prices of land in lots are comparatively cheap.	Far away from Bangkok (262km).

Table-43 Employment in the Masan Free Export Region

Year	1971	1972	1973	1974	1975	1976	1977
Nationwide Manufacturing Industry (A)	1,287,000	1,372,000	1,482,000	1,615,000	1,744,330		
Masan (B)	1,248	7,106	21,240	20,822	20,953	29,600	29,214
Male (C)	129	1,054	3,965	5,626	5,610	-	-
Female (D)	1,119	6,052	17,275	15,196	15,343	-	-
(B) / (A)	0.097	0.52	1.43	1.29	1.20	-	-
(D) / (B)	89.7	85.2	81.3	73.0	73.2	-	-

Source: Based upon data from the Industrial Zone Supervisory Board and the Masan Free Export Zone Supervisory Office.

Table-44 Labor Force in the Taiwan EPZ (as of October 1975)

	Kaoshing	Nanpeng	Taichung	Total	Sex differentiated %age
Male	5,923	1,981	1,424	9,328	16.4
Female	31,318	10,562	5,633	47,513	83.6
Total	37,241	12,543	7,057	56,841	100.0

Source: Processing Zone Monthly Statistical Report, October 1975.

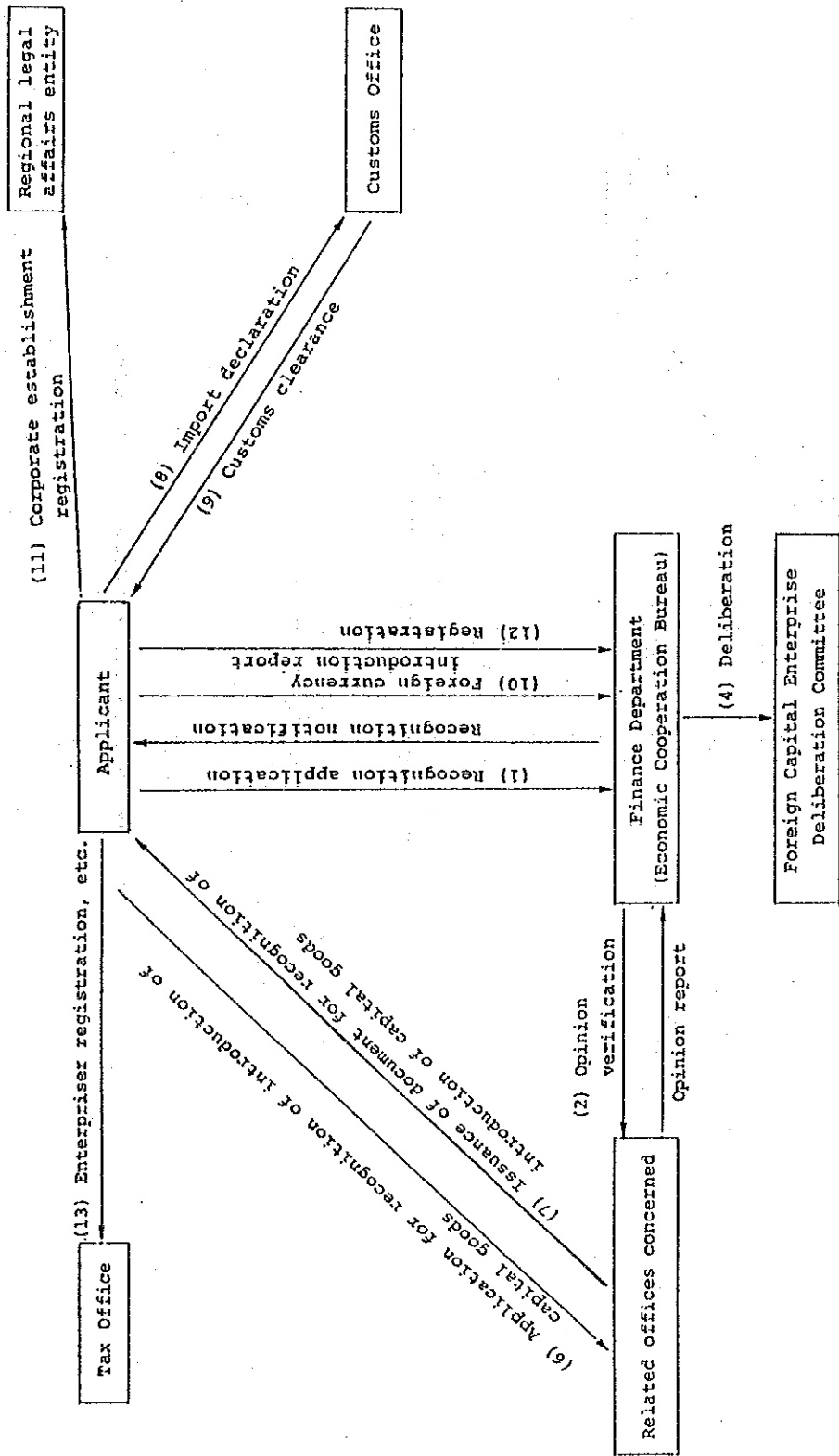
Table-45 Labor Force in the South Korean GIE (as of January 1978)

	Iri Industrial Complex	Changwou Industrial Complex	Kwangju Industrial Complex	Total for 3 Complexes	Sex diff. %age
Male	2,868	2,567	3,579	9,014	50.4
Female	4,900	3,181	793	8,874	49.6
Total	7,768	5,748	4,372	17,888	100.0

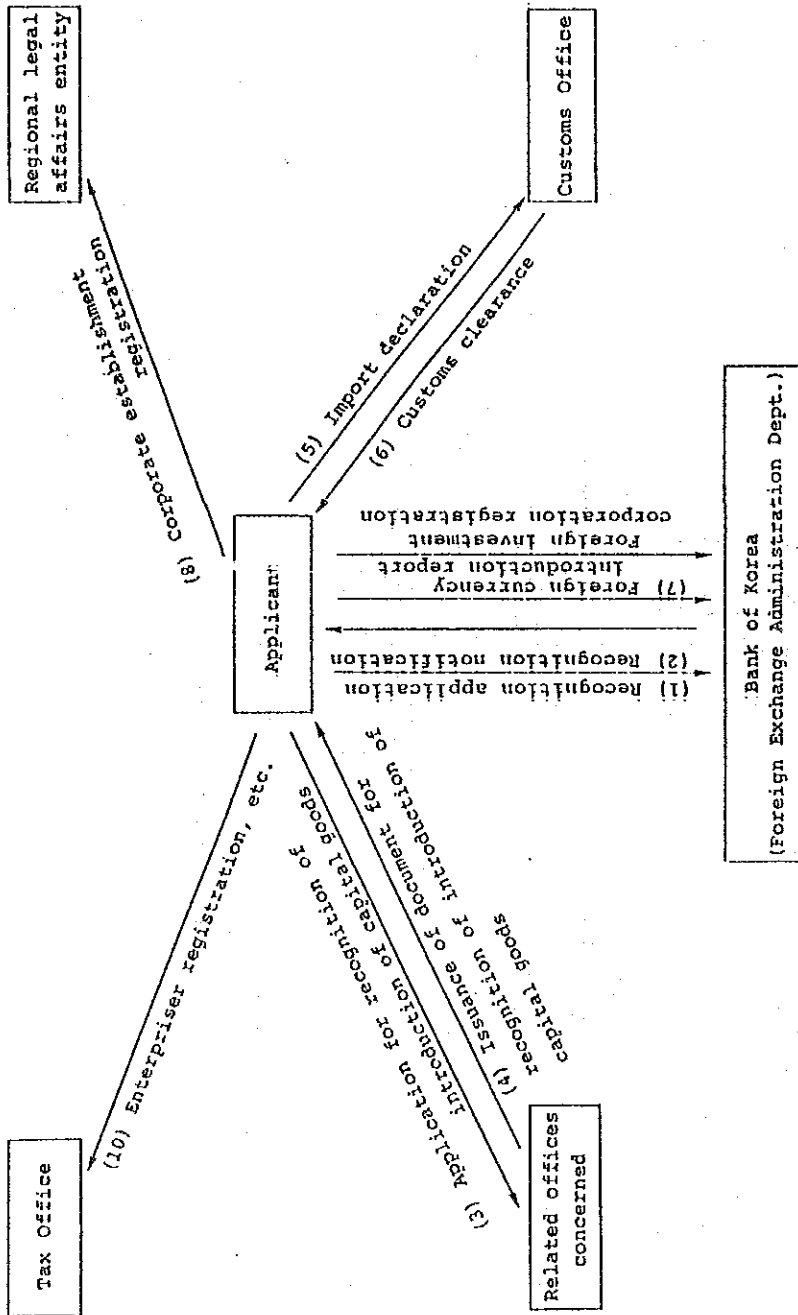
Note*	Textiles	13	Textiles	9	Textiles	173	Textiles	195
	Leather	6	Electric.	5	Machine.	64	Leather	8
	Elect. products	3	Chemical	4	Steel	5	Electric.	10
	Packaged goods	2	Machine.	3	Electric.	2	Machine.	68
	Food products	3	Leather	2	Chemical	4	Chemical	4
	Other	14	Other	15	Other	44	Other	196

Source: ?



Reference document: Guide to Investment in Korea, ROK Finance Department, Smaller Industries Promotion Public Corporation, Economic Cooperation 87-10, P31

Fig.-1 Factory siting Application Procedures (1), Korea



Reference document: Guide to Investments in Korea, ROK Finance Department, Smaller Enterprises Promotion Public Corporation, Economic Cooperation 87-10, P30

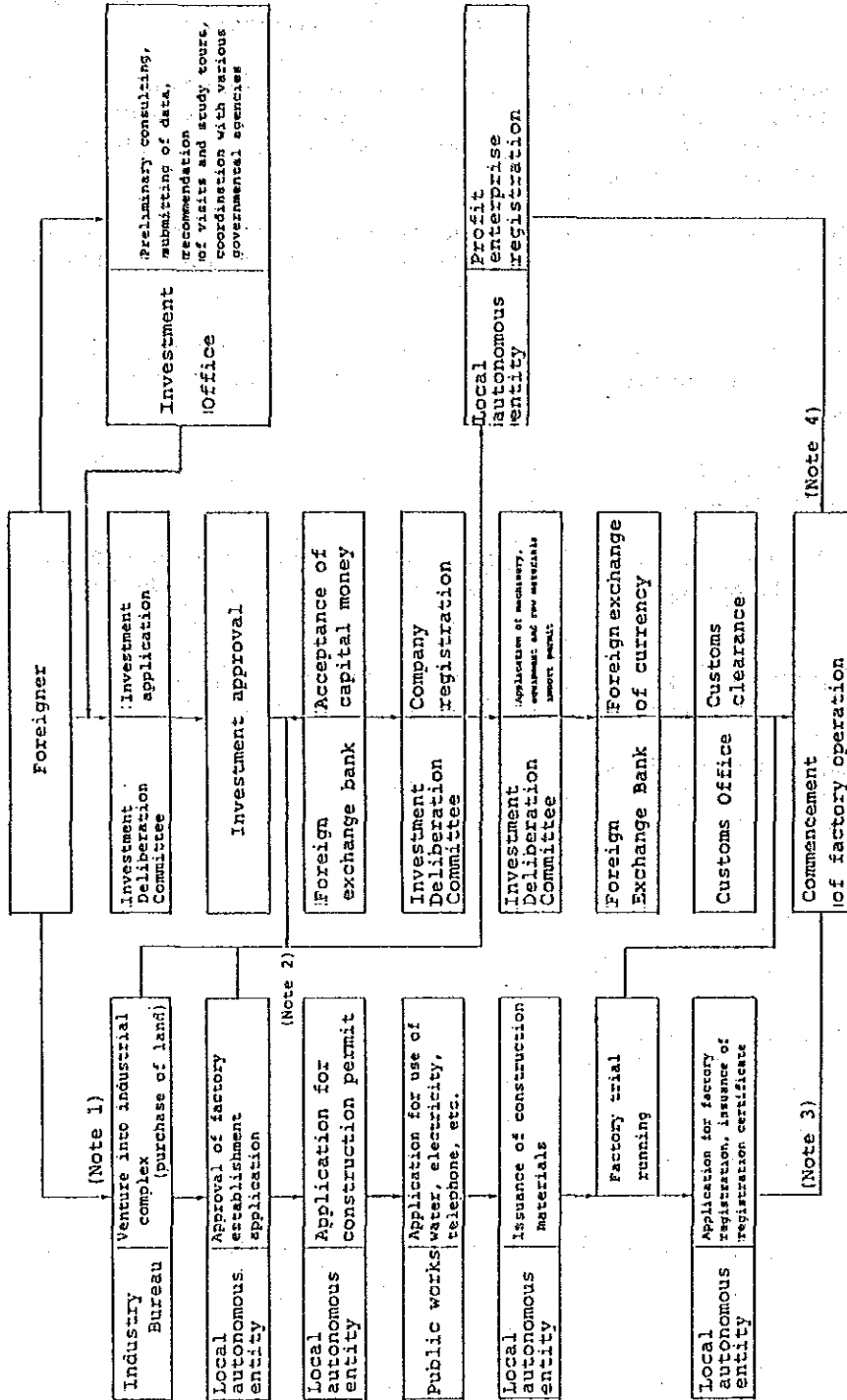
Fig.-2 Factory siting Application Procedures (2), Korea

Existing System	Procedures in Conformance with Free Export Zone Establishment Law
<p>1. Approval of direct investment and joint investment</p> <p>1) Acceptance of approval application form (Director of Economic Planning Agency) (Dispatch of application form)</p> <p>2) Deliberation by director of related department (within 50 days)</p> <p>3) Deliberation and decision by foreign currency introduction inquiry committee</p> <p>4) Approval by director of Economic Planning Agency</p> <p>2. Approval of cash loan contracts and capital goods introduction contracts</p> <p>1) Acceptance of approval application (director of Economic Planning Agency) (Dispatch of application form)</p> <p>2) a. Study by director of related agency (within 50 days) b. Study of possibility of repayments of loans and interests to industrial bank</p> <p>3) Decision by Foreign Currency Introduction Inquiry Committee</p> <p>4) Approval by director of Economic Planning Agency</p>	<p>1. Approval of direct investment, joint investment and technology introduction contracts</p> <p>1) Acceptance of approval application (director of Masan Free Zone Administration Agency)</p> <p>2) Deliberation by director of Masan Free Zone Administration Agency</p> <p>3) Approval by director of Masan Free Zone Administration Agency</p> <p>2. Approval of cash loan contracts and capital goods introduction contracts</p> <p>(Same as existing system described at left)</p>

Reference document: Existing State of Establishment of Masan Free Export Zone, March 1970, P8

Fig.-3 Procedures for Application for Direct Investment, Joint Investment and Technology Introduction into Masan Free Export Zone

Flowsheet of Procedures for Investment and  
Factory Establishment by Foreigners



Notes: 1. Entry into the industrial complex and purchase of land of industrial land with recommendation of the Investment Office, before and after submitting the investment application form.

2. Subsequent to investment approval and in parallel with it, the company establishment registration application, various procedures such as investment certificate, profit enterprise registration certificate and factory registration certificate are submitted. Industrial approval permit or permit and factory establishment permit application are submitted in the name of the Company Establishment Preparations Office, or these procedures accomplished in the company's name after being issued the company registration certificate.

3. Subsequent to investment approval and in parallel with it, the company establishment registration application, various procedures such as investment certificate, profit enterprise registration certificate and factory registration certificate are submitted. Industrial approval permit or permit and factory establishment permit application are submitted. The procedures for increasing the capital also conform with the procedures outlined in this flowsheet.

Reference documents: Guides on Investment in the Republic of China, Industrial Development and Investment Center, Ministry of Economic Affairs, P.R.C.

Fig. -4 Factory siting Application Procedures, Taiwan



Time Required	Acquisition of Investment Permit	Related Preparations
2 months	Preliminary survey Deliberation at head office	
1.5 months	Filing of applications	
5.5 months	Letter of Notice Reply Letter	Company registration, stock payment, land procurement, land preparation
6 months	Rescheduling	Factory establishment permit
3 months	Promotion certificate	Commencement of factory construction
		Factory completed Operations permit Trial running
		Commencement of factory operation

Referential document: Guide to Corporate Establishment Procedures in Thailand, Reference material No. 162, JETRO Bangkok Center, Bangkok Japanese Commerce and Trade Council, P9

Fig.-5 Procedures for Factory Siting Applications, Thailand

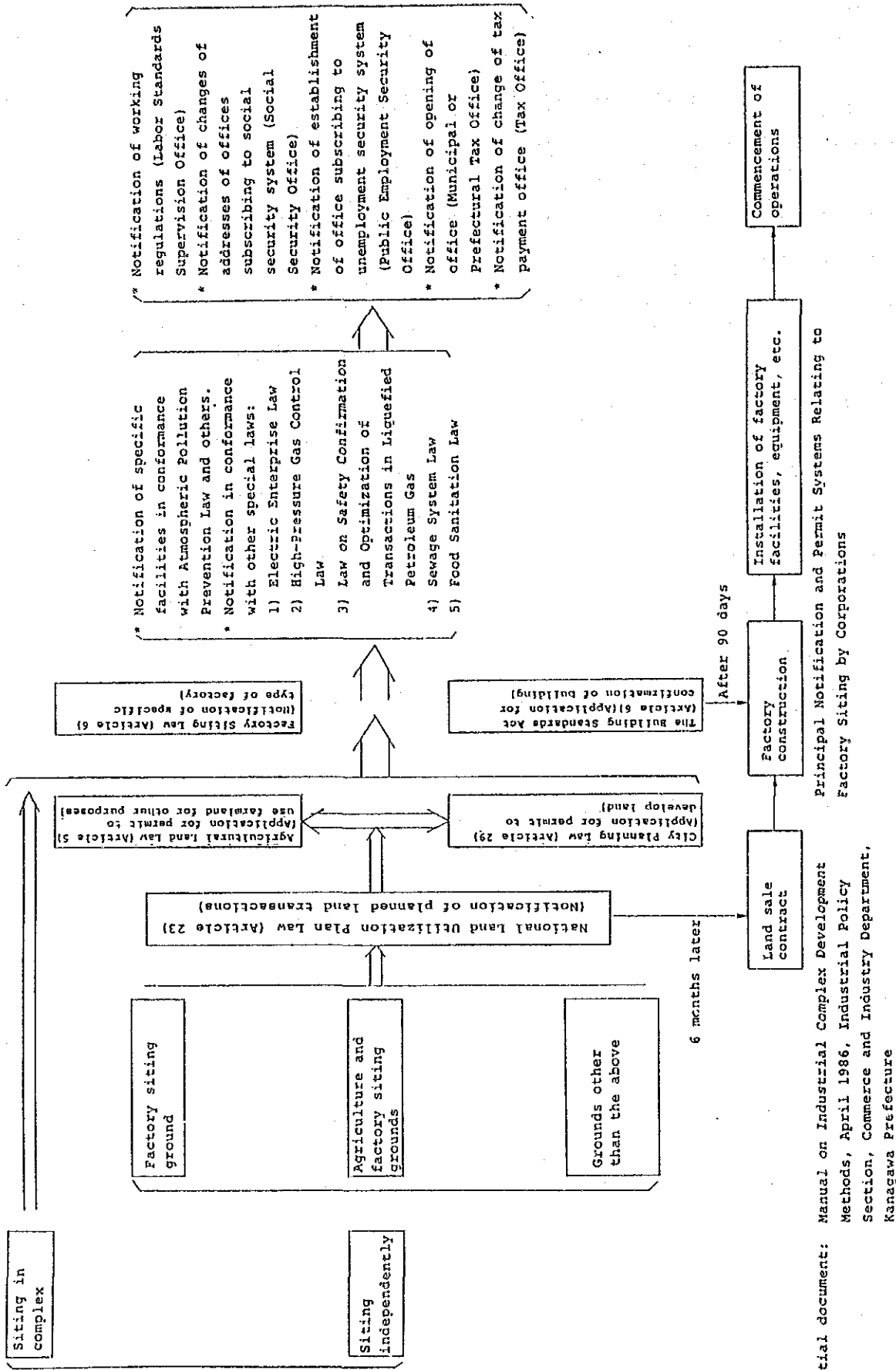


Fig.-6 Procedures for Factory Siting Applications, Japan

Referential document: Manual on Industrial Complex Development Methods, April 1986, Industrial Policy Section, Commerce and Industry Department, Kanagawa Prefecture

## 8. Investment Seminar



**I n v e s t i n L a e m C h a b a n g I E .**

The Office of the Eastern Seaboard Development Committee(OESB)  
and  
The Industrial Estate Authority of Thailand(IEAT)  
in association with  
Japan International Cooperation Agency(JICA)

request the pleasure of your attendance  
at a Seminar and Reception

on the Investment in the Laem Chabang EPZ/GIE

on Thursday November 17, 1988.

at *the Regent Bangkok*  
155 Rajadamri Road, Bangkok 10500  
Tel. No. : 251-6127

- ☆ Registration : 9:00~ 9:30
- ☆ Seminar : 9:30~12:00
- and
- ☆ Reception : 12:00~13:30

IEAT  
Enquiries : 253-0561  
Ext.: 303

- \* Please send back Reply Card until November 7, 1988.
- \* First come, First served (120 persons only)

PROGRAMME

on Thursday November 17, 1988.

9:00 ~ 13:30

at The Regent Bangkok  
155 Rajadamri Road, Bangkok 10500  
Tel. No. : 251-6127

[Seminar at Pimarnman Room 9:30~ 12:00]

1. Greeting Mr. Dusit Rangkasarit  
Assistant Minister / Ministry of Industry

2. Presentation

『The Eastern Seaboard Development Programme—  
The major role of the National Economic Development in Thailand』

Dr. Savit Bhotiwihok  
Director / The Office of the Eastern Seaboard  
Development Committee

『The Laem Chabang EPZ/GIE Development Programme—  
The major role of the Laem Chabang EPZ/GIE on the Eastern Seaboard  
Development Programme

and

Investment Promotion Strategies on the Laem Chabang EPZ/GIE』

Mr. Prateeb Chantaketta  
Deputy Governor / Industrial Estate Authority  
of Thailand

Dr. Sadakazu Iijima  
Leader / The Laem Chabang EPZ/GIE Industrial  
Promotion Study Team

3. Questions & Answers

《by OESB/IEAT/Study Team》

[Reception at Ratanakosin Room 12:00 ~ 13:30]

Back side of Card

<b>Reply Card</b>	
Thursday November 17, 1988. OESB/IEAT Investment Seminar	
<input type="checkbox"/>	will attend Seminar & Reception
<input type="checkbox"/>	will attend Seminar only
<input type="checkbox"/>	will attend Reception only
Your name	_____
Your firm & Position	_____
Address	_____
Phone No.	_____
Enquiries : IEAT TEL.: 253-0581 Ext:303	

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stamp
<b>Industrial Estate Authority of Thailand Planning &amp; Analysis Division</b>
618 Nikom Makkasan Road. Bangkok 10400

THE KINGDOM OF THAILAND

SUMMARY REPORT  
FOR  
THE LAEM CHABANG EPZ/GIE  
INDUSTRIAL PROMOTION  
IN  
THE KINGDOM OF THAILAND

NOVEMBER 17, 1988

JAPAN INTERNATIONAL COOPERATION AGENCY



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## 1. INDUSTRIAL DEVELOPMENT AND ITS ROLE IN THE ECONOMIC GROWTH OF THAILAND

The economy of Thailand has marked remarkable progress since the 1960's. During the 1950's GDP growth indicated an annual average growth rate of 4.7%. The following two decades GDP growth rate per annum jumped up to 7.9% and 6.9% in the 1960's and 1970's respectively. Early in the 1980's the growth rate declined to around 5% per annum, but still surpassed most other developing countries. This rapid economic growth was accomplished by a considerable increase in agricultural production and by industrial development.

The 1980's saw an emergence of manufacturing sector as a main foreign exchange earner. Utilizing skilled labor, and supported by the government, the manufacturing sector has grown to equal both in production and export of the agricultural sector which is still the backbone of Thailand. The exportation of textile products have shown rapid growth since the mid-1970's, and it became the NO.1 export item in 1985, superseding rice, which was traditionally the leading export commodity of Thailand.

The Sixth National Economic and Development Plan started in 1986 which marked the recovery of the Thai economy. The appreciation of Yen, and later other currencies of the NIEs, after the G-5 agreement in 1985, strengthened the export competitiveness of the Thai manufacturing sector. The appreciation of these traditionally export countries has also urged Japan, Korea, and Taiwan to search for alternative overseas production sites. Thailand, which has become the first destination for these countries, has been experiencing an unprecedented investment boom since 1986.

Table 1-1 Trend of Key Economic Indicators; 1961-91

	(Percent)					
	First Plan 1961-66	Second Plan 1967-71	Actual			Target
			Third Plan 1972-76	Fourth Plan 1977-81	Fifth Plan 1982-86	Sixth Plan 1987-91
<u>Economic growth</u>						
Agriculture	4.6	4.1	3.9	3.5	2.1	2.9
Industries	10.2	9.7	8.6	8.7	5.1	6.6
Total production	8.1	7.2	6.2	7.3	4.4	5.0
<u>Exports: goods</u>						
Annual value increase	8.7	4.1	14.0	20.0	8.4	10.7
<u>Inflation</u>	2.3	1.5	12.5	11.6	2.9	2.3
<u>Current account deficit/GDP</u>	~	2.5*	1.7	6.3	3.8	0.9
<u>Budgetary cash deficit/GDP</u>	0.7	2.9	2.7	3.3	3.4	2.6

Source: NESDB

Ref: \* Actual fig. of the last year of the planning period

## 2. OBJECTIVES OF LAEM CHABANG INDUSTRIAL ESTATE DEVELOPMENT

The Eastern Seaboard Development Program, which was initiated under the Fifth Plan, was handed down to the Sixth Plan as a top priority project. The major objectives of the Eastern Seaboard Development Program are;

- To accelerate the industrial growth rate
- To offer alternative industrial locations outside of Bangkok, and promote regional development
- To enhance the international competitiveness of the Thai economy in order to promote new industries and to attract foreign investments
- To provide jobs and facilities to encourage urban development away from Bangkok

The Eastern Seaboard Development Program consists of two industrial bases of distinctly different character, namely the Laem Chabang I.E. and the Map Ta Put I.E. The former is to help light labor intensive industries and the latter is to establish a chemical industrial complex utilizing natural gas produced in the Siam Bay.

The Laem Chabang I.E. is a strategic industrial base to be constructed to attract industries from the congested Bangkok areas and to enhance the international competitiveness of the Thai manufacturing sector with its improved infrastructures and the provision of EPZ.

At present, the international port of the country is limited to the Klong Toey Port, which is a river port on the Chao Phraya River 28 km from the ocean, therefore only 10,000 ton ship can enter it. The old facilities at the port can no longer cope with ever increasing volume of cargo transported by the large container ship. The congestion at the port became a controversial problem in 1988 with the dramatic increase in the trade volume. Acknowledging the need to have a deep sea-port, the Thai government had decided earlier to build a sea port with a depth of 14m at Laem Chabang. The new port, which should be completed by 1991, is expected to increase Thailand's trading capacity tremendously.

Thailand's development axes are three-directional, first to the north toward Ayutthaya, second to the southwest toward Samut Prakarn, third toward Laem Chabang, all originating in Bangkok. Once established, the Laem Chabang is to form another nucleus for industrial activities, thus providing a direct gateway to the vast Northeastern Region. In this context the Laem Chabang I.E. carries an important responsibility to serve as a hub of new industrial activities.

### 3. TARGET INDUSTRIES FOR LAEM CHABANG

Concerning the selection of the target industries, we usually consider two ways. One is the macroscopic approach from the industrial policies concerning the Laem Chabang Project. The other approach is to analyze the overall investment demands of potential investors. The industrial estate should urge the agglomeration of the related target industries with a high possibility of investment. The appropriate agglomeration can facilitate linkages between the industries, in particular with the supporting industries. The macroscopic approach is as follows;

#### Macroscopic approach to selection of target industries

- To promote a desirable industrial structure in view of the long term industrial policies, to induce high-tech and high-value-added industries, and to broaden the manufacturing technologies bases.
  - ==> electric and electronics, metal products, metal products, plastic products, machinery
- To utilize the international comparative advantages of Thailand such as;
  - 1) skilled abundant labor
    - ==> electric equipment and components assembly, garment, leather products, toys
  - 2) resource endowment
    - ==> rubber products, rubber wood products,
- To create a substantive economic impact such as employment creation
  - ==> electric and electronics assembly, textile and knitting, garments, and jewelry
- To facilitate the decentralization policy of industries from Bangkok
  - ==> factories located in Bangkok specially noise-pollution factories such as presswork, boiler-making.
- To make the manufacturing activities in the Laem Chabang comply with the environmental requirements.
  - ==> Non-polluting and non-large-water-consuming

Table 3-1 Target Industries to be located at the Laem Chabang(1)

Remarks: Symbols have the following meaning relating target industries.

□ : Industries derived from the approach of "desirable industrial structure"

◇ : Export-oriented industries

◎ : Labor-intensive industries

○ : Industries with a high possibility to decentralize out of Bangkok

■ : Port-oriented industries including port-related industries

● : Market-oriented industries

▲ : Products from basic chemicals (under the linkage with Map Ta Put)

★ : Resource-based industries

? : Large water-use industries (compared to the Laem Chabang's water-supply capacity)

→ LAEM CHABANG : Industries to be located at the Laem Chabang from theoretical approaches

Code	Types of Industry	Types/categories of industry for five ways of approach to selective industries	Industries to be located at the Laem Chabang
31119	Meat products	□ ◇ ◎ ● ★ ?	
31123	Ice-cream	● ?	
31131	Canning of fruit and vegetables	□ ◇ ◎ ● ★ ?	
31139	Fruit and vegetable products	□ ◇ ● ★ ?	
31141	Canning of fish	□ ◇ ■ ★ ?	
31149	Frozen sea foods products, etc.	□ ◇ ■ ★ ?	
31164	Tapioca mills	□ ◇ ■ ★	→ LAEM CHABANG
31171	Bakeries	●	→ LAEM CHABANG
31172	Biscuits	●	→ LAEM CHABANG
31173	Noodles and similar products	● ?	
31190	Confectionery	◎ ●	
31219	Other food products	◎ ● ?	
31220	Prepared animal feeds	□ ◇ ■ ● ★	→ LAEM CHABANG
31340	Soft drinks and carbonated waters	● ?	
32115	Weaving of cotton and man-made fibers	□ ◇ ◎ ?	
32120	Made-up textile goods	□ ◇ ◎ ○	→ LAEM CHABANG
32130	Knitting mills	□ ◇ ◎ ○	→ LAEM CHABANG
32201	Men's and boys' clothes	□ ◇ ◎ ○	→ LAEM CHABANG
32202	Women's, girls' and infants clothes	□ ◇ ◎ ○	→ LAEM CHABANG
32209	Other wearing apparel and accessories	□ ◇ ◎ ○	→ LAEM CHABANG
33120	Wooden and cane containers	□ ◇ ◎ ■ ●	→ LAEM CHABANG
32330	Leather and leather substitutes products	□ ◇ ○	→ LAEM CHABANG
33201	Woody furniture, fixture and flooring including rattan furniture	◎ ○ ● ★	→ LAEM CHABANG
34120	Containers and boxes of paper and paperboard	○ ■ ●	→ LAEM CHABANG
34207	Printing	○ ●	→ LAEM CHABANG
35120	Chemical fertilizer	□ ▲ ?	
35210	Paints, varnishes and lacquers	● ▲	→ LAEM CHABANG
35220	Drugs and medicine	● ▲ ?	
35231	Soap and cleaning preparation	● ▲	→ LAEM CHABANG
35299	Other chemical products	□ ● ▲ ?	
35510	Tyre and tube industries	□ ■ ● ▲ ★	→ LAEM CHABANG
35591	Rubber sheets and block rubber	□ ■ ● ▲ ★	→ LAEM CHABANG
35592	Rubber footwear	◇ ◎ ○	→ LAEM CHABANG
35599	Other rubber products	◇ ◎ ○	→ LAEM CHABANG
35601	Plastic containers	◎ ● ▲	→ LAEM CHABANG
35609	Other plastic products	◎ ● ▲	→ LAEM CHABANG
36200	Glass and glass products	□ ◎ ○ ● ★	→ LAEM CHABANG
36991	Concrete products	○ ■ ●	→ LAEM CHABANG
37110	Iron and steel rolling mills	□ ■ ●	→ LAEM CHABANG
37120	Iron and steel foundries	□ ◎ ■ ●	→ LAEM CHABANG
3711	Iron and steel sheering/slitting, etc	□ ■ ●	→ LAEM CHABANG
3712	Non-ferrous metal rolling mills	□ ■ ●	→ LAEM CHABANG
	Non-ferrous metal casting and its products	□ ■ ●	→ LAEM CHABANG
38120	Furniture and fixture primarily of metal	◇ ◎ ○ ●	→ LAEM CHABANG
38130	Structural metal products	◎ ■ ●	→ LAEM CHABANG
38191	Metal cans and shipping containers	■ ●	→ LAEM CHABANG
38192	Wire and wire products	□ ◇ ◎ ○ ●	→ LAEM CHABANG
38198	Coating, engraving and allied services	□ ◎ ●	→ LAEM CHABANG
	Heat treatment and electro plating	◎ ●	
38199	Other fabricated metal products	◎ ■ ●	→ LAEM CHABANG

Table 3-2. Target Industries to be located at the Laem Chabang(2)

Remarks: Symbols have the following meaning relating target industries.

□ : Industries derived from the approach of "desirable industrial structure"

◇ : Export-oriented industries

◎ : Labor-intensive industries

○ : Industries with a high possibility to decentralize out of Bangkok

■ : Port-oriented industries including port-related industries

● : Market-oriented industries

▲ : Products from basic chemicals (under the linkage with Map Ta Put)

★ : Resource-based industries

? : Large water-use industries (compared to the Laem Chabang's water-supply capacity)

→ LAEM CHABANG : Industries to be located at the Laem Chabang from theoretical approaches

Code	Types of Industry	Types/categories of industry for five ways of approach to selective industries	Industries to be located at the Laem Chabang
38220	Agricultural machinery and equipment	□◇	→ LAEM CHABANG
38292	Airconditioning machines and its parts	□◇◎○	→ LAEM CHABANG
38298	Repair shops	□ ○■●	→ LAEM CHABANG
38299	Other machinery except electrical :Mold and die :High precision machining	□	→ LAEM CHABANG
38310	Electrical industrial machinery and apparatus :Micromotor and microtransformer :Various switches and wiring instruments :Control panel, genratoors, etc.	□◇◎	→ LAEM CHABANG
38320	Radio, television and communication equipment and apparatus :Various audio apparatus :CRT(cathod-ray tube) :Telephone and its switching equipment :Video tape recorder :Facsimile	□◇◎	→ LAEM CHABANG
38330	Electrical appliances and housewares	□◇◎	→ LAEM CHABANG
38392	Electric accumulators :Dry cell	□◇◎	→ LAEM CHABANG
38399	Other electrical apparatus and supplies :Electronic copy machines :Personal computer, etc :Floppy disk drive :Electric printer :Electronic calculators :Assembly of integrated circuit :Electonic parts(tuner, trasister, ferite core, key board, speaker, condenser, resistor, LED, magnet head, lead frame, printed board, etc.)	□◇◎ ●	→ LAEM CHABANG
38411	Ship-repairing	◎ ■●	→ LAEM CHABANG
38419	Other shipbulding such as watercraft	◎ ●	→ LAEM CHABANG
38432	Motor vehicle bodies	◎ ●	→ LAEM CHABANG
38439	Other motor vehicle industries :Mortor vehicle parts and accessories :Engines, bearing, etc.	□◇◎ ●	→ LAEM CHABANG
38500	Precision instruments and machinery :Optical instruments such camera and lenses :Ophthalmic goods including frames :Watches, clocs and parts	□◇◎	→ LAEM CHABANG
39011	Cutting and polishing of gem stones	□◇◎	→ LAEM CHABANG
39012	Jewellery	□◇◎	→ LAEM CHABANG
39030	Sporting and athletic goods	□◇◎	→ LAEM CHABANG
39090	Industries not elsewhere classified :Toys :Stationery :Antique, handicraft and others	□◇◎	→ LAEM CHABANG
Others	Warehousing/transport wholesale trade	■● ■●	→ LAEM CHABANG → LAEM CHABANG

DR. Iijima's Speech At the Laem Chabang I.E. Seminar  
Nov. 17 th, 1988. Bangkok Regent

It is a great honor to speak to the distinguished guests present here at the today's seminar on the Laem Chabang I.E. I am the team leader of the study team on the Laem Chabang I.E., Sadakazu Iijima.

In recognizing a great importance of the Laem Chabang I.E. the Thai and the Japanese Government have decided to take up a study on the promotion and management of the Laem Chabang I.E. Although the recent progress of the Thai economy is astonishing, it is a well-known fact that the over-heated investment in Thailand is causing shortages in many areas. Starting with the land and engineers, the infrastructures such as the port seems almost paralysed to carry out the ever-increasing trades. All these problems can be attributed to one of the characteristics of the Thai economy---- Extremely centralized system.

The over-concentration in Bangkok is very obvious. Let us take a look at some illustrations. All the four pictures here illustrates the share of each region in area, population, income, and number of industrial activities. The size of each region in the pictures is drawn in proportion to the share of each area. As you see in the Picture-1 and 2 Bangkok already has more than 10 % of a total population on a tiny area which shares only 0.3 % of a total land area. The business and production shows further concentration in Bangkok where about 27 % of a total business establishments are located. In terms of income distribution it is almost striking that Bangkok alone generates more than 45 % of national income. Knowing these facts, we feel helpless but submit ourselves to notorious congestions in Bangkok. The Thai government, being fully aware of these problems, is trying to improve the situation.

The Eastern Seaboard Development Program, the Laem Chabang Project in particular is a concerted effort by both the public and private sectors to make breakthrough to the over-concentration in Bangkok. To understand why, let us look at the future industrial development in Thailand. This picture shows the present locations of industrial activities in Thailand. We can observe three directions of developments taking place. The first direction to the north toward Ayuttayah, passing the airport where some electronics related industries are growing, the second to Samut Prakarn where we find one of the most competitive food processing industries. The last direction is to the south-east, to Laem Chabang then to Map Ta Put. The development axis to the southeast offers more potential thus a different scenario than other development axes. First of all the Laem Chabang I.E. is equipped with an integrated infrastructures such as the best international port, housing, and commercial and business district. Being located off the Chaopraya Delta, the Laem Chabang I.E. stands on a good soil conditions. It also maintains a good

access to Bangkok. It will grow more than just an extension of Bangkok. It will become the core of major industrial activities in Thailand.

No wonder that a crazy speculations took place over the last one year or two! Some of you have missed the bus, but do not worry. The Laem Chabang I.E. is still there to wait for your investment.

When the Laem Chabang I.E. and its surrounding areas are fully established, the area will become the gateway for the industrial activities. The new developments can take place from Laem Chabang as the center, provided the timely development of the infrastructures are conducted by the government. The new extension could lead to the Northeastern Provinces, the area that is the most impoverished, yet endowed with abundant industrious labor. Although it may take some time, the fully established Laem Chabang Industrial Base will serve to maintain the growth momentum of Thailand beyond the NIEs.

Now let us turn back to our immediate future, to our study based upon company survey. We must give our deepest appreciation to many of those here today who kindly answered our survey forms, very long and complicated ones. We would like to present some of the results.

In our survey a total of 222 companies responded with interest in investing in the Laem Chabang I.E. The rate of interest is remarkably high compared to ordinary marketing surveys of this kind. In the survey we also asked what the potential investors expect to the Laem Chabang I.E. in terms of incentives, services and supporting facilities. As for the GIE incentives, The potential investors showed the highest interest in Tax exemptions and deductions as #1 followed by low interest loan. For those interested in EPZ the first improvement the investors are hoping for is to either eliminate the customs inspection or to improve the customs for the faster and simpler procedures. Secondly, the tax rebate system for the importation of raw materials for export goods production must be speeded up. As for the supporting services to be provided in the Laem Chabang I.E., the investors placed the highest priority on the government contact service. This indicates the substantive difficulties obtaining the licenses from the government. Among 34 supporting facilities we listed in the questionnaire, ranging from restaurants, housing to training facilities, incidentally the Branch office of banks and hospitals were ranked the first and second. Besides the top two, the investors indicated customs clearance agent, low cost housing for workers, and restaurants as important facilities.

Based upon these responses, we are going to recommend facilities and services to be provided at the Laem Chabang I.E. to the Thai government where they are feasible. Some of the facilities are already planned and those which are not included in the original plan will be also well taken care of by the Thai government.

Another finding of the survey which may be of use to the quests today is the expected industrial structure of the Laem Chabang I.E. First let us look at the Thai manufacturing sector.



The present structure of the Thai manufacturing sector is dominated by essential goods production namely food, textiles and housing related products. The next picture shows the approved investment by the BOI during the period of November 87 to April 88. The current investment trends indicate that the manufacturing sector will expand more into electronics, electric appliances, computer related products, machinery which form a core of the manufacturing sector in industrialized countries. The third picture indicates the breakdown of potential investors by type of industry. Naturally it shows the similar trend as the current investment trend. The biggest sector is the machinery industry, followed by electric and electronics industry. The textile industry which is the top exporting industry still shows the strong investment demand. Needless to say, the manufacturing of the above-mentioned machinery including electric and electronics could bring higher value-added to economy but requires higher technology and more sophisticated management system. Nevertheless, in these fields of production the current Thai manufacturers conduct only final stage of production process, i.e. assembly work which only produces small margins of value-added. In order to capture the latent part of high value-added, Thai manufacturing sector must expand to upstream processes of manufacturing process, firstly components and parts production, secondly tool and machinery production or material production. The first step is to expand the bases of supporting industries to produce components and parts. This expansion requires a different categories of technology from assembly including production control and quality control. The present situation of the Thai industries are shown in this illustration. The present level of technologies are mainly assembly work, operation and skill levels and the quality level has not attained high precision level yet. The levels should be raised and will be. That is the time when Thailand make a true entry to the newly industrialized economies.

In this context we are going to suggest the approaches to select target industries to the Laem Chabang I.E. The target industries which are attached in the handout in page 8 to 9 are derived from the five factors namely, the targeted industrial structure, international competitiveness, economic impact, industrial location policy in Thailand, and finally the environmental constraints of the Laem Chabang I.E. The last factor needs some attention, since the water supply capacity of the Laem Chabang I.E. is limited, a large consumer of industrial water should be avoided. Another important criteria is pollution. Having a large resort area of Pataya, the Laem Chabang I.E. must be free from pollution. The high tech and high value-added industries should be able to clear these criteria.

The Laem Chabang I. E. will offer an ideal industrial location where the most advanced and competitive companies both from Thailand and abroad are expected to invest. The Laem Chabang I.E. will become a core for upgrading industrial structure of Thailand. We are looking forward to seeing the future developments of the Laem Chabang I.E.

Thank You





JICA

