B.5 Manufacturing Sector Development Plan in CALABARZON

It is very important and in fact a prerequisite for the success of manufacturing sector development in CALABARZON that appropriate policy measures are to be established. The main measures illustrated in Figure B.16 are examined in the light of the CALABARZON's development strategy.

B.5.1 Support measures at the national level

Support measures for the industrial development could be broadly divided into two levels of the national and regional. The following measures, which comprise the main measures supporting and accelerating the manufacturing sector development in the Philippines, are principally coordinated and implemented by seven government agencies as follows.

<u>Policy measures and government agencies concerned</u>

	DTI	BOI	EPZA	NEDA	DA	DOST	DOF
•Ten-year Sectoral Planning	*						
•Investment Priorities Plan (IPP)		*					
•Investment incentives		*					*
•Export incentives		*	*				*
•Financing including foreign exchange	*						*
•Trade liberalization	*			*	*		*
•Trade Promotion	*						
•Science and technology development	*				*	*	
•Promotion of industrial dispersal	*			*			
•Policy specialized to SMEs	*			*			
•Subcontract-coordination program	*						
•Foreign Investments Act of 1991	*			*			*

Remark: DA- Department of Agriculture, DOF- Department of Finance

Some of the above measures are now controversial, but the followings are expected to be taken into consideration for the policy making.

a) To give "Strategic Industries" status prescribed in the Foreign Investments Act of 1991 to material/ intermediate industries, aiming to strengthen industrial structure and to enhance multiplier effect among industries (As mentioned previously, the NEDA, as a matter of policy and not as a legal requirement, shall formulate a list of strategic industries specifying the desired equity participation by Government and/or private sector Filipino investors in each strategic industry. The Act prescribes that foreigners can invest as much as 100% equity in export industries as a general rule, and domestic market industries which are not specified in Foreign Investments Negative List. Material/intermediate industries are mostly categorized into domestic market industry.),

b) To create"Foreign Trade Zone" (FTZ) in addition to or in stead of EPZ/SEPZ, which is an exception to the application of Tariff Law, import quota and other regulations concerned, aiming to address a delay of tariff reform and problems in protection of the existing/domestic market industries and to realize "Export Base in the Asia Pacific Region",

c) To establish a new division in DTI, responsible for specific strategic manufacturing subsectors in order to lead consistently and coordinate the private sector's activities along the national industrial policy,

d) To establish a regional institute for science and technology development or R&D, aiming to support the private sector, especially SME's activities to enhance value added or international competitiveness of the products and also to accelerate industrial dispersal,

e) To integrate industrial finance and technology upgrading programs for SME's, aiming to expand the production capacity and upgrade the existing facilities in order also to enable SME's to build the analytical capability to develop long-term programs,

f) To integrate and reorganize diversified policy measures specialized for SME's, especially for livelihood industries, aiming to efficiently realize the policy target,

g) To enhance/review the public sector's role in developing industrial estate, aiming to effectively accelerate industrial development in less developed areas,

h) To reconfirm the government's role in providing social capital goods/services, aiming to systematically mobilize both resources of the government and the private sector towards the provision of those situated in border area between the civil/industrial minimum and over the civil/industrial minimum as follows.

Classification of social capital goods/services by service level and by provision sector

Civil/Industrial Minimum (ordinarily provided by the public sector)	[Border Area] (provided by the public sector or by the private sector, otherwise by the public-private partnership)	Over Civil/Industrial Minimum (ordinarily provided by the private sector)
•Disaster control program		
•General roads •Port facility for the public use •Railways •General airport	•Expressway *Port Facility for the private use •Railways in urban areas •International airport	•Private roads
•Water supply •Industrial estates for SMEs	•Electric power supply •Telecommunication •Industrial Estates (IEs)	•IEs with high industrial amenity
•Basic/technicians training •Entrepreneurship development •Basic social service	•Engineers training •Incubator •high grade social service •Convention facilities	•Social club, etc.

B.5.2 Support measures and projects specific to CALABARZON

In addition to the policy measures described above, other direct support measures should be taken. These measures address more region-specific issues under the CALABARZON manufacturing sector development strategy. They cover such issues as manpower development, inter-industry linkages, technology upgrading and spatially balanced development, and emphasize SME's and local initiative. Implementation of these measures is broadly phased under three headings corresponding to the industrial development strategy as follows.

Direct support measures addressed issues under CALABARZON manufacturing sector development strategy

	Locational Strategy Promotion of decentralization	Survival & Growth Strategy Enhancement of production capability	Regional Integration Strategy Integration of regional economy
Phase 1 up to 1995	•Additional incentives for accelerating industrial location outside Metro Manila •Provincial Industrial Estate Development Program	•Regional Manpower Training Center	•SMEs Industrial Estate •Regional Integration of Livelihood Development
Phase 2 1996-2000	•Batangas Regional Industrial Center	*Commerce and Industry Plaza Complex	•Continuation of the above
Phase 3 2001-2010		•Regional Testing and R&D Center	

(1) Measures related to the locational strategy

Additional incentives (Phase 1)

Spill over/relocation of industries from Metro Manila will be effectively utilized to promote the manufacturing sector development in CALABARZON. Consequently, the following new incentives could be considered.

Tax exemption from income by replacing industrial assets outside Metro Manila

Investments in Metro Manila are already without incentive in principle. In addition to this, "negative incentive", it may be necessary to create a "positive incentive" for stimulating spill over/relocation from Metro Manila.

For this purpose, it is effective that income by replacing industrial assets outside Metro Manila shall be exempted from taxes, since Metro Manila's land price will increase. This incentive shall also bring about innovation of the industries through partly assuring funds for installing advanced equipment.

Accelerated depreciation

This aims to make start up of factory operation smooth and decrease the burden of working capital lending. Together with the the present incentive of income tax exemption, this incentive shall be more attractive for industries locating/replacing their factories in CALABARZON or outside Metro Manila.

Provincial Industrial Estate (PIE) Development Program (Phase 1)

This project aims to develop a provincial industrial estate (PIE) in the inland area of Batangas/part of Quezon with the public sector initiative in order to induce manufacturing industries. It will be implemented through the following study and program.

1) Selection of the candidate sites to be developed as the PIE,
2) Formulation of a development and management program the PIE, including establishment of measures to promote SME's,
3) Development of the PIE,
4) Implementation of an integration program for inducing the location of industries in and around the PIE.

It is controversial who should develop and manage IE's. The Government policy appears to be directed toward promotion of IE development by the private sector in line with privatization.

IE's existing and planned in CALABARZON are mostly developed by the private sector. There is, however, no plan of IE development not only by the private sector but also by the public sector in the inland of Batangas/part of Quezon where South Expressway extension is expected to enhance the potentials for industrial location/development and it will happen that many factories spontaneously locate along the highway.

Therefore, the public sector should take the initiative to develop industrial estate. This is, so to speak, a leading/pilot project in less developed area with potentials. Such an IE would better be equipped with the full range of infrastructure concerned, namely not only with "the industrial minimum" but also with additional amenities to make a precedent for subsequent IE's. This is also effective in avoiding spontaneous factory location and realizing planned development/rational land use.

Up to the date, IE's/EPZ's have been developed by the public sector as follows:

- EPZ by the Export Processing Zone Authority (EPZA)
- IEs by The National Housing Authority (NHA)
- IEs by The Food Terminal Incorporated (FTI) and the Technology Resource Center (TRC)
- Regional Industrial Center proposed and designated by the DTI

In addition to these, Bauan Provincial Industrial Estate (BPIE) is a unique project promoted through a government-private sector partnership called KABALANGKAS NG BAUAN (Co-Planner). This so called "Third sector corporation" shared by municipality of Bauan and the private sector shall be established to develop and manage BPIE.

Meanwhile, the key to its success is to formulate a development and management program for the PIE, especially to examine and assess who and how to develop and manage the PIE. There are three alternatives for this organizational arrangement, i.e. solely by the public sector (national and local government) including government-sponsored agencies; likewise by the private sector; and by government-private sector partnership.

DTI should organize a committee in cooperation with the NEDA-NIEP (National Industrial Estate Program) and the provincial government of Batangas/Quezon to discuss the matter.

The project is expected to be implemented with participation of foreign experts working in close collaboration with staff of the provincial government of Batangas/Quezon and DTI.

Batangas Regional Industrial Center (Phase 2)

Regional Industrial Centers (RIC's) including Batangas RIC and Cavite EPZ are designated by DTI, aiming to strategically focus on one location in each of the country's 13 regions, and to invest it with the full range of infrastructure needed by industries to establish there on a competitive footing. In this case, it depends on the situations who develop the RIC's except EPZ, while the implementing body is in principle DTI.

Batangas Regional Industrial Center (BRIC) has 750 ha prepared for the purpose, but no substantial progress has been made to date mainly because organizational arrangements for its development and management are not clear. Thus, this should be realized in Phase 2, based on the study mentioned under the PIE Development Program

(2) Measures related to survival and growth strategy

Regional (Southern Tagalog) Manpower Training Center (Phase 1)

This aims to strengthen/integrate functions of manpower training particularly for engineers and skilled workers by integrating activities of related agencies in order to prepare a footing /firm base for the manufacturing development in the Southern Tagalog region.

The Department of Labor and Employment (DOLE) should take leadership in promoting this project but other concerned agencies are to play the following roles:

1) DTI in coordination with other member agencies of REMDC shall be responsible for undertaking the industry and skills survey projects and provide inputs to the Data Base Management Information System of REMDC.

2) NMYC in coordination with other member agencies shall facilitate the immediate processing of survey results for dissemination to all member agencies and for the utilization of industries and educational and/or training institutions within the CALABARZON in particular, and Region IV in general.

3) DECS in coordination with other member agencies shall review and revise/develop different curricula based on the identified priority needs of industries within the CALABARZON and in other provinces of Region IV.

4) DLG in coordination with other member agencies shall be responsible for using the tri-media approach for the systematic dissemination and utilization of the data

and information regarding the progress of CALABARZON for the funding agencies as well as for the people in Region IV in particular and the Country in general.

5) DOST in coordination with other member agencies shall design the manpower training on the latest technology and facilitate technology transfer to the industries within CALABARZON and in other provinces of Region IV.

Commerce and Industry Plaza Complex (Phase 2)

This is a government-private-sector partnership project aiming to prepare the regional center for various exchanges such as information among industries and entrepreneurs, and thereby to promote inter-industry linkages through widening business chances and upgrading industrial technology/know-how, etc.

DTI including its provincial offices should take leadership in implementing this project through granting subsidy for construction of the Plaza Complex. The provincial governments of CALABARZON are respectively expected to provide sites for the construction. The city or rural chambers of commerce and industry should initiate the project by organizing entrepreneurs and other industrial entities to support the construction.

The Plaza Complex is a building to be occupied by such regional organization as chamber of commerce and industry, head offices of local enterprises or industrial organization regional or provincial offices of government agencies and other business services. It will be equipped with meeting room, multi-purpose hall, exhibiting space and other facilities.

This project is expected to change the trends of Metro Manila-oriented activities/information and to support regional industrialization.

Regional Testing and R & D Center (Phase 3)

This Center project aims at fulfilling the need for testing increased according to the progress of industrialization and assisting the private sector for technology and product development and thereby promoting industrial dispersal/decentralization. The Center should have an incubator function for venture business which will be effectively integrated with testing and R&D functions for the purpose.

This kind of institutes organized under DOST concentrate largely in Metro Manila and industries located in the provinces of Cavite, Laguna and Rizal are able to utilize Metro

Manila's functions. Industries located in Batangas and other areas of Region IV are, however, not easy to utilize them.

DTI including its regional and provincial offices should take initiative in implementing this project through granting subsidy for construction of the Center. The provincial government of Batangas is expected to provide sites for the construction. This project will be implemented as Region IV's project, especially as the project contributes to the formation of Regional Center in Southern Tagalog. Implementation and management of this project should be also effectively proceed in cooperation with PBMTI-Southern Tagalog Research and Extension Center mentioned previously and other state and national colleges.

After this project will be implemented, activities of DOST and related institutes will focus more on area of science at the national level rather than technology at the regional level.

(3) Measures related to regional integration strategy

SMEs industrial estates (Phase 1)

This project aims to provide the space and facilities for small and medium scale enterprises (SME's) and thereby to promote them. Promotion of SME's is a focal point of the national industrial policy because of their contribution to employment generation and economic growth.

The demand for the IE site by SME's will increase according to the expansion of production and to the conversion of livelihood industries into factory industry from household industry. It is, however, not easy for SME's to locate in any IE developed by the private sector since the land price is too high for them. SME's are also not easy to qualify for land conversion by CARP because their required size of factory site is too small.

Therefore, the public sector is expected to make efforts to promote SME's through providing for low cost land and facilities by developing SME's-IE.

DTI and the local governments should take leadership in implementing the project but some variations are considered. In the urban area, SME's-IE shall be developed in accordance with urban renewal/redevelopment of specified area. In newly developed area, it shall be implemented as a part of IE developed by the public sector. In other words, this is also a kind of absorption and return of development profits by the public sector.

Regional Integration of Livelihood Development (Phase 1)

This project aims at establishing an effective implementation system of livelihood development throughout CALABARZON. It will consist of 1) a regional livelihood potential and market study; 2) establishment of institution for livelihood development; 3) financial arrangement, and 4) provision of supportive service package.

One of the important outputs of the project is to create zones with specialized/discriminated products where division of labor is regionally and intensively performed, and information or technology concerned are agglomerated by zone.

Consequently, DTI will be positively concerned to the project, although DOLE and the Regional Employment Manpower Development Committee (REMDC) are main implementing agencies. Besides, it is very important that linkages between GO's and NGO's should be formulated. From the viewpoint of this, many livelihood ventures are expected to actively take part in the process of the study. In other words, it is expected that the progress of the study itself is to pick up livelihood ventures leading the formation of specified agglomeration zone and the organization of livelihood members concerned.

B.5.3 Development framework for CALABARZON manufacturing sector development

(1) 1988-2000 (Phase 1-2: trend growth; trend acceleration and renewed growth)

Method for projection

Figure B.17 shows the method and steps to project the manufacturing sector development framework in CALABARZON, targeted year of 2000. In this projection, some assumptions are made due mainly to lack of data.

Basic concept of this projection is firstly that the manufacturing growth rates by subsector are assumed to be the same between the Philippines, Metro Manila and CALABARZON (without spill over from Metro Manila) as two of the latter are major components of the former. The second is that spill over from Metro Manila, one of the major strategies for the development, is taken into account, namely 20% (Case I) and 30% (Case II) spill-over of Value Added by new investments/factories. The third is that CALABARZON incremental employment and industrial site demand projected is distributed into five provinces by such locational factors as; 1) the existing industrial agglomeration, 2) recent locational trends, 3) labor force and market potentials represented by population, and 4) land potentials.

Among the above locational factors, 3) labor force and market potentials and 4) land potentials are at the same level, respectively through all the manufacturing subsectors but different in each province in CALABARZON. The former is measured by population in 1990. The latter is firstly counted by the size of suitable land for industrial use selected under such criteria as 1) under 8% slope, 2) within 2 km from trunk road, and 3) with good groundwater conditions, and secondly the size is weighted by an indicator representing land cost, transport conditions, and the like. This indicator is divided into three levels. "Weight 1" is the lowest and set for Rizal with the highest land price among five provinces; "Weight 2" for Cavite and Laguna, "Weight 3" for Batangas in comparison with Rizal. In case of Quezon, the weight is at "Weight 1", and basic data (population and the suitable land) collection stays within potential areas centering on Lucena City in order to reflect Quezon's development potentials in a broad sense, including transport conditions. The results through the above considerations are as follows.

Locational factor's % shares for breakdown of incremental employment and land demand

		(in persons)			(% share)	
Labor and market	Cavite	1,152,534			21.4	Remarks:
potentials	Laguna	1,370,080			25.4	1) Quezon's population
(population in 1990)	Batangas	1,479,532			27.5	and land potentials
	Rizal	976,774			18.1	are counted within
	Quezon	411,268			7.6	such potential areas
	Total	5,390,188			100.0	as;
		(ha)		(weighted)	(% share)	Candelaria
Land potentials	Cavite	18,300	* 2	36,600	18.1	Dolores
weight ed by	Laguna	31,400	* 2	62,800	31.1	San Antonio
land cost, transport	Batangas	23,300	* 3	69,900	34.7	Sariaya
conditions, and the	Rizal	6,500	* 1	6,500	3.2	Tiaong
like	Quezon	25,930	* 1	25,930	12.9	Lucena City
	Total	105,430		201,730	100.0	

Out of two other locational factors, the existing industrial agglomeration is measured by the size of manufacturing employment by subsector in 1988 (shown in Table B.5). Recent locational trends are likewise measured by the size of manufacturing employment generation in the BOI approved projects between 1985-1990 (shown in Table B.12). These factors are specified for each subsector and each province.

These four locational factors are variable between the manufacturing subsectors. For instance, "land-intensive industry" such as some chemicals tends to locate in an area with low land cost/high land potentials. An area with large labor potentials attracts "Labor-intensive-industry" such as some electronics. Furthermore, there are many industries apt to concentrate in/around the existing agglomeration area. These variety is represented by "Allocation ratio" in this projection. The allocation ratio is set specifically for each manufacturing subsector.

As mentioned, calculation to distribute CALABARZON incremental employment and land demand into five provinces is relatively complicated. The following is an example of such calculation procedure.

<u>An example of calculation procedure for incremental employment</u>
(Electrical machinery & equipment in Laguna)

I: Incremental employment in CALABARZON total ------------------------	87,283
II: Laguna's distribution share --	0.3918
III: Laguna's incremental employment (I * II)--------------------------------	34,197

	Laguna's share		Allocation ratio		Distribution share
Existing industrial agglomeration in 1988	0.584	*	0.20	=	0.1168
Recent locational trends (BOI approved)	0.556	*	0.20	=	0.1112
Labor force and market potentials	0.254	*	0.40	=	0.1016
Land potentials	0.311	*	0.20	=	0.0622
	Total share			=	0.3918

<u>Results</u>

Based on the method mentioned above and shown in Figure B.16, the development framework in CALABARZON is calculated. The manufacturing value added of estimated 43.1 billion pesos in 1988 is expected to increase by the year 2000 to 113.5 billion pesos (at constant 1988 price) under a case of moderate spill over from Metro Manila (Case I: 20% spill over, corresponding to Development Alternative 3). Averaged growth rate is 8.4% per annum (Table B.31 and Table B.32). Value added under Case II (30% spill over) is projected 123.7 billion pesos in 2000.

The manufacturing employment of estimated 360,000 in 1988 is expected to increase by the year 2000 to 794,000, an increment of 434,000. Three subsectors account for the bulk of this increment. These are footwear and wearing apparel (72,553, 16.7%), textiles (102,209, 23.6%), and electrical machinery and equipment (87,283, 20.1%) as shown in

Table B.33. Industrial site demand corresponding to the incremental employment is projected by required land unit size by subsector and amount to 4, 296 ha in total.

The subsector distribution of incremental employment and land demand into five provinces of CALABARZON is summarized as follows. The detailed outputs are presented in Table B.34 and Table B. 35. Over 30% of the incremental employment is projected to occur in Laguna, largely as a result of the existing agglomeration economies and land potentials. Over 20% for Batangas reflects its development potentials.

Summary results of distributed incremental employment and land demand by province
(in the period 1988-2000)

	Incremental employment		Incremental land demand		Notice: Actual land demand
	in persons	% Shares	(ha)	% Shares	Case 1: % share of establishment
Cavite	80,585	18.6	811.5	18.8	with over 50 workers=60%
Laguna	138,571	31.9	1,360.1	31.7	Case 2: % share of establishment
Batangas	97,149	22.4	986.1	23.0	with over 100 workers=50%
Rizal	84,091	19.4	782.0	18.2	(based on the 1988 Census)
Quezon	33,607	7.7	355.9	8.3	Case 1---4,296 * 0.60 = 2,578 ha
	434,005	100.0	4296.2	100.0	Case 2---4,296 * 0.50 = 2,148 ha

Remark: Details may not add up to totals due to rounding.

The distributed shares by province are almost the same between employment and land demand while the results for Batangas reflect its land potentials. The total land demand of 4,300 ha may be overestimated because demand by small establishments such as household or livelihood type is counted. Accordingly, if actual land demand is realized mostly by establishments with over 50/100 workers, it will be 2,578 ha or 2,148 ha as shown above.

Furthermore, the land demand for industrial estates (IE's) should be estimated for the development planning. According to the Study on the Cavite EPZ Development and Promotion Program by JICA in 1990, it is estimated at 40% of the total land demand. In this case, the land demand for IE's in CALABARZON is 40% of 4,296 ha or 1,718 ha. In addition, the land demand for public facilities to be provide within IE's need to be counted, consisting of road, other common facilities, open/green space, and the like. These facilities occupy in general 20% to 40% of IE's developed area depending on situations. Accordingly, the land demand to be developed as IE's will be 2,148 ha to 2,863 ha (2,148 = 1,718 / [1.00 - 0.80], 2,863 = 1,718 / [1 - 0.60]). These demands are equivalent to 50% and 66% of the projected incremental industrial site demand of 4,296 ha, respectively.

(2) 2001 to 2010 (Phase 3: sustained growth)

This phase is for ten years at the beginning of the 21st century. Economic growth will sustain from Phase 2, and socioeconomic changes concerned to the CALABARZON manufacturing development will proceed as mentioned previously in "Development phasing". The manufacturing sector's growth rate during this phase will slow down throughout all the subsectors to a certain extent, even though increment in value added will be larger than that for 1988-2000. This phase is, in other words, for ten years shifting to "Qualitative extension" from "Quantitative extension" conducive to the reformation of industrial structure.

Other basic concept and procedure for the projection are firstly that value added annual growth rates by subsector will stay at 60% to 70% level against those for the former 1988-2000. The second is that manufacturing spill over from Metro Manila is assumed to have been reflected in the growth rate for the former period, where incremental value added by the spill over accounted for 20% (Case I) and 30% (Case II) of value added by new investments/factories. The third is that growth rates for labor productivity will be 2% annum for the existing establishments/factories in 2000, and 3% annum (same rate for the former 1988-2000) for new investments/factories, since the excess production capacity would have been full in use, accompanying more increase in the labor productivity for the former 1988-2000.

As for value added, the growth rate of consumer goods/livelihood-related industries will be around 5% per annum, reasonable for "sustained growth". Among them, footwear and wearing apparel will grow more than others as an main exporting industry. Material/intermediate goods industries except petroleum and coal products will grow by around 8% per annum, centering on chemicals and chemical products, basic metal products and metal industries. These growth is corresponding to an active growth of machinery industries. Petroleum and coal products accounted for 42% of the projected value added in 2000 (same share in 1988) but will not grow so much, maybe lower than 4% per annum on sustained basis. Machinery and equipment will be a major component of substantial growth during this phase and will attain over 10% annual growth.

Distribution of projected incremental employment and land demand into five provinces is to be made by changing already said locational factors, namely "the existing industrial agglomeration" measured by the size of employment in 1988 and "recent locational trends" measured by the size of employment in the BOI approved projects for 1985-1990. These two factors are replaced by the size of already distributed incremental employment for the former period 1988-2000. This is a kind of methodological consistency to reflect the recent trends into the distribution.

Based on the above considerations, the projected results for value added and employment in CALABARZON are as follows.

Projected Value Added and Employment in CALABARZON in 2010

(% share in parenthesis)

		I 1988	II 2000	III 2010	Growth rate (% per annum) II / I	III / II	III / I
Value Added	Livelihood -related	18,091 (41.9)	45,101 (39.8)	71,206 (33.4)	7.9	4.7	6.4
(in million pesos)	Material/intermediate	22,103 (51.2)	48,392 (42.7)	78,397 (36.7)	6.7	4.9	5.9
	Machinery & equipment	1,976 (4.6)	17,289 (15.2)	59,106 (27.7)	19.8	13.1	16.7
	Other industries	963 (2.2)	2,679 (2.4)	4,798 (2.2)	8.9	6.0	7.6
	TOTAL	43,133	113,461	213,507	8.4	6.5	7.5
Employment	Livelihood -related	267,470 (74.3)	510,013 (64.3)	670,194 (53.2)	5.5	2.8	4.3
(in persons)	Material/intermediate	49,800 (13.8)	105,192 (13.2)	161,077 (12.8)	6.4	4.4	5.5
	Machinery & equipment	31,130 (8.6)	156,160 (19.7)	397,095 (31.5)	14.4	9.8	12.8
	Other industries	11,600 (3.2)	22,640 (2.9)	32,275 (2.2)	5.7	3.6	4.8
	TOTAL	360,000	794,005	1,260,640	6.8	4.7	5.9

Industry group: Livelihood-related
(Food Manufacturing, Beverage Manufacturing, Textiles, Footwear and Wearing Apparel Wood and Cork Products, Furniture and Fixtures, Paper and Paper Products, Publishing and Printing, Leather and Leather Products, and Rubber Products)
Material/intermediate
(Chemicals and Chemical Products, Petroleum and Coal Products, Non-Metallic Mineral Products, Basic Metal Industries, and Metal Industries)
Machinery and equipment
(Machinery except Electrical, Electrical Machinery and Equipment, and Transportation Equipment)
Other industries --(Other Industries)

Remark: Details may not add up to totals due to rounding.

The manufacturing value added projected at 113.5 billion pesos in 2000 is expected to increase by the year 2010 to 213.5 billion pesos (at constant 1988 price). Weighted overall average growth rate is 6.5% per annum, accounting for 77% level against that in the period 1988-2000. Material/intermediate industry will decrease its share due mainly to low growth of petroleum and coal products which is a dominant component of this industry group. However, the industrial structure will be better balanced than that in 2000.

The manufacturing employment of projected 794,000 in 2000 is expected to increase by the year 2010 to 1,260,600, an increment of 466,600. Machinery and equipment industry accounts for the bulk of this increment (240,935, 52%), followed by livelihood-related industry.

The subsector distribution of incremental employment and land demand into five provinces of CALABARZON is arranged as follows.

Distributed incremental employment and land demand by province
(in the period 2000-2010)

	Incremental employment (in persons)				
	1988-2000		2001-2010		
	in persons	% Shares	in persons	% Shares	
Cavite	80,585	18.6	88,849	19.0	
Laguna	138,571	31.9	141,264	30.3	
Batangas	97,149	22.4	126,347	27.1	
Rizal	84,091	19.4	69,133	14.8	
Quezon	33,607	7.7	41,040	8.8	
	434,005	100.0	466,635	100.0	
	Incremental land demand (ha)				
	1988-2000		2001-2010		Notice: Actual land demand
	(ha)	% Shares	(ha)	% Shares	Case 1: % share of establishment
Cavite	811.5	18.8	917.0	19.3	with over 50 workers=60%
Laguna	1,360.1	31.7	1,407.4	29.6	Case 2: % share of establishment
Batangas	986.1	23.0	1,328.8	27.9	with over 100 workers=50%
Rizal	782.0	18.2	637.1	13.4	(based on the 1988 Census)
Quezon	355.9	8.3	465.3	9.8	Case 1---4,755 * 0.60 = 2,853 ha
	4296.2	100.0	4,755.8	100.0	Case 2---4,755 * 0.50 = 2,388 ha

Remark: Details may not add up to totals due to rounding.

Over 30% of the incremental employment is projected to occur in Laguna but slightly less than that in the period 1998-2000. Rizal will also decrease its share. Another three provinces will increase their shares, centering on Batangas.

Total land demand for CALABARZON will be 4,756 ha, more than 4,300 ha for the former 1988-2000, according to the increase in incremental employment and the structural change by subsector. The distributed shares by province are almost the same between employment and land demand as well as the projection for the former 1988-2000. Just as the projection for the former period, assuming actual land demand is realized mostly by establishments with over 50/100 workers, it will be 2,853 ha or 2,388 ha as shown above.

The land demand for the development of industrial estates (IE's) will be estimated to be 2,378 ha to 3,171 ha, based on the same considerations for the former period projection (IE's location ratio:40%, public facility land use ratio:60% to 80%).

Tables

Table B.1 Composition of Value Added by Manufacturing Subsector in 1983

	Value Added in million pesos			% Shares to the All Industries			% Shares to the Pilippines	
	PHILIP-PINES	METRO MANILA	CALABAR	PHILI-PPINES	METRO MANILA	CALA-BAR	METRO MANILA	CALA-BAR
ALL INDUSTRIES	51,327	24,065	10,437	100.0	100.0	100.0	46.9	20.3
311~312 Food Manufacturing	9,949	4,668	688	19.4	19.4	6.6	46.9	6.9
313 Beverage Manufacturing	4,065	1,370	340	7.9	5.7	3.3	33.7	8.4
314 Tobacco Manufacturing	1,785	1,737	0	3.5	7.2	0.0	97.3	0.0
321 Textiles	2,867	1,714	912	5.6	7.1	8.7	59.8	31.8
322 Wearing Apparel	1,695	1,095	263	3.3	4.5	2.5	64.6	15.5
323 Leather Tanning and Products	79	41	21	0.2	0.2	0.2	51.8	26.2
324 Leather Footwear	307	68	57	0.6	0.3	0.6	22.1	18.7
331 Wood Products	2,074	354	66	4.0	1.5	0.6	17.1	3.2
332 Furniture and Fixtures	458	173	20	0.9	0.7	0.2	37.8	4.3
341 Paper and Paper Products	1,368	400	238	2.7	1.7	2.3	29.2	17.4
342 Printing and Publishing	753	680	5	1.5	2.8	0.0	90.4	0.7
351 Industrial Chemicals	1,728	723	155	3.4	3.0	1.5	41.8	9.0
352 Other Chemical Products	3,213	2,890	96	6.3	12.0	0.9	90.0	3.0
353 Petroleum Refineries	6,798	0	6,087	13.2	0.0	58.3	0.0	89.5
354 Other Petroleum & Coal Products	27	17	1	0.1	0.1	0.0	61.6	4.2
355 Rubber Products	845	718	48	1.6	3.0	0.5	84.9	5.7
356 Miscellaneous Plastic Products	802	474	97	1.6	2.0	0.9	59.1	12.1
361 Pottery, China and Earthenware	108	96	0	0.2	0.4	0.0	88.8	0.3
362 Glass and Glass Products	377	329	9	0.7	1.4	0.1	87.2	2.4
363 Cement	759	119	240	1.5	0.5	2.3	15.7	31.7
369 Other Non-metallic Mineral Products	443	246	97	0.9	1.0	0.9	55.6	21.9
371 Iron and Steel Basic Industries	4,226	1,304	154	8.2	5.4	1.5	30.8	3.6
372 Non-ferrous Metal Basic Industries	271	146	109	0.5	0.6	1.0	53.9	40.3
381 Fabricated Metal Products	1,018	612	140	2.0	2.5	1.3	60.1	13.7
382 General Machinery	503	352	42	1.0	1.5	0.4	70.0	8.4
383 Electrical Machinery & Equipment	3,074	2,622	305	6.0	10.9	2.9	85.3	9.9
384 Transportation Equipment	1,417	914	224	2.8	3.8	2.1	64.5	15.8
385 Precision Instruments and Machinery	28	23	2	0.1	0.1	0.0	85.1	7.0
386 Repair of Metal Furniture & Fixtures	24	23	1	0.0	0.1	0.0	94.5	2.7
390 Other Manufacturing Industries	265	157	25	0.5	0.7	0.2	59.3	9.3

Source:1983 Census of Establishments(Head number of 3 digits is the industrial classification code number)

Table B.2 Composition of Employment by Manufacturing Subsector in 1983

	Employment in persons			% Shares to the All Industries			% Shares to the Pilippines	
	PHILIP-PINES	METRO MANILA	CALABAR	PHILI-PPINES	METRO MANILA	CALA-BAR	METRO MANILA	CALA-BAR
ALL INDUSTRIES	887,628	423,297	104,276	100.0	100.0	100.0	47.7	11.7
311~312 Food Manufacturing	190,404	49,432	19,911	21.5	11.7	19.1	26.0	10.5
313 Beverage Manufacturing	30,161	9,059	5,056	3.4	2.1	4.8	30.0	16.8
314 Tobacco Manufacturing	17,975	14,721	0	2.0	3.5	0.0	81.9	0.0
321 Textiles	91,005	59,322	18,951	10.3	14.0	18.2	65.2	20.8
322 Wearing Apparel	134,387	66,773	19,342	15.1	15.8	18.5	49.7	14.4
323 Leather Tanning and Products	4,324	2,191	734	0.5	0.5	0.7	50.7	17.0
324 Leather Footwear	14,467	6,564	3,985	1.6	1.6	3.8	45.4	27.5
331 Wood Products	64,843	6,330	3,716	7.3	1.5	3.6	9.8	5.7
332 Furniture and Fixtures	31,757	6,749	1,576	3.6	1.6	1.5	21.3	5.0
341 Paper and Paper Products	13,765	7,084	2,360	1.6	1.7	2.3	51.5	17.1
342 Printing and Publishing	20,065	14,278	534	2.3	3.4	0.5	71.2	2.7
351 Industrial Chemicals	10,466	5,680	1,233	1.2	1.3	1.2	54.3	11.8
352 Other Chemical Products	24,831	21,080	1,089	2.8	5.0	1.0	84.9	4.4
353 Petroleum Refineries	1,976	0	1,630	0.2	0.0	1.6	0.0	82.5
354 Other Petroleum & Coal products	462	167	35	0.1	0.0	0.0	36.1	7.6
355 Rubber Products	21,093	14,960	3,238	2.4	3.5	3.1	70.9	15.4
356 Miscellaneous Plastic Products	17,225	10,841	1,222	1.9	2.6	1.2	62.9	7.1
361 Pottery, China and Earthenware	3,719	1,668	177	0.4	0.4	0.2	44.9	4.8
362 Glass and Glass Products	7,311	5,943	339	0.8	1.4	0.3	81.3	4.6
363 Cement	7,297	921	2,168	0.8	0.2	2.1	12.6	29.7
369 Other Non-metallic Mineral Products	17,503	8,435	2,388	2.0	2.0	2.3	48.2	13.6
371 Iron and Steel Basic Industries	17,388	11,565	1,304	2.0	2.7	1.3	66.5	7.5
372 Non-ferrous Metal Basic Industries	3,619	2,149	1,192	0.4	0.5	1.1	59.4	32.9
381 Fabricated Metal Products	31,306	16,734	3,512	3.5	4.0	3.4	53.5	11.2
382 General Machinery	19,992	12,643	1,694	2.3	3.0	1.6	63.2	8.5
383 Electrical Machinery & Equipment	52,846	47,163	2,533	6.0	11.1	2.4	89.2	4.8
384 Transportation Equipment	23,450	14,056	3,196	2.6	3.3	3.1	59.9	13.6
385 Precision Instruments and Machinery	948	630	7	0.1	0.1	0.0	66.5	0.7
386 Repair of Metal Furniture & Fixtures	1,183	1,070	52	0.1	0.3	0.0	90.4	4.4
390 Other Manufacturing Industries	11,860	5,089	1,102	1.3	1.2	1.1	42.9	9.3

Source:1983 Census of Establishments(Head number of 3 digits is the industrial classification code number)

Table B.3 Composition of Employment by Manufacturing Subsector in 1988

	Employment (in Persons)			% Shares to the All Industries			% Shares to the Phils	
	PHILIP-PINES	METRO MANILA	CALABAR-ZON	PHILI-PPINES	METRO MANILA	CALA-BARZON	METRO MANILA	CALA-BARZON
ALL INDUSTRIES	1,078,527	515,393	133,836	100.0	100.0	100.0	47.8	12.4
311~312 Food Manufacturing	248,037	57,604	33,051	23.0	11.2	24.7	23.2	13.3
313 Beverage Manufacturing	27,892	8,175	3,953	2.6	1.6	3.0	29.3	14.2
314 Tobacco Manufacturing	15,130	11,902	0	1.4	2.3	0.0	78.7	0.0
321 Textiles	108,381	64,695	19,933	10.0	12.6	14.9	59.7	18.4
322 Wearing Apparel	181,550	116,789	27,951	16.8	22.7	20.9	64.3	15.4
323 Leather Tanning and Products	6,527	3,543	751	0.6	0.7	0.6	54.3	11.5
324 Leather Footwear	17,514	9,048	7,080	1.6	1.8	5.3	51.7	40.4
331 Wood Products	69,562	10,418	6,802	6.4	2.0	5.1	15.0	9.8
332 Furniture and Fixtures	52,880	12,926	2,190	4.9	2.5	1.6	24.4	4.1
341 Paper and Paper Products	16,311	10,046	2,617	1.5	1.9	2.0	61.6	16.0
342 Publishing ans Printing	27,910	20,919	878	2.6	4.1	0.7	75.0	3.1
351 Industrial Chemicals	9,838	4,510	1,607	0.9	0.9	1.2	45.8	16.3
352 Other chemical Products	29,222	24,474	1,779	2.7	4.7	1.3	83.8	6.1
353 Petroleum Refineries	1,971	40	1,591	0.2	0.0	1.2	2.0	80.7
354 Other Petroleum & Coal Products	343	227	0	0.0	0.0	0.0	66.2	0.0
355 Rubber Products	27,528	19,190	590	2.6	3.7	0.4	69.7	2.1
356 Miscellaneous Plastic Products	17,261	15,542	614	1.6	3.0	0.5	90.0	3.6
361 Pottery, China and Earthenware	6,118	2,825	854	0.6	0.5	0.6	46.2	14.0
362 Glass and Glass Products	5,995	4,842	303	0.6	0.9	0.2	80.8	5.1
363 Cement	6,503	1,230	1,342	0.6	0.2	1.0	18.9	20.6
369 Other Non-Metallic Mineral Products	18,402	5,196	2,751	1.7	1.0	2.1	28.2	14.9
371 Iron and Steel Basic Industries	19,706	12,725	1,014	1.8	2.5	0.8	64.6	5.1
372 Non-ferrous Metal Basic Industries	2,843	706	715	0.3	0.1	0.5	24.8	25.1
381 Fabricated Metal Products	39,225	19,220	4,021	3.6	3.7	3.0	49.0	10.3
382 General Machinery	24,210	15,002	1,507	2.2	2.9	1.1	62.0	6.2
383 Electrical Machinery & Equipment	51,463	39,742	4,367	4.8	7.7	3.3	77.2	3.5
384 Transportation Equipment	15,846	8,549	3,190	1.5	1.7	2.4	54.0	20.1
385 Precision Instruments and Machinery	3,238	646	0	0.3	0.1	0.0	20.0	0.0
386 Repair of Metal Furniture & Fixtures	1,114	1,032	17	0.1	0.2	0.0	97.1	1.5
390 Other Manufacturing Industries	26,007	13,580	2,368	2.4	2.6	1.8	52.2	9.1

Source:1988 Census of Establishment (Provisional Output)

Table B.4 Incremental Ratios of Employment by Manufacturing Subsector

	1983 Employment in Persons			1988 Employment in Persons			Increment Ratios (Times)		
	PHILI-PPINES	METRO MANILA	CALA-BAR	PHILI-PPINES	METRO MANILA	CALA-BAR	PHP	MAN-ILA	CAL-ABAR
ALL INDUSTRIES	887628	423297	104276	1078527	515393	117870	1.22	1.22	1.13
311~312 Food Manufacturing	190404	49432	19911	248037	57604	22485	1.30	1.17	1.13
313 Beverage Manufacturing	30161	9059	5056	27892	8175	3847	0.92	0.90	0.76
314 Tobacco Manufacturing	17975	14721	0	15130	11902	0	0.84	0.81	
321 Textiles	91005	59322	18951	108381	64695	19623	1.19	1.09	1.04
322 Wearing Apparel	134387	66773	19342	181550	116789	27142	1.35	1.75	1.40
323 Leather Tanning and Products	4324	2191	734	6527	3543	744	1.51	1.62	1.01
324 Leather Footwear	14467	6564	3985	17514	9048	7051	1.21	1.38	1.77
331 Wood Products	64843	6330	3716	69562	10418	4681	1.07	1.65	1.26
332 Furniture and Fixtures	31757	6749	1576	52880	12926	1763	1.67	1.92	1.12
341 Paper and Paper Products	13765	7084	2360	16311	10046	2588	1.18	1.42	1.10
342 Printing and Publishing	20065	14278	534	27910	20919	797	1.39	1.47	1.49
351 Industrial Chemicals	10466	5680	1233	9838	4510	1573	0.94	0.79	1.28
352 Other chemical Products	24831	21080	1089	29222	24474	1454	1.18	1.16	1.34
353 Petroleum Refineries	1976	0	1630	1971	40	1591	1.00	∞	0.98
354 Other Petroleum & Coal Products	462	167	35	343	227	0	0.74	1.36	0.00
355 Rubber Products	21093	14960	3238	27528	19190	576	1.31	1.28	0.18
356 Miscellaneous Plastic Products	17225	10841	1222	17261	15542	611	1.00	1.43	0.50
361 Pottery, China and Earthenware	3719	1668	177	6118	2825	854	1.65	1.69	4.82
362 Glass and Glass Products	7311	5943	339	5995	4842	303	0.82	0.81	0.89
363 Cement	7297	921	2168	6503	1230	1342	0.89	1.34	0.62
369 Other Non-metallic Mineral Products	17503	8435	2388	18402	5196	2109	1.05	0.62	0.88
371 Iron and Steel Basic Industries	17388	11565	1304	19706	12725	1012	1.13	1.10	0.78
372 Non-ferrous Metal Basic Industries	3619	2149	1192	2843	706	715	0.79	0.33	0.60
381 Fabricated Metal Products	31306	16734	3512	39225	19220	3765	1.25	1.15	1.07
382 General Machinery	19992	12643	1694	24210	15002	1392	1.21	1.19	0.82
383 Electrical Machinery & Equipment	52846	47163	2533	51463	39742	4365	0.97	0.84	1.72
384 Transportation Equipment	23450	14056	3196	15846	8549	3150	0.68	0.61	0.99
385 Precision Instruments and Machinery	948	630	7	3238	646	0	3.42	1.03	0.00
386 Repair of Metal Furniture & Fixtures	1183	1070	52	1114	1082	17	0.94	1.01	0.33
390 Other Manufacturing Industries	11860	5089	1102	26007	13580	2320	2.19	2.67	2.11

Source:1983 and 1988 Census of Establishment(1988:Provisional)

Table B.5 Composition of Employment in 1988 (by Manufacturing Subsector and by Province)

	Employment in Persons						% Shares to the All Industries					
	CALA-BARZON	CAVI-TE	LAGU-NA	BATA-NGAS	RIZAL	QUEZON	CALA-BARZON	CAVI-TE	LAGU-NA	BATA-NGAS	RIZAL	QUEZON
ALL INDUSTRIES	133836	14447	51616	18106	33701	15966	100.0	100.0	100.0	100.0	100.0	100.0
311~312 Food Manufacturing	33051	2121	12126	5434	2804	10566	24.7	14.7	23.5	30.0	8.3	66.2
313 Beverage Manufacturing	3953		3487	360		106	3.0		6.8	2.0		0.7
314 Tobacco Manufacturing												
321 Textiles	19933	811	10834	418	7560	310	14.9	5.6	21.0	2.3	22.4	1.9
322 Wearing Apparel	27951	6827	4937	6390	8988	809	20.9	47.3	9.6	35.3	26.7	5.1
323 Leather Tanning and Products	751	75	75	20	574	7	0.6	0.5	0.1	0.1	1.7	0.0
324 Leather Footwear	7080	293	5578	13	1167	29	5.3	2.0	10.8	0.1	3.5	0.2
331 Wood Products	6802	148	2580	353	1600	2121	5.1	1.0	5.0	1.9	4.7	13.3
332 Furniture and Fixtures	2190	497	535	109	622	427	1.6	3.4	1.0	0.6	1.8	2.7
341 Paper and Paper Products	2617		1680		908	29	2.0		3.3		2.7	0.2
342 Publishing and Printing	878	79	346	118	254	81	0.7	0.5	0.7	0.7	0.8	0.5
351 Industrial Chemicals	1607	188	612	382	391	34	1.2	1.3	1.2	2.1	1.2	0.2
352 Other chemical Products	1779	166	528		760	325	1.3	1.1	1.0		2.3	2.0
353 Petroleum Refineries	1591		61	1320	210		1.2		0.1	7.3	0.6	
354 Other Petroleum & Coal Products												
355 Rubber Products	590	144	99	6	327	14	0.4	1.0	0.2	0.0	1.0	0.1
356 Miscellaneous Plastic Products	614		474		137	3	0.5		0.9		0.4	0.0
361 Pottery, China and Earthenware	854	538	81	53	182		0.6	3.7	0.2	0.3	0.5	
362 Glass and Glass Products	303	250	33		20		0.2	1.7	0.1		0.1	
363 Cement	1342			551	791		1.0			3.0	2.3	
369 Other Non-Metallic Mineral Products	2751	162	937	141	869	642	2.1	1.1	1.8	0.8	2.6	4.0
371 Iron and Steel Basic Industries	1014	8	383		621	2	0.8	0.1	0.7		1.8	0.0
372 Non-ferrous Metal Basic Industries	715	549	37		129		0.5	3.8	0.1		0.4	
381 Fabricated Metal Products	4021	560	1583	460	1162	256	3.0	3.9	3.1	2.5	3.4	1.6
382 General Machinery	1507	147	377	305	563	115	1.1	1.0	0.7	1.7	1.7	0.7
383 Electrical Machinery & Equipment	4357	101	2551		1713	2	3.3	0.7	4.9		5.1	0.0
384 Transportation Equipment	3190	179	896	1491	584	40	2.4	1.2	1.7	8.2	1.7	0.3
385 Precision Instruments and Machinery												
386 Repair of Metal Furniture & Fixtures	17		17				0.0		0.0			
390 Other Manufacturing Industries	2368	604	769	182	765	48	1.8	4.2	1.5	1.0	2.3	0.3

Source:1988 Census of Establishment (Provisional Output)

Table B.6 Selected Subsectors by Province (Employment Size Base in 1988)

PHILIPPINES

Rank	Code	Subsector	Employment	%
		TOTAL	1078527	100.0
1	3222	Ready-made clothing	123775	11.5
2	3211	Textile spinning, finishing, etc.	74982	7.0
3	3122	Bakery products	71348	6.6
4	3118	Rice and corn milling	52592	4.9
5	3832	Radio, TV, communication equipment	38245	3.5
6	3322	Rattan furniture	31281	2.9
7	3123	Sugar milling and refining	31098	2.9
8	3221	Custom tailoring/dress-making shop	30360	2.8
9	3311	Sawing and planing mills	25312	2.3
10	3312	Veneer and plywood	23522	2.2
11	3229	Other weraing apparel	20894	1.9
12	3321	Wood furniture	20163	1.9
13	3423	Printing	19523	1.8
14	3829	Other machinery and machine parts	19329	1.8
15	3560	Miscellaneous plastic products	17261	1.6

METRO MANILA

Rank	Code	Subsector	Employment	%
		TOTAL	515393	100.0
1	3222	Ready-made clothing	90170	17.5
2	3211	Textile spinning, finishing, etc.	42687	8.3
3	3832	Radio, TV, communication equipment	30328	5.9
4	3122	Bakery products	23235	4.5
5	3560	Miscellaneous plastic products	15542	3.0
6	3229	Other weraing apparel	14667	2.8
7	3423	Printing	13401	2.6
8	3212	Knitting mills	12841	2.5
9	3552	Rubber footwear	12535	2.4
10	3829	Other machinery and machine parts	11523	2.2
11	3522	Drugs and medicines	11106	2.2
12	3141	Cigarettes	10965	2.1
13	3712	Steel works and rolling mills	10016	1.9
14	3221	Custom tailoring/dress-making shop	9175	1.8
15	3241	Leather shoes	7934	1.5

CALABARZON

Rank	Code	Subsector	Employment	%
		TOTAL	133836	100.0
1	3222	Ready-made clothing	19464	14.5
2	3211	Textile spinning, finishing, etc.	12876	9.6
3	3125	Desiccated coconut	9602	7.2
4	3122	Bakery products	8520	6.4
5	3241	Leather shoes	5624	4.2
6	3123	Sugar milling and refining	3650	2.7
7	3229	Other weraing apparel	3307	2.5
8	3212	Knitting mills	3124	2.3
9	3213	Made-up textile goods	2922	2.2
10	3221	Custom tailoring/dress-making shop	2852	2.1
11	3118	Rice and corn milling	2567	1.9
12	3836	Electric wires and wiring devices	2379	1.8
13	3223	Embroidery establishment	2328	1.7
14	3111	Live-stock products	2203	1.6
15	3317	Wood carvings	2150	1.6

CAVITE

Rank	Code	Subsector	Employment	%
		TOTAL	14447	100.0
1	3222	Ready-made clothing	4711	32.6
2	3229	Other weraing apparel	1401	9.7
3	3122	Bakery products	1219	8.4
4	3723	Non-ferrous metals rolling mills	545	3.8
5	3610	Pottery, china and earthenware	538	3.7
6	3211	Textile spinning, finishing, etc.	516	3.6
7	3909	Other manufacturing industries	460	3.2
8	3118	Rice and corn milling	440	3.0
9	3221	Custom tailoring/dress-making shop	395	2.7
10	3223	Embroidery establishment	320	2.2
11	3241	Leather shoes	285	2.0
12	3620	Glass and glass products	250	1.7
13	3321	Wood furniture	236	1.6
14	3322	Rattan furniture	232	1.6
15	3812	Structural metal products	205	1.4

LAGUNA

Rank	Code	Subsector	Employment	%
		TOTAL	51616	100.0
1	3211	Textile spinning, finishing, etc.	9587	18.6
2	3241	Leather shoes	4304	8.3
3	3222	Ready-made clothing	3742	7.2
4	3122	Bakery products	2921	5.7
5	3125	Desiccated coconut	2918	5.7
6	3836	Electric wires and wiring devices	2278	4.4
7	3317	Wood carvings	1837	3.6
8	3134	Soft drinks and carbonated water	1827	3.5
9	3111	Live-stock products	1559	3.0
10	3133	Malt liquors and malt	1427	2.8
11	3123	Sugar milling and refining	1405	2.7
12	3249	Other footwear	1274	2.5
13	3411	Pulp, paper and paperboard	1246	2.4
14	3212	Knitting mills	1113	2.2
15	3221	Custom tailoring/dress-making shop	752	1.5

BATANGAS

Rank	Code	Subsector	Employment	%
		TOTAL	18106	100.0
1	3222	Ready-made clothing	2563	14.2
2	3123	Sugar milling and refining	2242	12.4
3	3223	Embroidery establishment	1608	8.9
4	3229	Other weraing apparel	1555	8.6
5	3841	Ship building and repairing	1464	8.1
6	3122	Bakery products	1372	7.6
7	3530	Petroleum refineries	1320	7.3
8	3221	Custom tailoring/dress-making shop	664	3.7
9	3118	Rice and corn milling	622	3.4
10	3630	Cement	551	3.0
11	3128	Animal feeds	457	2.5
12	3511	Basic industrial chemicals	382	2.1
13	3131	Distilling/rectifying spirits	360	2.0
14	3811	Cutlery, hand tools, etc.	331	1.8
15	3829	Other machinery and machine parts	305	1.7

RIZAL

Rank	Code	Subsector	Employment	%
		TOTAL	33701	100.0
1	3222	Ready-made clothing	8156	24.2
2	3213	Made-up textile goods	2664	7.9
3	3211	Textile spinning, finishing, etc.	2631	7.8
4	3212	Knitting mills	1847	5.5
5	3122	Bakery products	1428	4.2
6	3832	Radio, TV, communication equipment	1290	3.8
7	3241	Leather shoes	1019	3.0
8	3812	Structural metal products	907	2.7
9	3412	Paper containers	808	2.4
10	3630	Cement	791	2.3
11	3319	Miscellaneous wood products	703	2.1
12	3712	Steel works and rolling mills	585	1.7
13	3111	Live-stock products	576	1.7
14	3232	Leather products & its substitutes	574	1.7
15	3221	Custom tailoring/dress-making shop	569	1.7

QUEZON

Rank	Code	Subsector	Employment	%
		TOTAL	15966	100.0
1	3125	Desiccated coconut	6682	41.9
2	3122	Bakery products	1580	9.9
3	3316	Wooden containers	1117	7.0
4	3118	Rice and corn milling	755	4.7
5	3116	Crude coconut oil, etc.	567	3.6
6	3311	Sawing and planing mills	536	3.4
7	3221	Custom tailoring/dress-making shop	472	3.0
8	3699	Other non-metalic mineral products	434	2.7
9	3119	Flour milling	400	2.5
10	3222	Ready-made clothing	292	1.8
11	3529	Other chemical and allied products	289	1.8
12	3215	Cordage, rope and twine	259	1.6
13	3321	Wood furniture	239	1.5
14	3117	Animal and vegetable oils and fats	232	1.5
15	3312	Veneer and plywood	221	1.4

Source:1988 Census of Establishment(Provisional)

Table B.7 Manufacturing Employment & Main Industry (by City and by Municipality in 1988) - 1/4

Province City Municipality	Population in 1987	Employment (persons)	Employment (%)	Size Rank	Induustries whose employment are more than 200 persons
CALABAR TOTAL	4217652	117870	100.0		
CAVITE TOTAL	975378	14447	12.3		
Cavite City	97529	689	0.6	E	
Tagaytay City	20761	44	0.0	G	
Trece Martirez	10579	100	0.1	F	
Alfonso	26771	100	0.1	G	
Amadeo	19300	62	0.1	G	
Baccor	125181	813	0.7	E	
Carmona	87291	3424	2.9	C	3211 Textile spinning, finishing, etc. 516
					3222 Ready-made clothing 1161
					3223 Embroidery establishment 298
					3241 Leather shoes 281
					3610 Pottery, china and earthenware 499
					3909 Other manufacturing industries 236
Dasmarinas	70869	5735	4.9	B	3222 Ready-made clothing 3255
					3229 Other weraing apparel 1399
					3723 Non-ferrous metals rolling mills 545
Gen.Emilio Aguinaldo	10791	12	0.0	G	
Gen.Mariano Alvarez		16	0.0	G	
Gen.Trias	50669	164	0.1	F	
Imus	74659	926	0.8	E	
Indang	37747	116	0.1	F	
Kawit	49246	253	0.2	F	
Magallanes	11080	4	0.0	G	
Maragondon	22802	63	0.1	G	
Mendez-Nunez	17438	34	0.0	G	
Naic	46909	379	0.3	F	
Noveleta	17751	93	0.1	G	
Rosario	42481	476	0.4	F	
Silang	66421	380	0.3	F	
Tanza	55057	535	0.5	E	3620 Glass and glass products 250
Ternate	14046	29	0.0	G	
LAGUNA TOTAL	1165925	51616	43.8		
San Pablo City	106904	4231	3.6	C	3116 Crude coconut oil, etc. 293
					3122 Bakery products 303
					3125 Desiccated coconut 2102
Alaminos	23685	407	0.3	F	
Bay	27511	69	0.1	G	
Binan	101402	6161	5.2	B	3122 Bakery products 506
					3241 Leather shoes 4116
					3249 Other footwear 504
Cabuyao	57265	5916	5.0	B	3111 Live-stock products 1392
					3112 Processed milk 520
					3114 Canned and preserved fruit, etc. 207
					3133 Malt liquors and malt 1227
					3211 Textile spinning, finishing, etc. 1462
					3222 Ready-made clothing 361
					3712 Steel works and rolling mills 207
Calamba	150330	20760	17.6	A	3122 Bakery products 401
					3123 Sugar milling and refining 1405
					3133 Malt liquors and malt 200
					3134 Soft drinks and carbonated water 1200
					3211 Textile spinning, finishing, etc. 6783
					3212 Knitting mills 751
					3222 Ready-made clothing 2769
					3411 Pulp, paper and paperboard 287
					3513 Synthetic resins, plastic materials 262
					3560 Miscellaneous plastic products 474
					3699 Other non-metalic mineral products 291
					3812 Structural metal products 308
					3814 Metal stamping, coating mills, etc. 672
					3831 Electrical machinery and apparatus 273
					3836 Electric wires and wiring devices 2278
					3845 Motor vehicle parts and accessories 342
					3909 Other manufacturing industries 326

Source:NATIONAL STATISTICS OFFICE
Remark:Size rank is classified based on the employment in cities and municipalities as follows.
A:more than 10,000　B:5,000～9,999　C:2,500～4,999　D:1,000～2,499
E:500～999　F:100～499　G:1～99　H:Nothing

Table B.8 Manufacturing Employment & Main Industry (by City and by Municipality in 1988:Continued) - 2/4

Province City Municipality	Population in 1987	Employment (persons)	(%)	Size Rank	Induustries whose employment are more than 200 persons	
CALABAR TOTAL	4217652	117870	100.0			
Calauan	28116	184	0.2	F		
Cavinti	14905	144	0.1	F		
Famy	6103	36	0.0	G		
Kalayaan	12262	448	0.4	F	3317 Wood carvings	272
Liliw	19441	212	0.2	F		
Los Banos	59804	453	0.4	F		
Luisiana	13516	172	0.1	F		
Lumban	20075	211	0.2	F		
Mabitac	9922	28	0.0	G		
Magdalena	12103	851	0.7	E	3125 Desiccated coconut	814
Majayjay	14968	81	0.1	G		
Nagcarlan	34979	306	0.3	F		
Paete	18584	1920	1.6	D	3317 Wood carvings	1403
					3419 Other paper and paper worked produc	273
Pagsanjan	23217	302	0.3	F		
Pakil	10068	61	0.1	G		
Pangil	12514	55	0.0	G		
Pila	24165	178	0.2	F		
Rizal	7543	75	0.1	G		
San Pedro	106904	4079	3.5	C	3122 Bakery products	484
					3134 Soft drinks and carbonated water	569
					3212 Knitting mills	230
					3249 Other footwear	677
					3411 Pulp, paper and paperboard	950
Santa Cruz	71184	449	0.4	F		
Santa Maria	17668	47	0.0	G		
Santa Rosa	77542	3424	2.9	C	3122 Bakery products	406
					3211 Textile spinning, finishing, etc.	1342
Siniloan	20512	296	0.3	F		
Victoria	19519	60	0.1	G		
BATANGAS TOTAL	1368657	18106	15.4			
Batangas City	168891	2240	1.9	D	3119 Flour milling	219
					3122 Bakery products	200
					3530 Petroleum refineries	950
Lipa City	142016	2272	1.9	D	3122 Bakery products	228
					3128 Animal feeds	419
					3222 Ready-made clothing	820
Agoncillo	19025	14	0.0	G		
Alitagtag	17364	35	0.0	G		
Balayan	50727	1305	1.1	D	3123 Sugar milling and refining	1005
Balete	9661	0	0.0	H		
Bauan	50878	4830	4.1	C	3222 Ready-made clothing	207
					3223 Embroidery establishment	1308
					3229 Other veraing apparel	1380
					3511 Basic industrial chemicals	240
					3841 Ship building and repairing	1464
Calaca	43256	172	0.1	F		
Calatagan	32849	35	0.0	G		
Cuenca	19593	72	0.1	G		
Ibaan	29908	70	0.1	G		
Laurel	21820	14	0.0	G		
Lemery	50019	197	0.2	F		
Lian	30135	90	0.1	G		
Lobo	27777	66	0.1	G		
Mabini	27474	27	0.0	G		
Malvar	21257	327	0.3	F	3222 Ready-made clothing	216
Mataas na Kahoy	13919	16	0.0	G		
Nasugbu	70526	1314	1.1	D	3123 Sugar milling and refining	1176
Padre Garcia	22570	217	0.2	F		

Source:NATIONAL STATISTICS OFFICE

Remark:Size rank is classified based on the employment in cities and municipalities as follows.

A:more than 10,000 B:5,000～9,999 C:2,500～4,999 D:1,000～2,499

E:500～999 F:100～499 G:1～99 H:Nothing

Table B.9 Manufacturing Employment & Main Industry (by City and by Municipality in 1988:Continued) - 3/4

Province City Municipality	Population in 1987	Employment (persons)	Employment (%)	Size Rank	Induustries whose employment are more than 200 persons	
CALABAR TOTAL	4217652	117870	100.0			
Rosario	63612	711	0.6	E	3222 Ready-made clothing	228
San Jose	32699	30	0.0	G		
San Juan	68540	671	0.6	E	3131 Distilling/rectfying spirits	332
San Luis	20091	67	0.1	H		
San Nicolas	12565	10	0.0	G		
San Pascual	30905	804	0.7	E	3530 Petroleum refineries	370
Sta. Teresita	12474	0	0.0	H		
Sto. Tomas	50780	650	0.6	E	3222 Ready-made clothing	318
Taal	33607	264	0.2	F		
Talisay	22883	150	0.1	F		
Tanauan	83520	586	0.5	E	3222 Ready-made clothing	356
Taysan	22547	683	0.6	E	3630 Cement	551
Tingloy	15431	12	0.0	G		
Tuy	29318	154	0.1	F		
RIZAL TOTAL	707692	33701	28.6			
Angono	36288	5227	4.4	B	3111 Live-stock products	550
					3211 Textile spinning, finishing, etc.	1283
					3213 Made-up textile goods	2292
					3222 Ready-made clothing	798
Antipolo	102211	4211	3.6	C	3222 Ready-made clothing	1077
					3241 Leather shoes	267
					3319 Miscellaneous wood products	542
					3630 Cement	433
Baras	12567	53	0.0	G		
Binangonan	97020	2072	1.8	D	3222 Ready-made clothing	616
					3630 Cement	358
Cainta	91940	9606	8.2	B	3122 Bakery products	514
					3124 Confectionery products	263
					3211 Textile spinning, finishing, etc.	499
					3212 Knitting mills	1500
					3213 Made-up textile goods	208
					3215 Cordage, rope and twine	279
					3222 Ready-made clothing	501
					3232 Leather products & its substitutes	527
					3412 Paper containers	743
					3521 Paints, lacquers, etc.	207
					3529 Other chemical and allied products	288
					3552 Rubber footwear	235
					3692 Structual concrete products	206
					3712 Steel works and rolling mills	585
					3812 Structural metal products	553
					3843 Assembly of moter vehicle	427
Cardona	27819	425	0.4	F		
Jalajala	14059	52	0.0	G		
Montalban	52070	1430	1.2	D	3211 Textile spinning, finishing, etc.	724
Morong	28368	647	0.5	E	3222 Ready-made clothing	463
Pililla	27781	403	0.3	F	3530 Petroleum refineries	210
San Mateo	63932	1783	1.5	D	3222 Ready-made clothing	863
					3241 Leather shoes	437
Tanay	46961	543	0.5	E		
Taytay	89109	7209	6.1	B	3222 Ready-made clothing	3417
					3315 Millwork plants	369
					3513 Synthetic resins, plastic materials	244
					3829 Other machinery and machine parts	359
					3831 Electrical machinery and apparatus	298
					3832 Radio, TV, communication equipment	1290
					3902 Musical instruments	220
Teresa	17567	40	0.0	G		

Source: NATIONAL STATISTICS OFFICE
Remark: Size rank is classified based on the employment in cities and municipalities as follows.
A: more than 10,000 B: 5,000～9,999 C: 2,500～4,999 D: 1,000～2,499
E: 500～999 F: 100～499 G: 1～99 H: Nothing

Table B.10 Manufacturing Employment & Main Industry (by City and by Municipality in 1988:Continued) - 4/4

Province City Municipality	Population in 1990	Employment (Persons)	Employment (%)	Size Rank	Industries whose employment is more than 200 persons
CALABARZON TOTAL		133836	100.0		
QUEZON TOTAL		15966	11.9		
Lucena City	150624	4938	3.7	C	3117 Animal and vegetable oils and fats 225 3122 Bakery products 362 3125 Desiccated coconut 2934
Agdangan	8207	9	0.0		
Alabat	11785	60	0.0	G	
Atimonan	46651	821	0.6	E	3116 Crude coconut oil, etc. 263 3529 Other chemical and allied products 289
Buenavista	20060	9	0.0	G	
Burdeos	17983	74	0.1	G	
Calauag	64856	216	0.2	F	
Candelaria	69969	2039	1.5	D	3125 Desiccated coconut 1748
Catanauan	48019	102	0.1	F	
Dolores	18146	16	0.0	G	
Genaral Luna	17997	8	0.0	G	
General Nakar	18323	5	0.0	G	
Guinayagan	32829	54	0.0	G	
Gumaca	48195	217	0.2	F	
Infanta	35564	64	0.0	G	
Jumalig	4542	8	0.0	G	
Lopez	66010	702	0.5	E	3119 Flour milling 400
Lucban	30130	434	0.3	F	
Macalelon	19887	13	0.0	G	
Mauban	43740	402	0.3	F	
Mulanay	38661	122	0.1	F	
Padre Burgos	15219	19	0.0	G	
Pagbilao	41636	206	0.2	G	
Panukulan	9815	6	0.0	G	
Patnanungan	9447	4	0.0	G	
Perez	8609	19	0.0	G	
Pitogo		24	0.0	G	
Plaridel		33	0.0	G	
Polillo		80	0.1	G	
Quezon		24	0.0	G	
Real		169	0.1	F	
Sanpaloc		22	0.0	G	
San Andres		19	0.0	G	
San Antonio		62	0.0	G	
San Francisco		22	0.0	G	
San Narciso		58	0.0	G	
Sariaya		481	0.4	F	
Tagkawayan		433	0.3	F	
Tayabas		1804	1.3	D	3312 Veneer and plywood 221 3316 Wooden containers 892 3699 Other non-metallic mineral products 363
Tiaong		2122	1.6	D	3125 Desiccated coconut 2000
Unisan		46	0.0	G	

Source:1988 Census of Establishment (Provisinal Output)

Remarks:Size rank is classified based on the employment in city and municipalities as follows.
A:more than 10000 B:5,000～9,999 C:2,500～4,999 D:1,000～2,499
E:500～999 F:100～499 G:1～99 H:Nothing

Table B.11 BOI Approved Investments in the Period 1985-1990 (New and Expansion Projects; Project Cost)

Project Cost (in Million Pesos)	PHILI-PPINES	CALABARZON Total	CVT.	LGN.	BTG.	RZL.	QZN.	% Shares to the Philippines CLBZN.	CVT.	LGN.	BTG.	RZL.	QZN.
All Industries	205812	69886	11556	17190	26566	14155	419	34.0	5.6	8.4	12.9	6.9	0.2
Agriculture	6225	1912	367	1208	241	96		30.7	5.9	19.4	3.9	1.5	
Seeds	9												
Food Crops	373	17	2	4	11			4.6	0.6	1.0	3.0		
Feed Grains	1288	81		52	29			6.3		4.0	2.2		
Other Crops	894	200		174	27			22.4		19.4	3.0		
Livestock & Poultry	2891	1486	353	955	87	91		51.4	12.2	33.0	3.0	3.1	
Ornamental Plants	142	44	11	24	3	6		30.7	7.7	16.6	2.2	4.1	
Animal Breeders	100	84			84			84.6			84.6		
Agricultural Services	528												
Fishery	4613	151	1		101		49	3.3	0.0		2.2		1.1
Fish and Marine Products	317	23					23	7.4					7.4
Aquaculture	4296	128	1		101		26	3.0	0.0		2.3		0.6
Mining	16421	57	9		48			0.3	0.1		0.3		
Metallic Ore Mining, etc.	15377												
Non-metallic Ore Mining/ Milling	1044	57	9		48			5.4	0.8		4.6		
Manufacturing Industry	120579	42029	9321	13183	5216	14032	277	34.9	7.7	10.9	4.3	11.6	0.2
311～2 Food Manufacturing	3780	880	25	210	560	84	1	23.3	0.7	5.6	14.8	2.2	0.0
321 Textiles	32898	20537	5064	6433	145	8895		62.4	15.4	19.6	0.4	27.0	
322 Wearing Apparel	2851	468	83	140	24	222		16.4	2.9	4.9	0.8	7.8	
323 Leather Products	169	12	9			3		6.9	5.3			1.6	
Footwear	621	116		68	1	46	2	18.7		10.9	0.1	7.4	0.3
331 Wood Products	1655	67	35	12	2	19		4.1	2.1	0.7	0.1	1.1	
341 Paper & Paper Products	2608	722	272	440		10		27.7	10.4	16.9		0.4	
342 Publishing & Printing	235	30				30		12.8				12.8	
351～352 Chemical Products	13726	4727	910	1151	1717	868	80	33.9	6.6	8.4	12.5	6.3	0.6
Basic Industrial Chemicals	8416	1890	512	89	1209		80	22.5	6.1	1.1	14.4		0.9
Synthetic Resins	455	414	16	398				91.0	3.5	87.5			
Chemical Fertilizers	197	80			80			40.6			40.6		
Synthetic Yarns & Fibers	959	891		23		868		92.9		2.4		90.5	
Drugs & Pharmaceuticals	1403	1193	324	604	265			85.0	23.1	43.1	18.9		
Misc. Chemical Products	2297	259	59	37	164	0		11.3	2.6	1.6	7.1	0.0	
354 Other Petroleum & Coal Products	61	13				13		21.9				21.9	
355 Rubber Products	1236	103	92	11				8.3	7.4	0.9			
356 Miscellaneous Plastic Products	3177	2011	113	854	968	76		63.3	3.6	26.9	30.5	2.4	
Construction/Housing Components	19856	2743	151	410		1993	189	13.8	0.8	2.1		10.0	1.0
369 Other Non-Metallic Mineral Products	1942	1015	36	181	770	28		52.2	1.8	9.3	39.6	1.4	
Basic Metal Products	2374	382			382			16.1			16.1		
381 Fabricated Metal Products	2821	884	196	471	114	102		31.3	6.9	16.7	4.0	3.6	
382 General Machinery	1271	736	156	247	179	154		57.9	12.3	19.4	14.1	12.1	
383 Electrical Machinery & Equipment	18695	3756	1062	1516	0	1177		20.1	5.7	8.1	0.0	6.3	
384 Transportation Equip.	7363	1910	650	903	310	48		25.9	8.8	12.3	4.2	0.6	
Car Development Program	7210	1794	650	903	196	45		24.9	9.0	12.5	2.7	0.6	
Motorcycle Development Program	8	3				3		33.6				33.6	
Shipbuliding & Shiprepa-iring	145	114			114			78.6			78.6		
385 Precision Instruments and Machinery	90	58	58					64.1	64.1				
390 Other Manufacturing	3033	861	410	137	44	264	5	28.4	13.5	4.5	1.5	8.7	0.2
Energy-Related Projects	26291	20461		230	20169	25	37	77.8		0.9	76.7	0.1	0.1
Service Exporter	134												
Public Utilities, etc.	12326	5230	1859	2526	790		56	42.4	15.1	20.5	6.4		0.5
Tourism-Oriented Projects	19224	42		42				0.2		0.2			

Source: BOI, Department of Trade and Industry (Head number of 3 digits is the industrial classification code number)

Table B.12 BOI Approved Investments in the Period 1985-1990 (New and Expansion Projects; Employment Generation)

Employment Generation (in Persons)	PHILI-PPINES	CALABARZON Total	CVT.	LGN.	BTG.	RZL.	QZN.	% Shares to the Philippines CLBZN.	CVT.	LGN.	BTG.	RZL.	QZN.
All Industries	527095	101643	24452	36887	6714	31414	2176	19.3	4.6	7.0	1.3	6.0	0.4
Agriculture	33256	4174	519	2936	518	201		12.6	1.6	8.8	1.6	0.6	
Seeds	13												
Food Crops	5544	296	36	196	64			5.3	0.6	3.5	1.2		
Feed Grains	2126	130		68	62			6.1		3.2	2.9		
Other Crops	18370	515		415	100			2.8		2.3	0.5		
Livestock & Poultry	5919	2903	465	2139	169	130		49.0	7.9	36.1	2.9	2.2	
Ornamental Plants	461	215	18	118	8	71		46.6	3.9	25.6	1.7	15.4	
Animal Breeders	130	115			115			67.6			67.6		
Agricultural Services	653												
Fishery	16271	394	19		244		131	2.4	0.1		1.5		0.8
Fish and Marine Products	2294	51					51	2.2					2.2
Aquaculture	13977	343	19		244		80	2.5	0.1		1.7		0.6
Mining	18925	60	15		45			0.3	0.1		0.2		
Metallic Ore Mining, etc.	13941												
Non-metallic Ore Mining/ Milling	4984	60	15		45			1.2	0.3		0.9		
Manufacturing Industry	430911	95,004	23869	32790	5384	31203	1758	22.0	5.5	7.6	1.2	7.2	0.4
311～2 Food Manufacturing	16609	1365	268	491	210	339	57	8.2	1.6	3.0	1.3	2.0	0.3
321 Textiles	51953	23206	5272	8447	719	8768		44.7	10.1	16.3	1.4	16.9	
322 Wearing Apparel	88476	16433	3658	5265	963	6547		18.6	4.1	6.0	1.1	7.4	
323 Leather Products	6701	442	365			77		6.6	5.4			1.1	
Footwear	12868	2368		1202	16	1123	27	18.4		9.3	0.1	8.7	0.2
331 Wood Products	22500	2022	722	226	40	1034		9.0	3.2	1.0	0.2	4.6	
341 Paper & Paper Products	4752	1235	754	446		35		26.0	15.9	9.4		0.7	
342 Printing & Publishing	337	70				70		20.8				20.8	
351～352 Chemical Products	10017	3337	572	1324	416	978	47	33.3	5.7	13.2	4.2	9.8	0.5
Basic Industrial Chemicals	2566	619	251	149	172		47	24.1	9.8	5.8	6.7		1.8
Synthetic Resins	334	219	56	163				65.6	16.8	48.8			
Chemical Fertilizers	377	118			118			31.3			31.3		
Synthetic Yarns & Fibers	2347	1250		290		960		53.3		12.4		40.9	
Drugs & Pharmaceuticals	1313	797	159	524	114			60.7	12.1	39.9	8.7		
Misc. Chemical Products	3080	334	106	198	12	18		10.8	3.4	6.4	0.4	0.6	
354 Other Petroleum & Coal Products	85	10				10		11.8				11.8	
355 Rubber Products	3590	445	393	52				12.4	10.9	1.4			
356 Miscellaneous Plastic Products	9449	1875	698	487	115	575		19.8	7.4	5.2	1.2	6.1	
Construction/Housing Components	11774	2228	580	535		711	402	18.9	4.9	4.5		6.0	3.4
369 Other Non-Metallic Mineral Products	3136	800	164	300	300	36		25.5	5.2	9.6	9.6	1.1	
Basic Metal Products	1665	256		36	220			15.4			13.2		
381 Fabricated Metal Products	9495	2210	472	937	630	171		23.3	5.0	9.9	6.6	1.8	
382 General Machinery	4593	2411	506	718	408	779		52.5	11.0	15.6	8.9	17.0	
383 Electrical Machinery & Equipment	91911	10876	1267	6045	0	3564		11.8	1.4	6.6	0.0	3.9	
384 Transportation Equip.	12124	7851	3352	3166	1085	248		64.8	27.6	26.1	8.9	2.0	
Car Development Program	11489	7615	3352	3166	965	132		66.3	29.2	27.6	8.4	1.1	
Motorcycle Development Program	162	116				116		71.6				71.6	
Shipbuilding $ Shiprepa-iring	593	120			120			20.2			20.2		
385 Precision Instruments and Machinery	839	744	744					88.7	88.7				
390 Other Manufacturing	67917	14820	4082	3113	262	6138	1225	21.8	6.0	4.6	0.4	9.0	1.8
Energy-Related Projects	4930	1103		486	420	10	187	22.4		9.9	8.5	0.2	3.8
Service Exporter	177												
Public Utilities, etc.	9488	809	30	576	103		100	8.5	0.3	6.1	1.1		1.1
Tourism-Oriented Projects	13137	99		99				0.8		0.8			

Source: BOI, Department of Trade and Industry (Head number of 3 digits is the industrial classification code number)

Table B.13 Labor Preparation Rate(LPR) for BOI approved Investments (in the Period 1985-1990: New and Expansion Projects)

Remarks Figures identiy the higher degree of employment per project cost;figures in parenthesis also identify the degree in the large classification groups of industry.		Employment per Project Cost (Persons/Million Pesos)			% Shares of CALABARZON to the PHP	
		I PHILIP-PINES	II CALABAR-ZON	II／I Differe-nces	Project Cost	Employ-ment Ge-neration
All Industries		2.56	1.45	0.57	34.0	19.3
Agriculture	(1)	5.34	2.18	0.41	30.7	12.6
Other Crops	1	20.55	2.57	0.13	22.4	2.8
Food Crops	2	14.86	17.07	1.15	4.6	5.3
Ornamental Plants	3	3.25	4.93	1.52	30.7	46.6
Livestock & Poultry	4	2.05	1.95	0.95	51.4	49.0
Animal Breeders	5	1.71	1.37	0.80	84.6	67.6
Feed Grains	6	1.65	1.61	0.97	6.3	6.1
Seeds	7	1.47			0.0	0.0
Agricultural Services	8	1.24			0.0	0.0
Fishery	(3)	3.53	2.61	0.74	3.3	2.4
Fish and Marine Products	1	7.24	2.18	0.30	7.4	2.2
Aquaculture	2	3.25	2.69	0.83	3.0	2.5
Mining	(5)	1.15	1.06	0.92	0.3	0.3
Non-Metallic Ore Mining/Milling	1	4.78	1.06	0.22	5.4	1.2
Metallic Ore Mining/Milling	2	0.91			0.0	0.0
Manufacturing Industry	(2)	3.57	2.26	0.63	34.9	22.0
323 Leather Tanning and Products	1	39.62	37.71	0.95	6.9	6.6
322 Wearing Apparel	2	31.03	35.14	1.13	16.4	18.6
390 Other Manufacturing Industries	3	22.39	17.22	0.77	28.4	21.8
Footwear	4	20.72	20.37	0.98	18.7	18.4
331 Wood Products	5	13.59	30.02	2.21	4.1	9.0
385 Precision Instruments and Machinery	6	9.27	12.83	1.38	64.1	88.7
383 Electrical Machinery & Equipment	7	4.92	2.90	0.59	20.1	11.8
311～312 Food Manufacturing	8	4.39	1.55	0.35	23.3	8.2
382 General Machinery	9	3.61	3.28	0.91	57.9	52.5
381 Fabricated Metal Products	10	3.28	2.50	0.76	30.1	23.0
356 Miscellaneous Plastic Products	11	2.97	0.93	0.31	63.3	19.8
355 Rubber Products	12	2.90	4.33	1.49	8.3	12.4
341 Paper and Paper Products	13	1.82	1.71	0.94	27.7	26.0
384 Transportation Equipment	14	1.65	4.11	2.50	25.9	64.8
Car Development Program		1.59	4.25	2.66	24.9	66.3
Motorcycle Development Program		19.99	42.57	2.13	33.6	71.6
Shipbuliding & Shipreparing		4.09	1.05	0.26	78.6	20.2
390 Other Non-Metallic Mineral Products	15	1.61	0.79	0.49	52.2	25.5
321 Textiles	16	1.58	1.13	0.72	62.4	44.7
342 Publishing and Printing	17	1.43	2.33	1.63	12.8	20.8
354 Other Petroleum & Coal Products	18	1.39	0.75	0.54	21.9	11.8
351～352 Chemical Products	19	0.73	0.71	0.97	34.4	33.3
Basic Industrial Chemicals		0.30	0.33	1.07	22.5	24.1
Synthetic Resins		0.73	0.53	0.72	91.0	65.6
Chemical Fertilizers		1.92	1.48	0.77	40.6	31.3
Synthetic Yarns & Fibers		2.45	1.40	0.57	92.9	53.3
Drugs and Pharmaceuticals		0.94	0.67	0.71	85.0	60.7
Misc. Chemical Products		1.34	1.29	0.96	11.3	10.8
Basic Metal Products	20	0.70	0.67	0.96	16.1	15.4
Construction/Housing Components	21	0.59	0.81	1.37	13.8	18.9
Energy-Related Projects	8	0.19	0.05	0.29	77.8	22.4
Service Exporter	4	1.32			0.0	0.0
Public Utilities	6	0.77	0.15	0.20	42.4	8.5
Tourism-Oriented Projects	7	0.68	2.36	3.45	0.2	0.8

Source:BOI, Department of Trade and Industry (Head number of 3 digits is the industrial classification number)

Table B.14 Industrial Estates in CALABARZON (as of May 1990)

Province	Name	Land Area ('00 m²)	I Developed	II Sold/ Leased	III = I - II Available	Location (Municipality)
Cavite	① Buliham NHA IE	300	300	300	0	Silang
	② Cavite EPZ (CEPZ)	27,500	25,500	5,000	20,500	Rosario
	③ Cavite-Carmona IE	5,300	5,300	5,300	0	Carmona
	④ Dasmarinas Bagnon Bayan IE	1,281	1,281	796	485	Dasmarinas
	⑤ First Cavite IE	23,000	15,500	3,800	11,700	Dasmarinas
	⑥ First City Land Industrial Center	2,400	2,400	2,400	0	Dasmarinas
	⑦ Gateway Industries Complex	40,000	12,000	3,000	9,000	Javalera, Gen. Trias
	⑧ Gen. Mariano Alvarez IE	973	973	107	866	Gen. Mariano Alvarez
	⑨ Informal IE					Imus
	⑩ New Cavite IE	4,389	3,016	2,132	884	Gen. Trias
	⑪ People's Technology Complex					Carmona
	Cavite : Subtotal	105,143	66,270	22,835	43,435	
Laguna	⑫ Ayala-Laguna Technopark	23,300	23,300	6,477	16,823	Binan, Sta. Rosa
	⑬ Canlubang Industrial Park	124,000	70,800	17,600	53,200	Canlubang
	⑭ The Science Park of Phils.	14,300	4,500	4,500	0	Bo. Diezmo, Canlubang
	Laguna : Subtotal	161,600	98,600	28,577	70,023	
Existing : Total		266,743	164,870	51,412	113,458	
Laguna	① C. Ito IE	20,000				Canlubang
	② Mitsubishi IE	34,400				Canlubang
	Laguna : Subtotal	54,400				
Cavite	③ Marubeni IE	14,500				Dasmarinas
Batangas	④ Batangas IE	35,000				Bauan
	⑤ Batangas Regional Industrial Center	75,000				
	Batangasa : Subtotal	110,000				
Rizal	⑥ Pinuguay IE					Pinuguay
	⑦ San Mateo IE					San Mateo
Planned : Total		178,900				

Sourc: DTI and other sources

Table B.15 Trends of Equity Investments by Nationality

	Year	Equity (in Million Pesos)			III/I (%)
		I Total	II Filipino	III Foreign	
1) Equity Total of BOI-Approved Investments as for New and Expansion Projects	1985	1,570	700	870	55.4
	1986	1,354	1,012	342	25.3
	1987	8,285	5,953	2,332	28.1
	1988	14,313	6,654	7,659	53.5
	Total	25,522	14,319	11,203	43.9
2) BOI-Approved Equity Investment	1985	1,140	409	731	64.1
	1986	830	562	268	32.3
	1987	3,475	2,463	1,012	29.1
	1988	4,782	2,556	2,226	46.5
	1989	14,715	8,604	6,111	41.5
	Total	24,942	14,594	10,348	41.5
3) Approved Export Manufacturing Projects	1985	1,232	394	837	67.9
	1986	774	519	256	33.1
	1987	1,923	1,369	554	28.8
	1988	18,100	10,319	7,782	43.0
	Total	22,029	12,601	9,429	42.8

Source: 1) and 2) from BOI, 3) from CENTRAL BANK OF PHILIPPINES
Remarks: "Foreign{ includes "joint venture with foreigners".

Table B.16 Financial Assistance/Loans Granted to Small and Medium Scale Enterprises (SMEs) by Major Financing Programs

	1987		1988		1989	
	NUMBER OF APPROVED APPLICATIONS	TOTAL AMOUNT (in million Pesos)	NUMBER OF APPROVED APPLICATIONS	TOTAL AMOUNT (in million Pesos)	NUMBER OF APPROVED APPLICATIONS	TOTAL AMOUNT (in million Pesos)
TOTAL	1,481	1,038.623	3,703	2,842.095	3,192	3,305.83
DTI: TST-SELA	2	0.475	110	31.293	158	93.32
DBP	535	159.403	1,476	938.480	1,338	1,434.31
CBP: IGLF	158	322.651	555	1,528.539	394	1,239.66
TLRC:					1,145	-
EIMP	57	110.512	39	68.589	-	196.00
AITTP	24	139.120	21	112.000	-	6.00
TUFP	19	9.424	9	4.350	-	-
ULFP	562	77.020	1,384	44.000	-	81.00
BSKP	-	-	-	-	-	4.00
GFSME:	114	194.443	98	89.154	-	-
Regular	-	-	-	-	88	108.16
CGGF	-	-	-	-	60	128.47
LGGF	-	-	-	-	1	2.00
PHILGUARANTEE:	-	-	-	-		
ECGP-SMI	10	25.575	11	25.690	8	12.92

Percentage Distribution of Financial Assistance/Loans Granted to Small and Medium Enterprises by Major Financing Programs

	1987		1988		1989	
	NUMBER OF APPROVED APPLICATIONS	TOTAL AMOUNT (in million Pesos)	NUMBER OF APPROVED APPLICATIONS	TOTAL AMOUNT (in million Pesos)	NUMBER OF APPROVED APPLICATIONS	TOTAL AMOUNT (in million Pesos)
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00
DTI: TST-SELA	0.14	0.05	2.97	1.10	4.95	2.82
DBP	36.12	15.35	39.86	33.02	41.92	43.39
CBP: IGLF	10.67	31.07	14.99	53.78	12.34	37.50
TLRC:					35.87	
EIMP	3.85	10.64	1.05	2.41	-	5.92
AITTP	1.62	13.39	0.57	3.94	-	0.18
TUFP	1.28	0.91	0.24	0.15	-	-
ULFP	37.95	7.42	37.38	1.55	-	2.45
BSKP	-	-	-	-	-	0.12
GFSME:	7.70	18.72	2.65	3.14	-	-
Regular	-	-	-	-	2.75	3.27
CGGF	-	-	-	-	1.88	3.88
LGGF	-	-	-	-	0.03	0.06
PHILGUARANTEE:						
ECGP-SMI	0.68	2.46	0.30	0.90	0.25	0.39

Notes:

AITTP - Agro-Industrial Technology Transfer Program
BSKP - Bagong Balikatan sa Kabuhayan Program
CBP - Central Bank of the Philippines
CGGF-CALF-GSFME Guarantee Facility
DBP - Development Bank of the Philippines
DTI - Department of Trade and Industry
ECGP-SMI - Export Credit Guarantee Program for Small and Medium Industries
EIMP - Export Industry Modernization Program
GFSME - Guarantee Fund for Small and Medium Enterprises
IGLF - Industrial Guarantee and Loan Fund
LGGF -
PHILGUARANTEE - Philippine Export and Foreign Loan Guarantee Corporation
TLRC - Technology and Livelihood Resource Center
TST-SELA - Tulong-sa-Tao- Self-employment Loan Assistance
TUFP - Technology Utilization Financing Program
ULFP - Urban Livelihood Financing Program

Source : *Bureau of Small and Medium Business Development, DTI*

Table B.17 Selected Indicators for Foreign Trade in the Philippines

	Value in 1988 Export	Value in 1988 Import	% Shares in 1988 Export	% Shares in 1988 Import	Growth Ratio ('88/'83:%) Export	Growth Ratio ('88/'83:%) Import	Difference (Exp. -Imp.) 1983	Difference (Exp. -Imp.) 1988
TOTAL(F.O.B. Values in Million U.S.Dollars)	7,074	8,158	100.0	100.0	41.3	9.0	-2,481	-1,084
02 Dairy products and birds' eggs	1	161	0.0	2.0	-63.4	25.9	-126	-161
03 Fish and fish preparations	407	35	5.7	0.4	208.8	420.3	125	371
04 Cereals and cereal preparations	8	282	0.1	3.5	-44.7	13.6	-234	-274
05 Vegetables and fruits	418	37	5.9	0.5	27.9	158.7	312	381
06 Sugar, sugar preparations and honey	83	20	1.2	0.2	-74.1	301.1	316	63
07 Coffe, tea, cocoa and spices	62	8	0.9	0.1	-14.7	-61.2	52	54
08 Animal feeds	65	166	0.9	2.0	-13.5	105.9	-5	-101
12 Tobacco and tobacco products	27	78	0.4	1.0	-24.1	33.9	-23	-52
24 Cork and wood	173	2	2.4	0.0	-24.9	335.0	230	171
26 Texitile fibers and their waste	43	156	0.6	1.9	68.8	63.0	-70	-113
27 Crude fertilizer and crude mineral	183	55	2.6	0.7	12.8	195.6	143	128
28 Metaliferous ores and scrap	383	102	5.4	1.3	-12.6	3694.4	435	280
33 Petroleum and petroleum products	131	1,025	1.9	12.6	15.7	-50.9	-1,973	-894
42 Fixed vegetable oils and fats	408	12	5.8	0.2	-21.4	-34.4	500	396
51 Organic chemicals	87	255	1.2	3.1	79.7	30.8	-146	-168
52 Inorganic chemicals	27	113	0.4	1.4	728.3	56.0	-69	-85
53 Dyeing, tanning and coloring materials	1	61	0.0	0.7	-44.6	43.2	-40	-59
54 Medicinal and pharmaceutical products	5	113	0.1	1.4	-28.1	49.2	-69	-108
56 Fertilizer, manufactured	69	108	1.0	1.3	216618.8	18.5	-91	-38
58 Artificial resin, plastics, etc.	32	230	0.4	2.8	175.6	33.3	-151	-199
59 Chemical materials and products, n.e.s.	23	112	0.3	1.4	96.8	40.3	-68	-89
63 Cork and wood manufactures	183	3	2.6	0.0	12.8	376.8	161	180
64 Papper and paper products	5	111	0.1	1.4	95.9	71.4	-62	-106
65 Textile yarn, fabrics, etc. and related prd.	73	324	1.0	4.0	64.1	77.1	-139	-251
67 Iron and steel	64	475	0.9	5.8	129.4	33.4	-328	-411
68 Nn-ferrous metal	307	124	4.3	1.5	225.0	29.7	-1	183
69 Manufactures of metals, n.e.s.	15	85	0.2	1.0	41.4	-42.2	-136	-69
71 Power generation machinery and equipment	0	70	0.0	0.9	-71.5	-55.2	-155	-70
72 Machinery for particular industries	12	316	0.2	3.9	77.7	-15.5	-368	-305
74 General industrial machinery, n.e.s.	5	211	0.1	2.6	36.1	-26.3	-283	-206
75 Office machines and data processing equip.	21	69	0.3	0.8	1664.0	27.2	-53	-49
76 Communication equipment and related products	68	107	1.0	1.3	156.3	23.2	-60	-39
77 Electrical machines, n.e.s. and parts	569	472	8.0	5.8	194.4	48.6	-124	97
78 Road vehicles	18	229	0.3	2.8	-23.8	11.6	-181	-211
79 Other transportation equipment	0	128	0.0	1.6	-55.1	60.0	-79	-128
82 Furnitures and parts thereof	184	2	2.6	0.0	119.9	80.6	82	182
84 Articles of apparel and clothing accessories	441	6	6.2	0.1	38.3	64.9	315	434
87 Precision instruments for professional use	1	53	0.0	0.6	-63.0	-18.5	-63	-52
89 Miscellaneous manufactured articles, n.e.s.	249	85	3.5	1.0	87.5	36.9	71	164
93 Special transaction not classified	2,101	1,739	29.7	21.3	62.7	61.5	214	362

Principal Exports by Major Products Group:1988

<u>1. Consumer manufactutrs</u>	<u>1,924(27.2)</u>
Garments	1,194(16.9)
Gift, toy and housewares	249(3.5)
Furniture	184(2.6)
Fashion accessories/travel goods	170(2.4)
Footwear	77(1.1)
<u>2. Industrial manufactures</u>	<u>2,252(36.1)</u>
Electronics	1,063(20.3)
Metal manufactures	455(6.4)
Chemicals	256(3.6)
Petoleum products	160(2.3)
<u>3. Food and preparations</u>	<u>1,058(15.0)</u>
Traditional	298(4.2)
Canned pineapple	83(1.2)
Desiccated coconut	78(1.1)
Sugar and molasses	74(1.1)
Copra meal/cake	62(0.9)
<u>4. Resoured-based products</u>	<u>1,260(17.8)</u>
Traditional	1,063(15.0)
Coconut oil	401(5.7)
Mineral products	343(4.8)
Forest products	256(3.6)
<u>5. Other expors</u>	<u>280(4.0)</u>

Imports by End Use:1988

1. Producer goods	7,951(93.0)
Semi-processed raw materials	4,983(61.1)
Unprocessed raw materials	1,386(17.0)
Machinery & equipment	837(10.3)
Supplies	384(4.7)
2. Consumer goods	569(7.0)
Durable	38(0.5)
Non-durable	531(6.5)

Source:NATIONAL STATISTICS OFFICE, International Trade Division

Table B.18 Type of Scientific and Technological Services Rendered by the DOST System by Agency

PC = Philippine Council	1	2	3	4	5	6	7	8	9
1) Department of Science and Technology		Π			Π	Π			Π
2) PC for Agriculture, Forestry and Natural Resource and Dev.		Π					Π	Π	Π
3) PC for Health Research and Development							Π		
4) PC for Industry and Energy Research and Development	Π	Π							
5) PC for Aquatic and Marine Research and Development		Π							
6) PC for Advanced Science and Technology R&D		Π							
7) Food and Nutrition Research Institute	Π	Π					Π		Π
8) Forest Products Research and Development	Π	Π					Π		
9) Industrial Technology Development Institute	Π	Π		Π	Π	Π	Π		
10) Metal Industry Research and Development Center	Π	Π					Π		Π
11) Philippine Nuclear Research Institute	Π	Π	Π	Π	Π		Π		
12) Philippine Textile Research Institute	Π								
13) Advanced Science and Technology Institute									
14) Phil. Atmospheric Geophysical & Astronomical Services Administration		Π			Π		Π		
15) Philippine Institute of Volcanology & Seismology				Π	Π				
16) Science Education Institute									Π
17) Science and Technology Information Institute							Π	Π	
18) Technology Application & Promotion Institute		Π	Π				Π		Π
19) Philippine Science School							Π		
20) National Academy of Science and Technology							Π		
21) Philippine National Science Society							Π	Π	Π

Legend:

1. Testing, standardization, meteorology and Quality control;
2. Regular routine work on the counseling of clients designed to help them use scientific, technological, and m management information, e.g., technical assistance and training;
3. Activities relating patents and licenses;
4. Prospecting and related activities designed to locate and identify oil and mineral resources;
5. Topographical, geological and hydrological surveying; meteorological; seismological observation; surveying
   of soils and of plants, fish, and wildlife resources; routine soil, atmosphere, and water testing; routine checking and monitoring of radio-activity levels;
6. S&T services provided by museums of science and /or technology, botanical and zoological gardens and other S&T collections (anthropological, archeological, geological, etc.);
7. S&T services provided by libraries, archives, information and documentation centers, reference department, scientific congress, data banks, and information processing department;
8. Systematic work on the translation and editing of S&T books and periodicals;
9. Gathering information on human, social, economic and cultural phenomena, using for the purpose of compiling routine statistics, e.g., population censuses, market studies, social and cultural statistics.

Source: Department of Science and Technology (from Philippine Year Book)

Table B.19 Average Effective Tariff Protection (in Percent)

	1980	1986	1988
All Sectors	50	23	23
Agriculture	13	1	1
Corn	97	21	21
Coconut	8	0	0
Banana	6	1	1
Other Fruits and Nut	1	0	0
Vegetables	92	31	31
Tobacco	125	28	28
Fiber Crops	15	3	3
Coffee and Cacao	0	0	0
Other Commercial Crops, N.E.C	79	15	15
Fishing	15	4	5
Logging & Other Forestry Activities	20	21	21
Mining	0	2	2
Manufacturing	75	34	33
Food	63	31	30
Beverage	43	21	21
Tobacco	15	53	53
Textiles	88	44	44
Garments	24	0	0
Foot Wear	8	0	0
Wood & Products	16	19	19
Paper, Rubber, Leather & Plastic	127	81	74
Chemical & Products	78	49	49
Non-Metallic Mineral Products	117	34	34
Basic Metals	137	55	55
Machinery	77	33	33
Transport	209	41	41
Misc.. Manufacturing	76	37	37

Source: Tariff Commission, 02/12/90 (computed based on 1983 I-O Table)

Table B.20 Selected Socioeconomic Targets of the Medium-Term Philippine Development Plan (at Constant 1972 Price)

	1987	1992	Increase rates per annum
Gross National Product(GNP:in billion pesos)	95.3	132.7	6.80%
Per Capita GNP(in pesos)	1,661	2,064	4.40%
Gross Domestic Product(GRDP:in billion pesos)	96.9	135.3	6.90%
Population(in thousand persons)	57,400	64,300	2.32%
Labor Force(in thousand persons)	22,205	26,047	3.24%
a) Employment	19,857	24,778	4 .53%
b) Unemployment	2,348	1,269	Δ11.58%
c) Unemployment rates	10.6%	4.9%	Δ14.30%

Table B.21 GDP by Industrial Origin (in Billion pesos, at Constant 1972 price)

	Estimate 1986	1987	1988	Targets 1989	1990	1991	1992	Annual average 1987-92
Gross Domestic Product	90.9	96.9	103.8	110.8	118.7	126.9	135.3	115.4
Growth rate (%)	0.4	6.7	7.1	6.7	7.1	6.9	6.7	6.9
Agriculture, Fishery and Forestry	26.8	27.9	29.1	30.6	32.2	34.0	35.9	31.6
Growth rate (%)	3.0	4.0	4.5	5.0	5.5	5.5	5.5	5.0
Industry	28.4	31.0	33.7	36.5	39.5	42.9	47.1	38.4
Growth rate (%)	−1.6	9.1	8.9	8.2	8.3	8.5	9.7	8.8
Manufacturing	21.7	23.2	24.8	26.7	28.8	31.1	33.7	28.1
Growth rate (%)	0.3	7.0	7.0	7.5	7.8	8.0	8.4	7.6
Mining and quarrying	1.8	1.9	1.9	2.0	2.1	2.2	2.3	2.1
Growth rate (%)	3.0	3.0	3.5	4.0	4.6	4.9	5.0	4.2
Construction	3.6	4.5	5.5	6.2	6.9	7.7	9.0	6.6
Growth rate (%)	−15.1	25.5	20.9	12.7	11.7	12.0	16.1	16.5
Electricity, gas and water	1.3	1.4	1.5	1.6	1.8	1.9	2.1	1.7
Growth rate (%)	4.0	6.5	8.0	8.0	9.0	9.0	10.0	8.4
Services	35.7	38.1	41.0	43.8	46.9	50.0	52.2	45.3
Growth rate (%)	0.3	6.8	7.6	6.7	7.2	6.5	4.9	6.6

Table B.22 Plan Targets vs.Actual Performance for GDP/GVA (Gross Value Added) in Industrial Sector (in Billion pesos, at Constant 1972 Price)

	1987	1988	1989	Actual vs. Plan targets 1987	1988	1989
Industry Totall	30,987	33,736	36,492	98.7%	95.6%	97.4%
(Actual performance)	(30,590)	(32,250)	(35,533)			
Manufacturing	23,210	24,835	26,698	99.8%	101.7%	100.7%
(Actual performance)	(23,168)	(25,251)	(26,886)			
Mining and quarrying	1,872	1,938	2,016	82.6%	83.3%	77.5%
(Actual performance)	(1,547)	(1,615)	(1,563)			
Construction	4,528	5,476	6,172	87.6%	79.3%	80.1%
(Actual performance)	(3,967)	(4,344)	(4,947)			
Electricity,gas and waterr	1,377	1,487	1,606			
(Actual performance)	(1,908)	(1,995)	(2,137)	138.6%	134.2%	133.1%

Source:Target MTPDP
Actual performance Economic and Social statistics Office, National Statistical Coordination Board

Table B.23 Selected Socioeconomic Targets of the Medium Term Regional Development Plan of Region IV (at Constant 1972 Price)

	1987	1992	Increase rates per annum	(Nation)
Gross Regional Domestic Product (GRDP:in million pesos)	13,570	18,801	6.74%	(6.90%)
Agriculture,Fishery and Forestry	32.51%	32.82%		
Industry	33.88%	34.41%		
Tertiary/Service	33.61%	32.77%		
Per Capita GRDP(in pesos)	1,812	2,206	3.62%	
Population(in thousand persons)	7,488	8,522	2.64%	(2.32%)
Employment(in thousand persons)	2,396	3,305	6.32%	(4.53%)

Table B.24 Accomplishments on Small and Medium Industry Technology Transfer Development Program by DTI Region IV (June 1989-July 1990)

	No. of Activities	No. of Beneficiaries Served	
		Land owners	Farmer beneficiaries
•Training/Seminars Total	379	337	7,181
•Skills and Entrepreneurial	336	234	6,509
•Technology	9	32	202
•Investment Opportunities/Fora	14	59	287
•Study Missions	20	12	183

•Technical Assistance		No. of Activities
Studies	Environmental Scanning	44
	Municipal Profile	117
	Pre Investment Studies	14
	Feasibility Studies	9
	Commodity Flow Chart	7
	(Sub-total)	191
Marketing Program	Trade Fairs/Centers/Exhibits	17
	Consultancy Services (man-mouth)	95
	Sub-total	112

•Infrastructure Support		No. of Activities
Agro-Industrial prototype equipment/:	Proposals prepared & evaluated	36
common service facilities	Proposals approved	3
	Proposals/projects established	2

Source:DTI-Region IV

Table B.25 Distribution of Industrial Investments by Japanese Companies (including joint venture:from the 1960s to 1989)

【Real Number of corporation】

	World Total	Asian total	PHI	INDO	THA	MAY	SIN	HKG	TWN	CHINA	KOR
Total	11484	4299	152	232	639	434	658	751	686	228	395
Agriculture, Forestry and Fishery	128	46	6	8	10	7	0	0	1	4	3
Mining	137	16	5	3	1	2	0	1	0	1	2
Construction	412	217	12	22	44	43	34	15	20	14	4
Manufacturing	4220	2339	83	157	367	258	245	149	520	131	340
Food products	269	134	9	5	41	5	15	12	14	16	16
Textile and apparel	313	203	8	19	38	13	5	28	36	19	30
Woood products, furniture and fixtures	62	35	1	5	4	11	2	1	5	3	3
Pulp and paper products	40	14	0	1	3	1	4	2	1	1	1
Chemicals.	572	339	15	30	42	43	43	9	68	20	60
Petroleum products	105	53	0	1	14	5	8	5	8	4	8
Rubber and leather produts	88	54	3	4	7	10	5	1	14	1	8
Ceramics, stone and clay products	128	80	3	8	12	16	4	2	13	2	11
Iron and steel products	146	58	1	9	14	12	5	1	5	4	2
Non-ferrous metals and products	173	104	5	5	22	16	17	8	18	4	8
Fabricated metal products	173	119	3	5	13	14	20	4	36	8	16
General machinery	414	195	6	14	29	10	24	5	54	6	39
Electrical machinery, equipment, etc.	896	505	14	14	59	67	66	26	143	25	76
Transportation equipment	89	55	5	10	10	8	3	0	6	1	2
Automobile and parts	356	172	8	15	37	12	2	0	49	2	29
Precision instrument and machinery	138	75	0	1	5	7	7	17	13	8	15
Other manufacturing	258	144	2	11	17	8	15	28	37	7	16
Commerce	3670	924	22	3	120	66	214	357	109	15	13
Financing and insurance	1152	294	8	26	23	22	64	120	3	13	9
Real estate	291	54	0	2	14	3	8	13	6	8	0
Warehousing/transport	525	159	4	4	31	10	46	52	8	2	2
Service and others	949	250	12	7	29	23	47	34	19	40	22

【Percentage to Total】

	World Total	Asian total	PHI	INDO	THA	MAY	SIN	HKG	TWN	CHINA	KOR
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, Forestry and Fishery	1.1	1.1	3.9	3.4	1.6	1.6	0.0	0.0	0.1	1.8	0.8
Mining	1.2	0.4	3.3	1.3	0.2	0.5	0.0	0.1	0.0	0.4	0.5
Construction	3.6	5.0	7.9	9.5	6.9	9.9	5.2	2.0	2.9	6.1	1.0
Manufacturing	36.7	54.4	54.6	67.7	57.4	59.4	37.2	19.8	75.8	57.5	86.1
Food products	2.3	3.1	5.9	2.2	6.4	1.2	2.3	1.6	2.0	7.0	4.1
Textile and apparel	2.7	4.7	5.3	8.2	5.9	3.0	0.8	3.7	5.2	8.3	7.6
Woood products, furniture and fixtures	0.5	0.8	0.7	2.2	0.6	2.5	0.3	0.1	0.7	1.3	0.8
Pulp and paper products	0.3	0.3	0.0	0.4	0.5	0.2	0.6	0.3	0.1	0.4	0.3
Chemicals	5.0	7.9	9.9	12.9	6.6	9.9	6.5	1.2	9.9	8.8	15.2
Petroleum products	0.9	1.2	0.0	0.4	2.2	1.2	1.2	0.7	1.2	1.8	2.0
Rubber and leather produts	0.8	1.3	2.0	1.7	1.1	2.3	0.8	0.1	2.0	0.4	2.0
Ceramics, stone and clay products	1.1	1.9	2.0	3.4	1.9	3.7	0.6	0.3	1.9	0.9	2.8
Iron and steel products	1.3	1.3	0.7	3.9	2.2	2.8	0.8	0.1	0.7	1.8	0.5
Non-ferrous metals and products	1.5	2.4	3.3	2.2	3.4	3.7	2.6	1.1	2.6	1.8	2.0
Fabricated metal products	1.5	2.8	2.0	2.2	2.0	3.2	3.0	0.5	5.2	3.5	4.1
General machinery	3.6	4.5	3.9	6.0	4.5	2.3	3.6	0.7	7.9	2.6	9.9
Electrical machinery, equipment, etc.	7.8	11.7	9.2	6.0	9.2	15.4	10.0	3.5	20.8	11.0	19.2
Transportation equipment	0.8	1.3	3.3	4.3	1.6	1.8	0.5	0.0	0.9	0.4	0.5
Automobile and parts	3.1	4.0	5.3	6.5	5.8	2.8	0.3	0.0	7.1	0.9	7.3
Precision instrument and machinery	1.2	1.7	0.0	0.4	0.8	1.6	1.1	2.3	1.9	3.5	3.8
Other manufacturing	2.2	3.3	1.3	4.7	2.7	1.8	2.3	3.7	5.4	3.1	4.1
Commerce	32.0	21.5	14.5	1.3	18.8	15.2	32.5	47.5	15.9	6.6	3.3
Financing and insurance	10.0	6.8	5.3	11.2	3.6	5.1	9.7	16.0	0.4	5.7	2.3
Real estate	2.5	1.3	0.0	0.9	2.2	0.7	1.2	1.7	0.9	3.5	0.0
Warehousing/transport	4.6	3.7	2.6	1.7	4.9	2.3	7.0	6.9	1.2	0.9	0.5
Service and othes	8.3	5.8	7.9	3.0	4.5	5.3	7.1	4.5	2.8	17.5	5.6

Source:"Foreign Investment Year Book 1990"(TOYO KEIZAI SHINPOSHA, Japan)
Remarks:PHI Philippines INDO Indonesia THA Thailand MAY Malaysia SIN Singapore HKG Hong-Kong
TWN Taiwan KOR Korea

Table B.26 Factors for Industrial Investment by Japanese Companies

【Real Number】

		World Total	Asian total	PHI	INDO	THA	MAY	SIN	HKG	TWN	CHINA	KOR
Investment objectives	Total(Number of corporation)	11484	4299	152	232	639	434	658	751	686	228	395
	Raw materials and resouces	471	152	18	17	20	22	15	13	19	14	7
	Local processing of resources	248	78	4	8	11	11	14	4	8	9	4
	Utilizing manpower and costdown	1190	995	41	63	140	97	107	81	267	52	132
	Incentives for investment	975	652	28	89	108	98	71	13	99	23	88
	Local and third country's market	4730	1837	58	108	245	188	337	336	308	61	146
	Collecting information	1621	448	9	12	43	36	106	169	40	9	17
	Changing export channel	303	96	3	7	9	12	18	9	23	2	11
	Royalty	496	252	3	21	42	33	31	32	41	11	27
Main destination of products	Total(Number of answer)	4207	1980	60	108	241	196	326	284	430	77	221
	Export for Japan	739	414	12	20	45	28	54	59	98	31	61
	Local market	2604	1086	39	69	142	116	168	153	215	35	121
	Export for third country	864	480	9	19	54	52	104	72	116	11	39
Main origin of raw-materials	Total(Number of answer)	3375	1746	49	114	231	193	279	208	376	62	187
	Import fom Japan	1396	698	19	38	86	67	122	92	160	24	74
	Local market	1536	787	24	56	108	86	108	72	178	33	97
	Import from third country	443	261	6	20	37	40	49	44	38	5	16

【Percentage to Total】

		World Total	Asian total	PHI	INDO	THA	MAY	SIN	HKG	TWN	CHINA	KOR
Investment objectives	Total(Number of corporation)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Raw materials and resouces	4.1	3.5	11.8	7.3	3.1	5.1	2.3	1.7	2.8	6.1	1.8
	Local processing of resources	2.2	1.8	2.6	3.4	1.7	2.5	2.1	0.5	1.2	3.9	1.0
	Utilizing manpower and costdown	10.4	23.1	27.0	27.2	21.9	22.4	16.3	10.8	38.9	22.8	33.4
	Incentives for investment	8.5	15.2	18.4	38.4	16.9	22.6	10.8	1.7	14.4	10.1	22.3
	Local and third country's market	41.2	42.7	38.2	46.6	38.3	43.3	51.2	44.7	44.9	26.8	37.0
	Collecting information	14.1	10.4	5.9	5.2	6.7	8.3	16.1	22.5	5.8	3.9	4.3
	Changing export channel	2.6	2.2	2.0	3.0	1.4	2.8	2.7	1.2	3.4	0.9	2.8
	Royalty	4.3	5.9	2.0	9.1	6.6	7.6	4.7	4.3	6.0	4.8	6.8
Main destination of products	Total(Number of answer)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Export for Japan	17.6	20.9	20.0	18.5	18.7	14.3	16.6	20.8	22.8	40.3	27.6
	Local market	61.9	54.8	65.0	63.9	58.9	59.2	51.5	53.9	50.2	45.5	54.8
	Export for third country	20.5	24.2	15.0	17.6	22.4	26.5	31.9	25.4	27.0	14.3	17.6
Main origin of raw-materials	Total(Number of answer)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Import fom Japan	41.4	40.0	38.8	33.3	37.2	34.7	43.7	44.2	42.6	38.7	39.6
	Local market	45.5	45.1	49.0	49.1	46.8	44.6	38.7	34.6	47.3	53.2	51.9
	Import from third country	13.1	14.9	12.2	17.5	16.0	20.7	17.6	21.2	10.1	8.1	8.6

Source:"Foreign Investment Year Book 1990"(TOYO KEIZAI SHINPOSHA, Japan)
Remarks:PHI Philippines INDO Indonesia THA Thailand MAY Malaysia SIN Singapore HKG Hong-Kong
TWN Taiwan KOR Korea

Table B.27 Processing Rates of Agricultural and Fishing Products in the Philippines (1988; in Metric Tons)

	A Domestic Supply	B : for Process			Processing Rates			
		Feed	Food	Non-Food	Feed	Food	Non-Food	Total
I. CEREALS & CEREAL PRODUCTS								
Palay	8,971		8,717			97.2		97.2
Rice	5,881	176	6		3.0	0.1		3.1
Corn(shelled)	4,390	1,328	2,316	443	30.3	52.8	10.1	93.1
Corn grits(milled)	1,575	787	157		50.0	10.0		60.0
Wheat grain	1,089		1,089			100.0		100.0
Wheat flour	954		906			95.0		95.0
Oats	3							
Other cereals and cereal products	1,191		360			30.2		30.2
II. STARCHY ROOTS & TUBERS								
Sweet potato	695	35			5.0			5.0
Cassava	1,845	187		1,306	10.1		70.8	80.9
Cassava starch and flour	261			131			50.0	50.0
Irish potato	62							
III. SUGAR AND SYRUPS								
Sugarcane	18,917		18,812			99.4		99.4
Panocha and muscovado	84		0					
Centrifugal	1,133		1,020			90.0		90.0
Refined	671		335			50.0		50.0
Malasses	422	42		337	10.0		80.0	90.0
IV. PULSES AND NUTS								
Mongo	46	0			1.0			1.0
Dried beans	11							
Soybeans	5	0	5		1.0	97.0		98.0
Peanuts	53		3			6.0		6.0
Cashew and Pili	7		1			10.0		10.0
Coconut(nuts term)	12,400	87	624	11,234	0.7	5.0	90.6	96.3
V. VEGETABLES								
Fresh	2,219		69			3.1		3.1
Leafy and yellow veg.	874							
Leguminous pods	213							
Tomatos	290		43			15.0		15.0
Other vegetable prep.	842		25			3.0		3.0
VI. FRUITS								
Fresh	4,876		798			16.4		16.4
Bananas	2,201		770			35.0		35.0
Citrus	151		3			2.0		2.0
Other Vit.C rich fruits	716		7			1.0		1.0
Other fresh fruits	1,809		18			1.0		1.0
VII. MEAT AND PRODUCTS								
Fresh and frozen	1,262		189			15.0		15.0
Beef	90		9			10.0		10.0
Carabao meat	45		0			0.1		0.1
Pork	724		145			20.0		20.0
Goat meat(chevon)	37							
Sheep meat(mutton)	0							
Poultry	178		35			19.6		19.6
Chicken	174		35			20.0		20.0
Duck	4							
Others	124							
Organ meat	67							
Edible offals	57							
Other meat	64		1			1.0		1.0
VIII. FISH AND OTHER MARINE PRODUCTS								
Fresh and frozen	2,316	17	694		0.7	30.0		30.7
Fish	1,755	17	564		1.0	32.1		33.1
Crustaceans	78							
Mollusks	222							
Other sea foods	261		130			50.0		50.0

Source: Food Balance Sheet of the Philippines (Department of Agriculture)

Table B.28 Manufacturing Industries Concentrated in Metro Manila (1988, Employment and % Shares to the Philippines) - 1/3

Rank	Industries	Employment	%
1	3141 Cigarettes	10965	100.0
2	3149 Other tobacco manufactures	15	100.0
3	3216 Artificial leather products	179	100.0
4	3219 Other textiles	65	100.0
5	3851 Measuring and surveying instruments	350	100.0
6	3711 Steel working furnaces	1256	99.8
7	3523 Soaps, detergents, paints, etc.	6904	98.0
8	3860 Repair of metal furniture and fixture	1082	97.1
9	3422 Publishing industry	2340	96.4
10	3833 Household electric appliances	2630	96.3
11	3142 Cigars	402	96.2
12	3852 Photographic and optical instrument	215	95.6
13	3815 Fabricated wire products	2810	94.0
14	3323 Box beds and mattresses	515	93.8
15	3839 Other electrical machinery, etc.	1583	93.8
16	3414 Articles of paper board	91	92.9
17	3825 General industry machinery, etc	2044	91.0
18	3560 Miscellaneous plastic products	15542	90.0
19	3816 Non-electric lighting fixtures,etc	556	89.1
20	3819 Miscellaneous fabricated products	1665	89.0
21	3421 Newspaper industry	4456	87.2
22	3127 Coffee roasting and processing	3236	87.2
23	3413 Articles of paper	2075	86.2
24	3522 Drugs and medicines	11106	86.0
25	3824 Special industry machinery	434	85.8
26	3907 Pens, pencils and stationery	530	85.8
27	3904 Medical instruments and apparatus	357	85.2
28	3429 Other printing, publishing, etc	722	84.8
29	3843 Assembly of motor vehicle	3133	81.1
30	3620 Glass and glass products	4842	80.8
31	3521 Paints, lacquers, etc	2236	80.5
32	3823 Metal and wood working machinery	536	80.1
33	3906 Toys and dolls	3165	79.7
34	3832 Radio, TV, communication equipment	30328	79.3
35	3212 Knitting mills	12841	77.9

Table B.29 Manufacturing Industries Concentrated in Metro Manila (1988, Employment and % Shares to the Philippines) - 2/3

Rank	Industries	Employment	%
36	3713 Iron and steel foundries	1291	77.6
37	3214 Carpets and rugs	1694	77.1
38	3813 Metal containers	5159	76.2
39	3514 Pesticides, insecticides, etc.	972	75.7
40	3845 Motor vehicle parts and accessories	2625	75.5
41	3724 Non-ferrous foundries	427	75.3
42	3325 Window, door screens, etc.	206	73.6
43	3831 Electrical machinery and apparatus	1762	73.4
44	3552 Rubber footwear	12535	73.1
45	3113 Dairy products	4229	73.0
46	3222 Ready-made clothing	90170	72.8
47	3847 Aircraft and parts	347	72.6
48	3691 Structural clay products	1986	70.9
49	3229 Other wearing apparel	14667	70.2
50	3423 Printing	13041	68.6
51	3324 Partitions, lockers, etc.	327	68.3
52	3217 Fiber batting, etc.	283	67.7
53	3834 Primary cell and batteries	404	67.1
54	3821 Engines and turbines	60	66.7
55	3540 Other petroleum and coal products	227	66.2
56	3814 Metal stamping, coating mills, etc.	3355	65.3
57	3551 Tires and inner tubes	3863	65.2
58	3529 Other chemical and allied products	4228	65.1
59	3712 Steel works and rolling mills	10016	64.7
60	3559 Miscellaneous rubber products	2792	62.6
61	3412 Paper containers	3849	62.3
62	3215 Cordage, rope and twine	4370	61.8
63	3232 Leather products & its substitutes	2576	61.0
64	3829 Other machinery and machine parts	11523	59.6
65	3849 Other transportation equipment	46	59.0
66	3211 Textile spinning, finishing, etc.	42687	56.9
67	3124 Confectionery products	3661	55.0
68	3835 Electric accumulators	466	55.0
69	3411 Pulp, paper and paperboard	3954	54.5
70	3241 Leather shoes	7934	54.1

Table B.30 Manufacturing Industries Concentrated in Metro Manila (1988, Employment and % Shares to the Philippines) - 3/3

Rank	Industries	Employment	%
71	3129 Miscellaneous food products	4242	53.9
72	3903 Sporting and athletic goods	640	53.6
73	3513 Synthetic resins, plastic materials	1227	52.9
74	3836 Electric wires and wiring devices	2569	51.9
75	3131 Distilling/rectifying spirits	2744	51.6
76	3846 Motorcycles and bicycles	591	50.6
77	3511 Basic industrial chemicals	2222	49.7
78	3111 Live-stock products	4022	49.7
79	3909 Other manufacturing industries	7452	48.6
80	3610 Pottery, china and earthenware	2825	46.2

Table B.31 Estimated Value Added & Employment in CALABARZON in 1988

	I Value Added in mill. pesos	II Employment in persons	III Productivity (I / II)	% Shares I V A	% Shares II Emp.
Food Manufacturing	9,860	86,830	113.6	22.9	24.1
Beverage Manufacturing	1,487	4,880	340.7	3.4	1.4
Textiles	3,671	68,420	53.7	8.5	19.0
Footwear,Wearing Apparel	2,240	84,550	26.5	5.2	23.5
Wood and Cork Products	121	6,320	19.2	0.3	1.8
Furniture and Fixtures	28	1,430	19.9	0.1	0.4
Paper and Paper Products	541	8,740	61.9	1.3	2.4
Publishing and Printing	44	1,980	22.1	0.1	0.6
Leather and Leather Products	57	2,480	22.8	0.1	0.7
Rubber Products	42	1,840	22.9	0.1	0.5
Chemicals & Chemical Products	1,829	11,210	163.1	4.2	3.1
Petroleum & Coal Products	18,128	3,620	5,007.8	42.0	1.0
Non-Metallic Mineral Products	731	18,390	39.7	1.7	5.1
Basic Metal Industries	325	6,850	47.5	0.8	1.9
Metal Industries	1,090	9,730	112.1	2.5	2.7
Machinery except Electrical	188	4,820	39.0	0.4	1.3
Electrical Machinery and Equipment	1,353	18,030	75.0	3.1	5.0
Transportation Equipment	435	8,280	52.6	1.0	2.3
Other Manufacturing Industries	963	11,600	83.0	2.2	3.2
ALL INDUSTRIES	43,133	360,000	119.8	100.0	100.0

Remark: Productivity (Unit: thousand pesos/person•year)

Table B.32 Projected Value Added in CALABARZON in 2000

	Value Added (in million pesos) I Tenta-tive	Value Added (in million pesos) II: 20% Spill Over	Value Added (in million pesos) III Final Outputs	Growth Rates I Ten-tative	Growth Rates III Final	% Shares in 1988	% Shares in 2000 Final
Food Manufacturing	17,707	1,753	19,460	5.0	5.8	22.9	17.2
Beverage Manufacturing	2,670	127	2,797	5.0	5.4	3.4	2.5
Textiles	9,244	1,794	11,038	8.0	9.6	8.5	9.7
Footwear,Wearing Apparel	5,641	2,802	8,443	8.0	11.7	5.2	7.4
Wood and Cork Products	423	318	741	11.0	16.3	0.3	0.7
Furniture and Fixtures	109	114	223	12.0	18.9	0.1	0.2
Paper and Paper Products	1,089	82	1,171	6.0	6.6	1.3	1.0
Publishing and Printing	111	664	775	8.0	27.0	0.1	0.7
Leather and Leather Products	144	54	198	8.0	10.9	0.1	0.2
Rubber Products	85	170	255	6.0	16.2	0.1	0.2
Chemicals & Chemical Products	5,740	3,352	9,092	10.0	14.3	4.2	8.0
Petroleum & Coal Products	32,555	19	32,574	5.0	5.0	42.0	28.7
Non-Metallic Mineral Products	1,646	299	1,945	7.0	8.5	1.7	1.7
Basic Metal Industries	818	464	1,282	8.0	12.1	0.8	1.1
Metal Industries	2,745	754	3,499	8.0	10.2	2.5	3.1
Machinery except Electrical	529	578	1,107	9.0	15.9	0.4	1.0
Electrical Machinery and Equipment	7,239	6,059	13,298	15.0	21.0	3.1	11.7
Transportation Equipment	2,327	557	2,884	15.0	17.1	1.0	2.5
Other Manufacturing Industries	2,169	510	2,679	7.0	8.9	2.2	2.4
ALL INDUSTRIES	92,991	20,470	113,461	6.6	8.4	100.0	100.0

Table B.33 Projected Employment in CALABARZON in 2000

	Incremental Employment			Total	% Shares	
	I Tenta-tive	II: 20% Spill Over	III Final Outputs	Employment (incremental+ 1988 existing)	in 1988	in 2000 Total
Food Manufacturing	22,525	8,238	30,763	117,593	24.1	14.8
Beverage Manufacturing	1,266	296	1,562	6,442	1.4	0.8
Textiles	52,350	20,203	72,553	140,973	19.0	17.8
Footwear,Wearing Apparel	64,735	38,174	102,909	187,459	23.5	23.6
Wood and Cork Products	9,124	3,597	12,721	19,041	1.8	2.4
Furniture and Fixtures	2,430	2,550	4,980	6,410	0.4	0.8
Paper and Paper Products	3,601	685	4,286	13,026	2.4	1.6
Publishing and Printing	1,524	6,109	7,633	9,613	0.6	1.2
Leather and Leather Products	1,938	1,038	2,976	5,456	0.7	0.7
Rubber Products	767	1,393	2,160	4,000	0.5	0.5
Chemicals & Chemical Products	13,471	9,531	23,002	34,212	3.1	4.3
Petroleum & Coal Products	940	48	988	4,608	1.0	0.6
Non-Metallic Mineral Products	10,671	1,346	12,017	30,407	5.1	3.8
Basic Metal Industries	5,244	1,970	7,214	14,064	1.9	1.8
Metal Industries	7,453	4,718	12,171	21,901	2.7	2.8
Machinery except Electrical	4,694	8,084	12,778	17,598	1.3	2.2
Electrical Machinery and Equipment	49,673	37,610	87,283	105,313	5.0	13.3
Transportation Equipment	22,760	2,209	24,969	33,249	2.3	4.2
Other Manufacturing Industries	6,729	4,311	11,040	22,640	3.2	2.9
ALL INDUSTRIES	281,895	152,110	434,005	794,005	100.0	100.0

Table B.34 Projected Incremental Employment by Province (1988-2000)

	Total	Cavite	Laguna	Batangas	Rizal	Quezon
Food Manufacturing	30,763	4,835	10,182	6,764	4,385	4,597
Beverage Manufacturing	1,562	215	758	309	183	96
Textiles	72,553	13,742	23,366	16,135	14,184	5,126
Footwear,Wearing Apparel	102,909	20,493	30,225	24,986	19,818	7,387
Wood and Cork Products	12,721	2,185	3,637	2,364	2,592	1,943
Furniture and Fixtures	4,980	1,172	1,199	999	1,110	500
Paper and Paper Products	4,286	1,215	1,608	651	594	218
Publishing and Printing	7,633	834	1,721	1,202	3,391	484
Leather and Leather Products	2,976	913	547	550	793	173
Rubber Products	2,160	750	477	392	410	132
Chemicals & Chemical Products	23,002	4,246	7,444	5,738	3,474	2,100
Petroleum & Coal Products	988	57	105	506	287	33
Non-Metallic Mineral Products	12,017	2,410	3,249	2,908	2,304	1,416
Basic Metal Industries	7,214	1,761	1,965	1,398	1,605	485
Metal Industries	12,171	2,341	3,984	3,156	1,851	839
Machinery except Electrical	12,778	2,902	3,275	2,861	2,923	816
Electrical Machinery and Equipment	87,283	13,068	34,197	15,659	19,446	4,913
Transportation Equipment	24,969	4,977	7,716	8,164	2,673	1,440
Other Manufacturing Industries	11,040	2,469	2,916	2,407	2,338	909
ALL INDUSTRIES	434,005	80,585	138,571	97,149	84,091	33,607

Table B.35 **Projected Incremental Land Demand by Province (1988-2000)**

	Total	Cavite	Laguna	Batangas	Rizal	Quezon
Food Manufacturing	384.5	60.4	127.3	84.5	54.8	57.5
Beverage Manufacturing	15.7	2.2	7.6	3.1	1.8	1.0
Textiles	725.4	137.4	233.6	161.3	141.8	51.3
Footwear,Wearing Apparel	514.5	102.5	151.1	124.9	99.1	36.9
Wood and Cork Products	127.1	21.8	36.4	23.6	25.9	19.4
Furniture and Fixtures	49.8	11.7	12.0	10.0	11.1	5.0
Paper and Paper Products	71.3	20.2	26.8	10.8	9.9	3.6
Publishing and Printing	25.4	2.8	5.7	4.0	11.3	1.6
Leather and Leather Products	16.5	5.1	3.0	3.0	4.4	1.0
Rubber Products	21.6	7.5	4.8	3.9	4.1	1.3
Chemicals & Chemical Products	575.2	106.2	186.1	143.5	86.9	52.5
Petroleum & Coal Products	12.3	0.7	1.3	6.3	3.6	0.4
Non-Metallic Mineral Products	300.3	60.2	81.2	72.7	50.8	35.4
Basic Metal Industries	120.1	29.3	32.7	23.3	26.7	8.1
Metal Industries	173.9	33.5	56.9	45.1	26.4	12.0
Machinery except Electrical	213.0	48.4	54.6	47.7	48.7	13.6
Electrical Machinery and Equipment	581.9	87.1	228.0	104.4	129.6	32.8
Transportation Equipment	312.0	62.2	96.4	102.0	33.4	18.0
Other Manufacturing Industries	55.1	12.3	14.6	12.0	11.7	4.5
ALL INDUSTRIES	4296.2	811.5	1360.1	986.1	782.0	355.9

Remark: This land demand is overestimated. Actual demand to be occurred may be 50% to 60% of the projected on the total base, because demand by small establishments.such as household/livelihood type is counted.
Details may not add up to totals due to rounding.

Figures

Figure B.1 Regional Distribution of Manufacturing Employment (Industrial Centers and Main Industries in 1988)

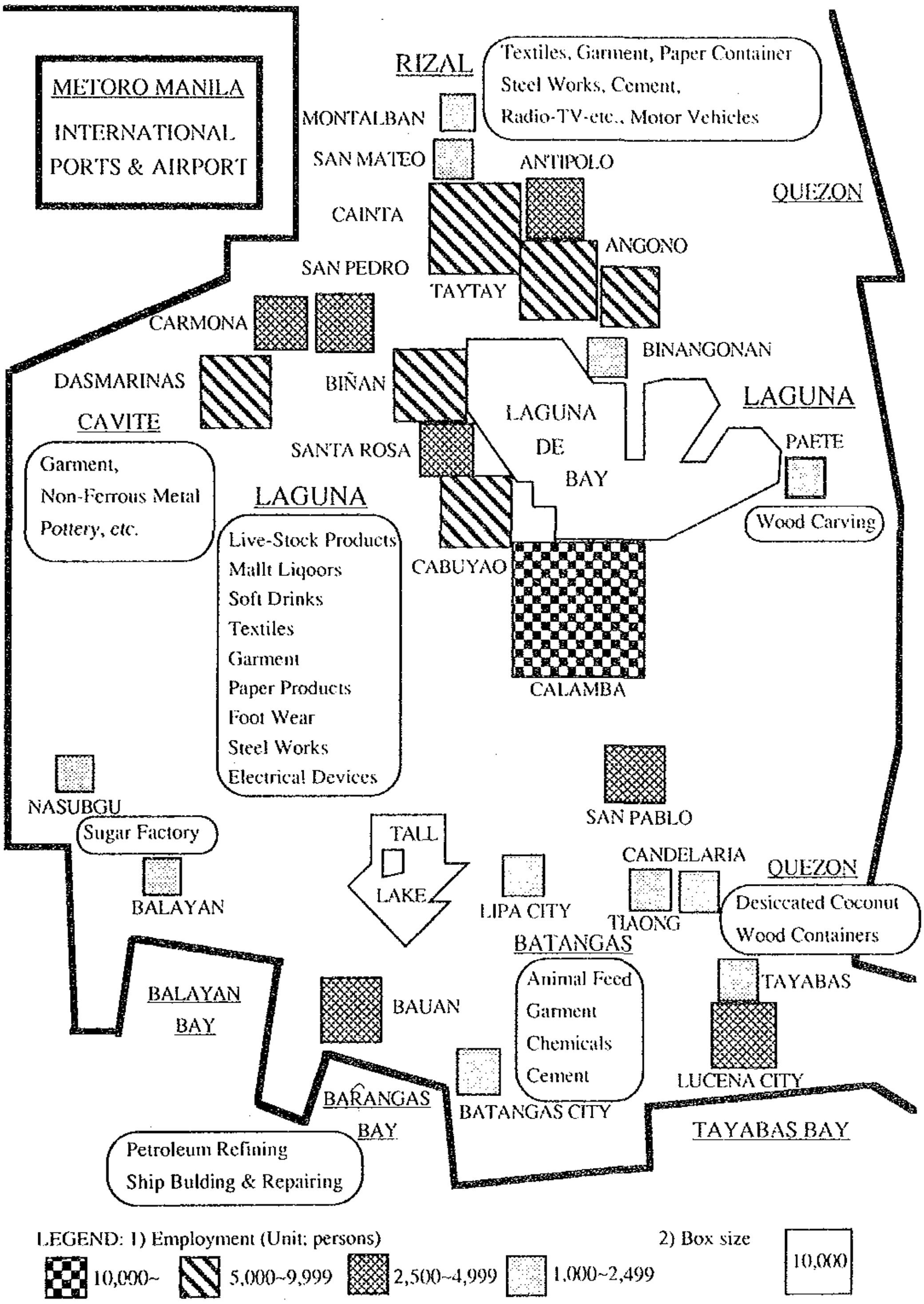


Figure B.2 Trends of BOI Approved Investments in the Philippines (New and Expansion Projects)

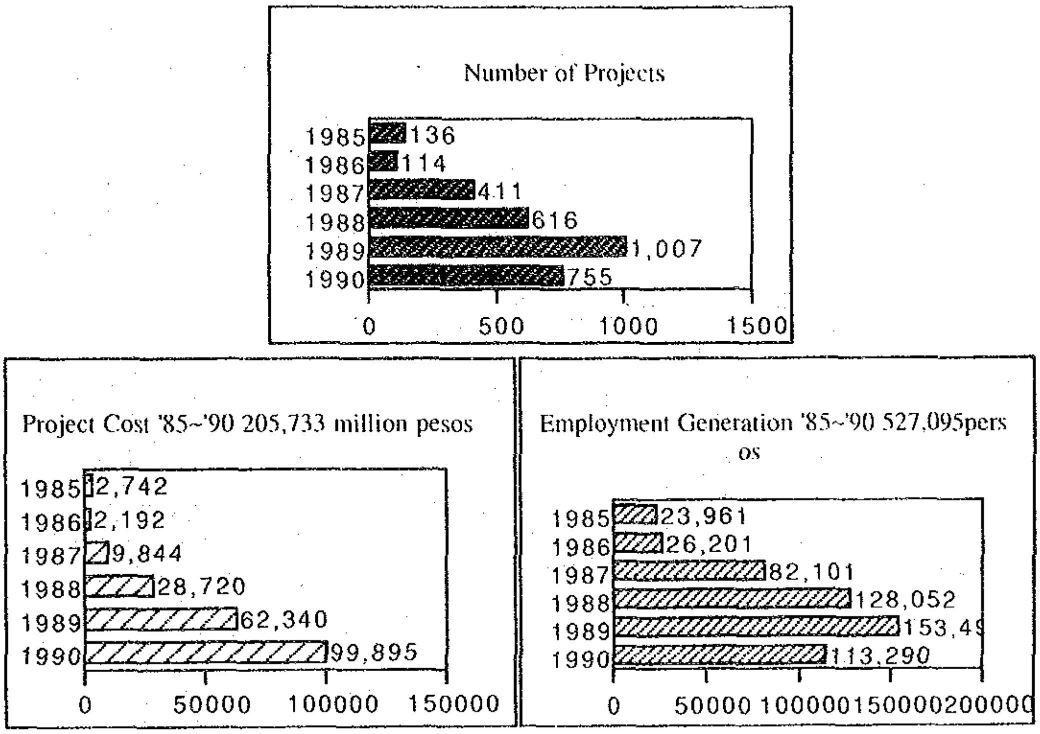


Figure B.3 Manufacturing Investments by CALABARZON's Province (1985-1990; New and Expansion Projects Approved by the BOI)

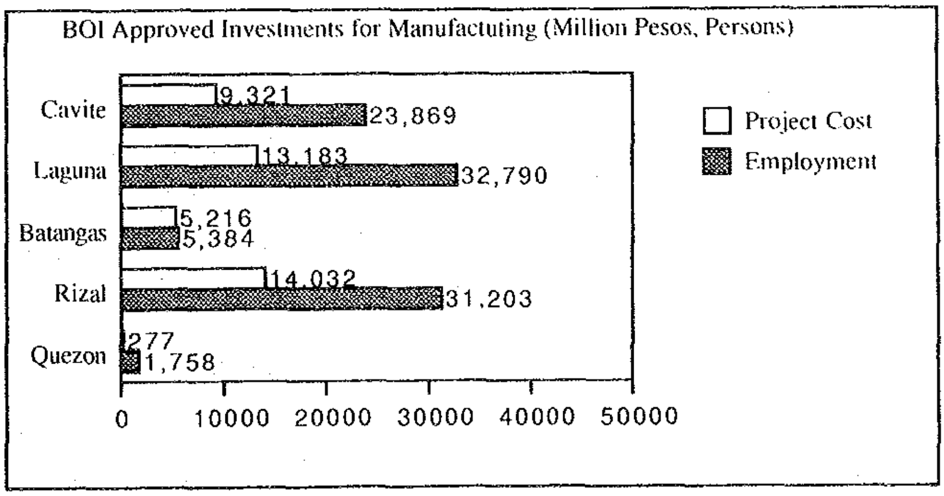


Figure B.4 Labor Preparation Rate (LPR) for BOI Approved Investments (in the Period 1985-1990; Unit-Persons/Million Pesos)

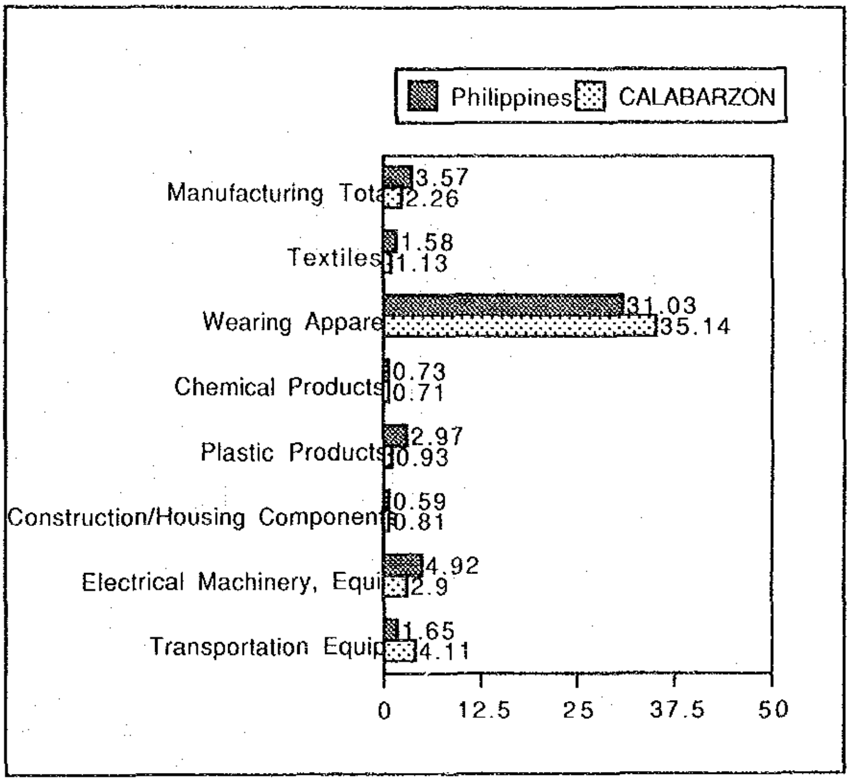
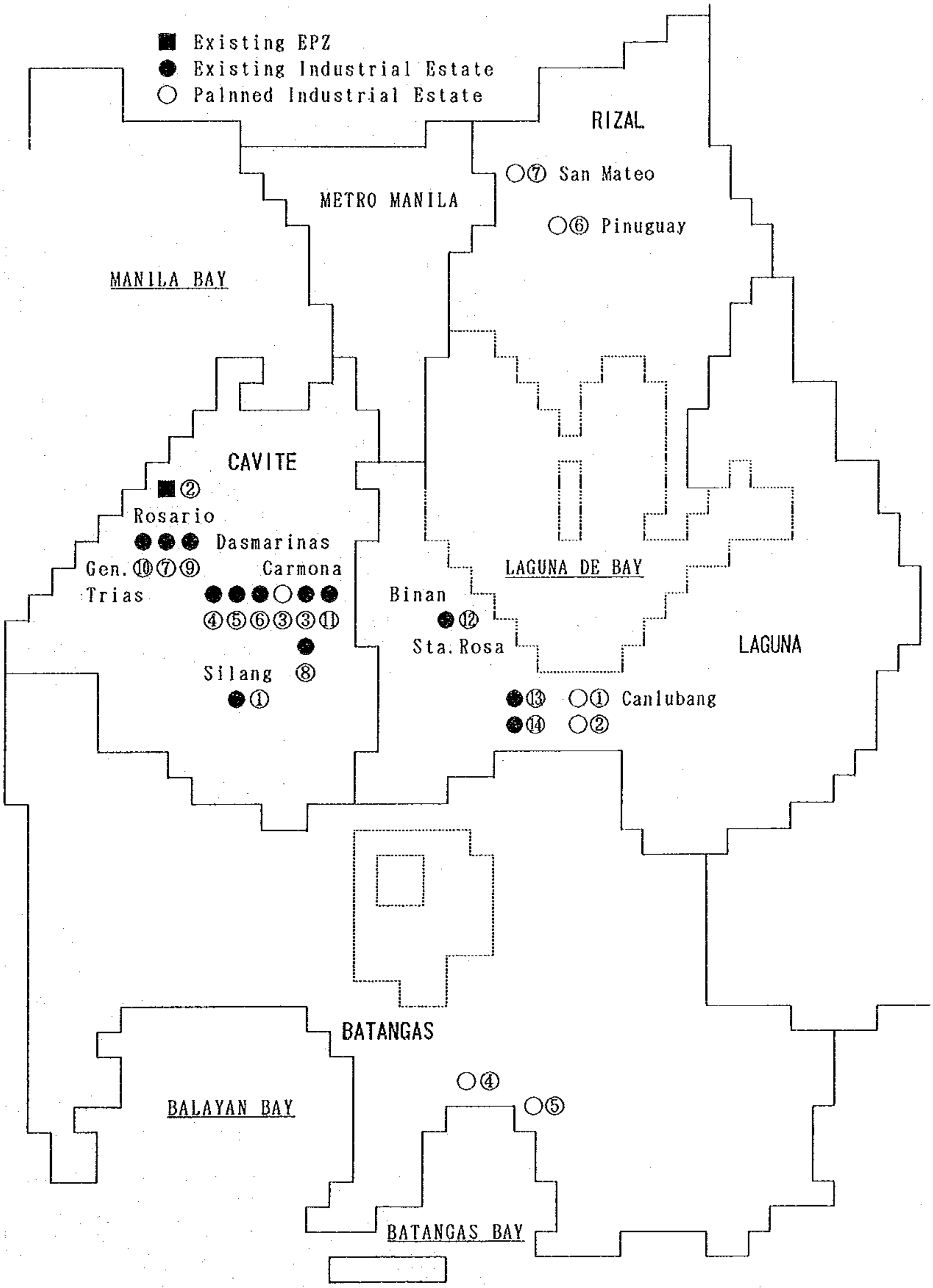


Figure B.5 Location of Existing/Planned Industrial Estates and EPZ



Remark: Circled numbers correspond to those of Table 1.14.
Marking positions are just indicative.

Figure B.6 Map of Principal Road Network

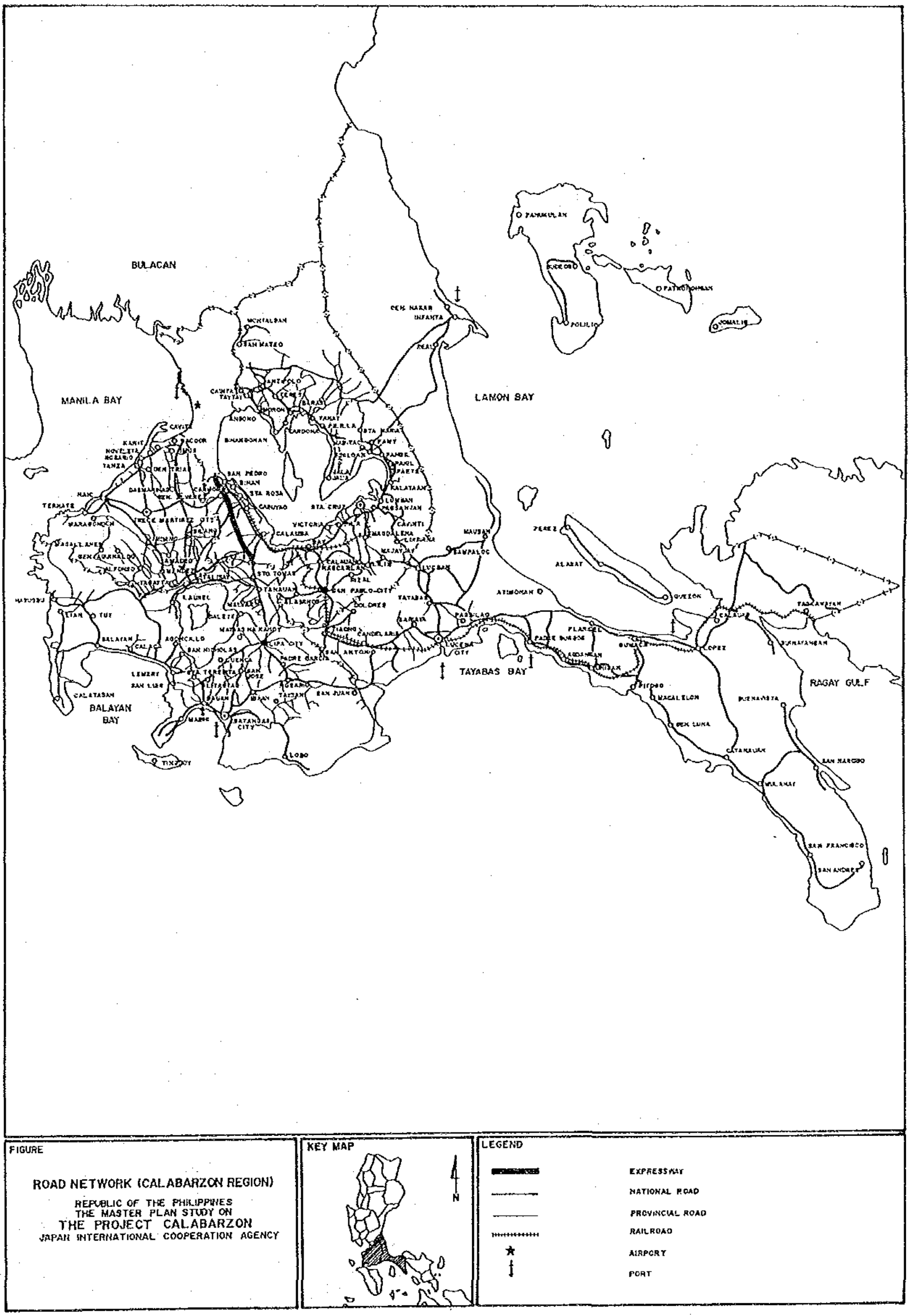


Figure B.7 Location of Private Industrial Ports along the Batangas Bay

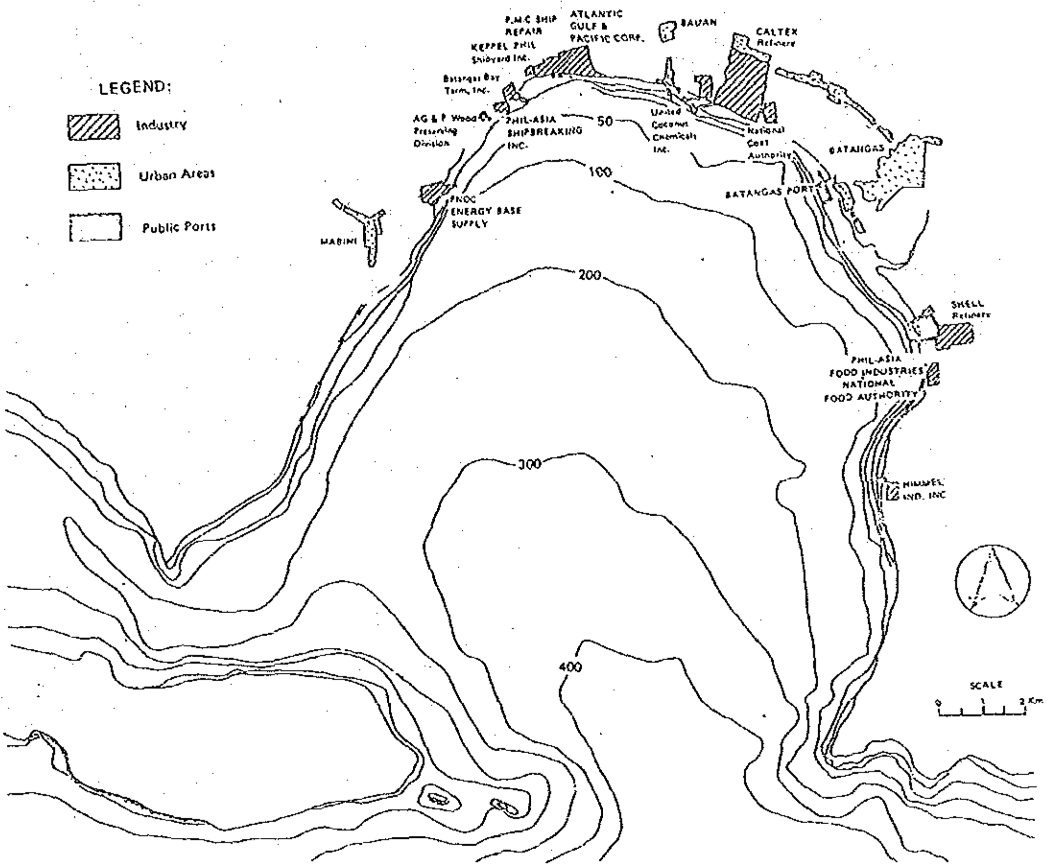
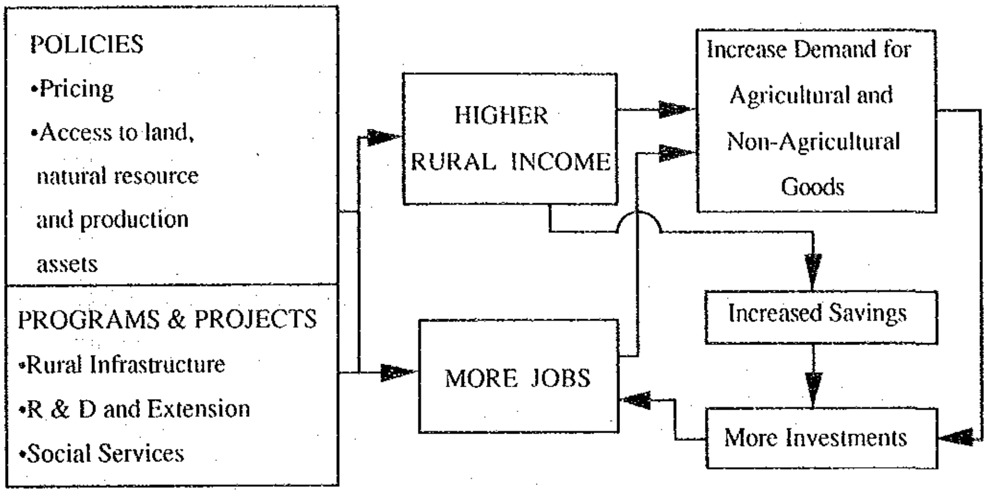


Figure B.8 Employment-Oriented, Rural-Based Development Strategy in the Medium-Term



Source:Medium-Term Philippine Development Plan (Page 37)

Figure B.9 Industrial Development Strategy and Policy Framework

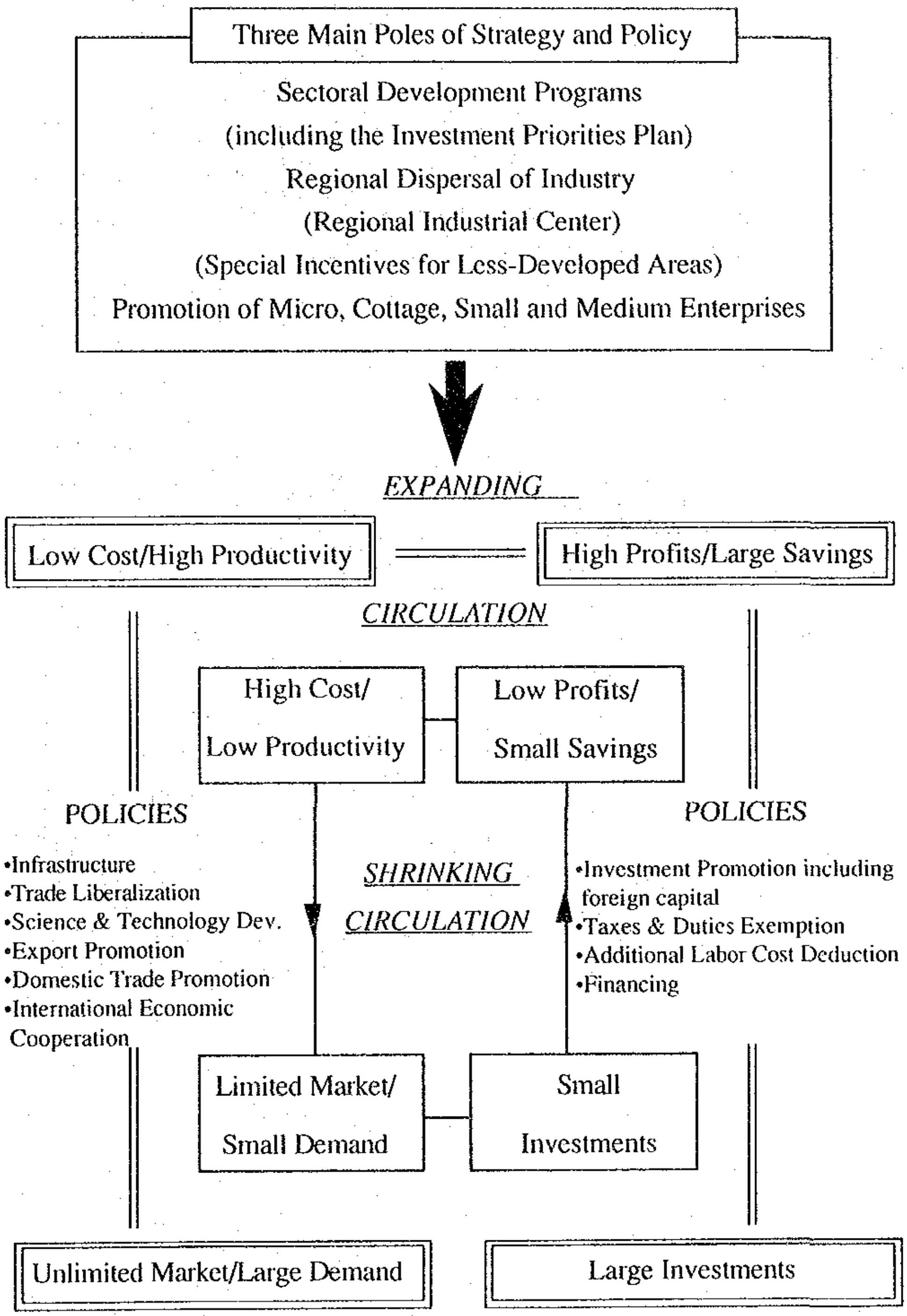


Figure B.10 Outline of Urban Growth Corridor Development Strategy in Region IV

First Dimension of Strategy

- Development through the promotion of better rural-urban interaction and development
- Urban growth corridor municipalities/cities playing a role of farm product markets for the surrounding rural areas and the resource subregional/island provinces

Second Dimension of Strategy

- Formation of linkage/network based a developed land transport system among selected urban growth corridor municipalities/cities in the regional main land Luzon
- Principal elements of this dimension of strategy
- (a) Linear extension of development along the Pan Pacific highway and the railways with high intensity activity centers focused in Biñan, Calamba, San Pablo City and Lucena City
- (b) Strengthening highways and/or restoring railway grids to balance the dominance of the linear pattern focused on Metro Manila and the selected high intensity centers and to promote further develo-pment of the Batangas Bay and Cavite Coastal areas
- (c) The foreign new linkage eastern Luzon through the planned Marikina-Infanta highways and the establishment of Infanta-Real as a nodal transport center (this has been considered of lesser priority than the two elements above.)

Source:Summarized from the Medium-Term Regional Development Plan (Page 21)

Figure B.11 CALABARZON's Potentials on Manufacturing Development

Comparative advantages of the Philippines	CALABARZON's potentials I
Natural Resources	•Abundant agro-resources including livestock and seafood •Lime stone, marble, etc.
Geographical position in the Asia-Pacific Region	•Central position of the Philippines •Good access to Manila international ports and airport
Labor cost/manpower availability including English speaking people	•High-educated labor availability •Skilled labor availability
GSP privileges	•Agglomeration of industries concerned such as textiles and apparel

CALABARZON's regional conditions	CALABARZON's potentials II
Market & supporting services	•Proximity/neighboring to Metro Manila
Manufacturing concentration	•Solely 15% and 62% of the country's 1988 Gross Value Added to that of Metro Manila
Infrastructure	•Deep natural harbors of Batangas •Relatively developed infrastructure; road, electricity, water, telecommunication
Industrial site	•Developed industrial sites; -Cavite EPZ -Existing 14 and planned/designed 10 IEs

Figure B.12 Roles and Objectives for CALABARZON's Manufacturing Sector Development

National Development Goals

a) Alleviation of poverty

b) generation of more productive employment

c) promotion of equity and social justice

d) attainment of sustainable economic growth

Roles of Manufacturing Development

1) Leading sector for CALABARZON's regional development

2) Driving force of further industrial development of Region IV and the country

3) Contribution to industrial dispersal and the formation of "Urban Growth Corridor" of Region IV

Medium-Term

Long-Term

Objectives of Manufacturing Development

1) to generate employment opportunities both in the urban and rural areas through a spatially balanced development, keeping a harmonious and complementary relationship with agriculture and natural environment

2) to enhance the income level of the populace by increasing value added or productivity

3) to expand domestic and export market through the production of goods with international competitiveness corresponding to industrial globalization

4) to realize a stronger industrial structure with a better circulation of every resource

5) to realize an industrial base with high technology integration in the Asian Pacific Region leading to the sustainable growth of the country

CALABARZON's Development Goals

a) to ensure rational development of industry and agriculture with a resultant pattern of human settlement balanced with ecological and environmental considerations

b) to induce the growth of investments from all possible investors

c) to open avenue for wider participation of the populace in the forward and backward linkage of all these development efforts

Figure B.13 Overall Strategy for Manufacturing Sector Development in CALABARZON

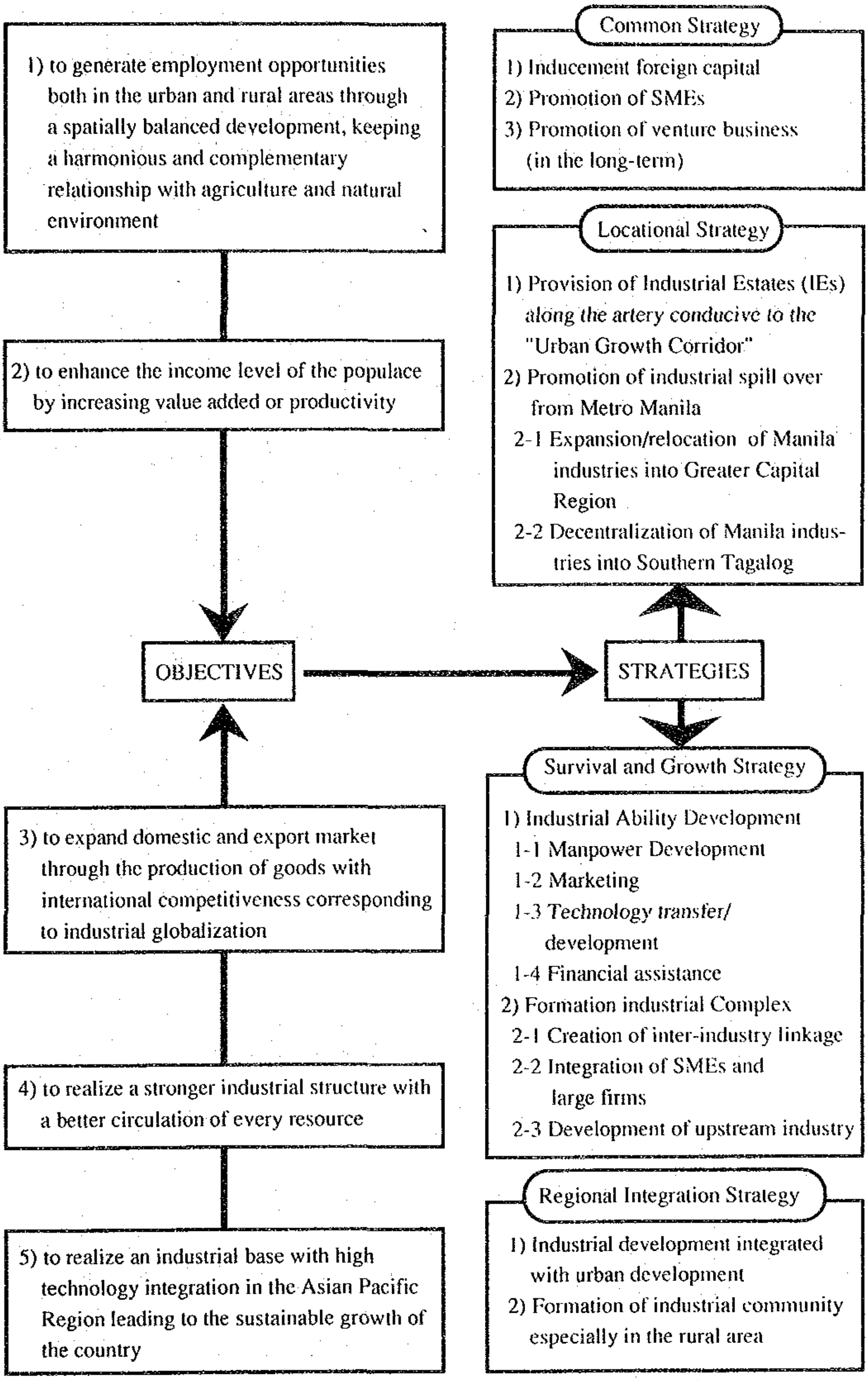


Figure B.14 Subregions for Industrial Development in CALABARZON (Industrial Areas)

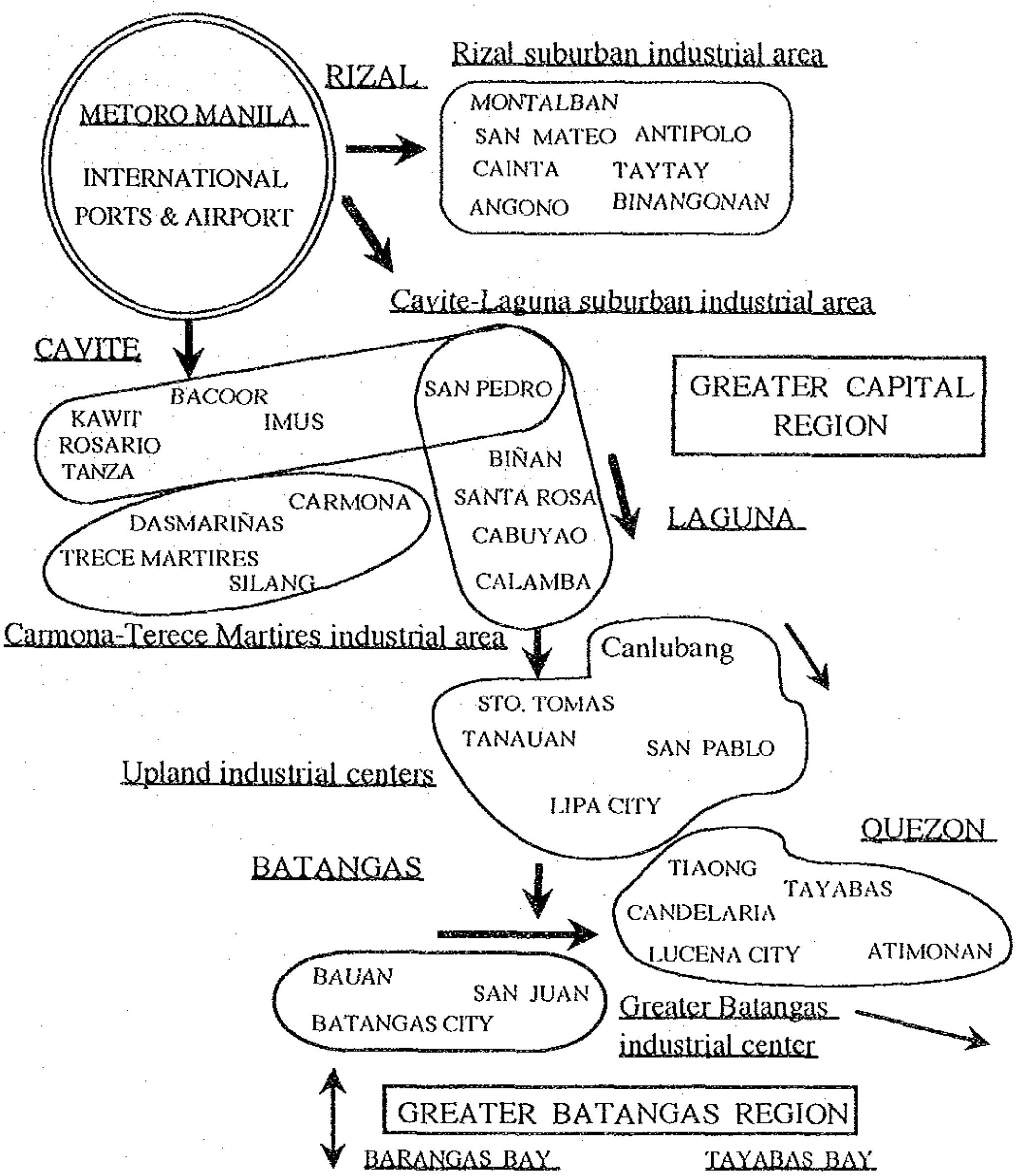


Figure B.15 Factors for Categorizing Industry Types in View of Locational Tendency

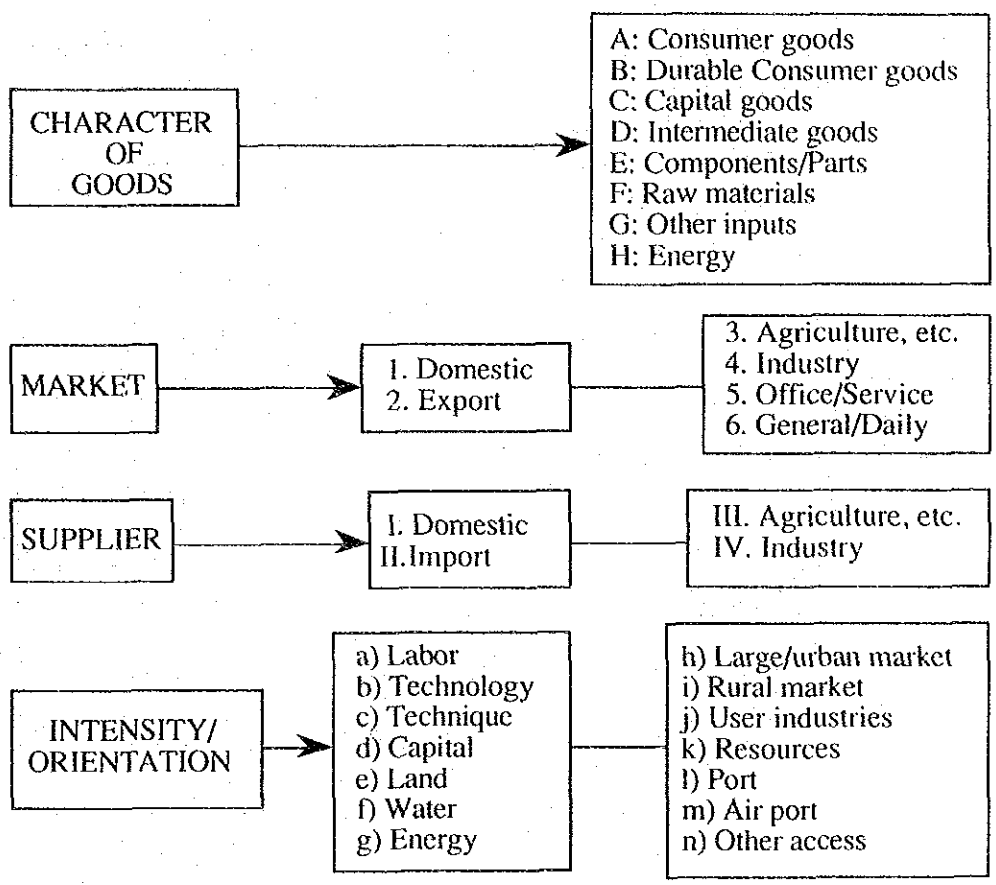


Figure B.16 Development Strategies and Support Measures

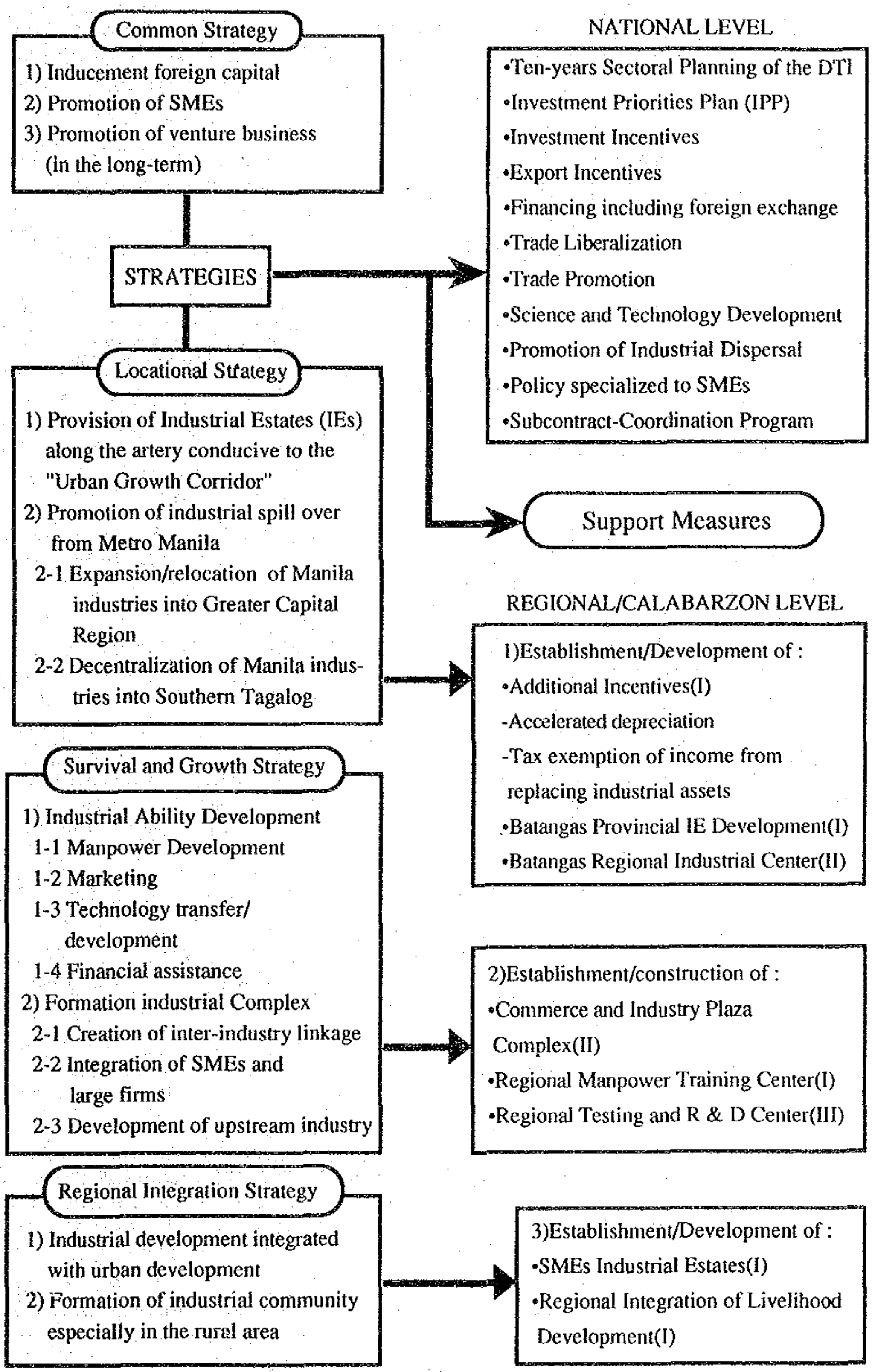


Figure B.17 Method and Steps for Forecast of Development Framework

STEP 1-1 1988 Value Added by Subsector Philippines, Metro Manila, CALABARZON (All establishments)	- Estimates for Metro Manila and CALABARZON based on their % shares of value added to the country in 1987 Industrial Survey/ % shares of employment in 1988 Census of Establishment (each for over 10 employment establishment)
STEP 1-2 1988 Employment by Subsector CALABARZON (All establishments)	- Based on 1988 Census of Establishment, 1980 Household Census and 1983 Census of Establishment
STEP 1-3 1988 Labor Productivity by Subsector CALABARZON (All establishments)	- Calculation (outputs of Step 1-1/outputs of Step 1-2)
STEP 2-1 Forecast of Growth Rates by Subsector (1988 to 2000 : per annum)	- Based on the following outputs: DTI Study, recent trends and other consideration
STEP 2-2 2000 Value Added of CALABARZON by Subsector (Tentative Outputs)	- Based on the assumption that the growth rates by subsector shall be same between CALBARZON, Metro Manila and the country
STEP 2-3 2000 Value Added of CALABARZON by Subsector (Final Outputs : Case I)	- Additional increase by spill-over of value added from Metro Manila (Case I: 20%, Case II: 30%, respectively of value added by new investments/factories)
STEP 2-4 Value Added of CALABARZON by New Investments/Factories and by Subsector, 1988 to 2000	- Subtraction of Value added by 1988 existing factories from the total (assumed 3% per annum growth of labor productivity
STEP 3-1 2000 Labor Productivity by Subsector - Over 10 employment establishment base - Differential use of productivity Spillover: Metro Manila's productivity	- Based on the assumption that substantial increase of value added shall be realized by over 10 employment establishment - Assumed 4% per annum growth of labor productivity
STEP 3-2 Incremental Employment of CALABARZON by Subsector, 1988 to 2000	- Calculation (outputs of Step 2-4/ outputs of Step 3-3)
STEP 3-3 Required Land Unit Size by Sector	- Based on the Manufacturing Statistics of Japan and existing factories in CALABARZON
STEP 3-4 Industrial Site Demand of CALBARZON by Subsector, 1988 to 2000	- Calculation (outputs of Step 3-2/ outputs of Step 3-3)
STEP 4-1 Breakdown through the 4 Locational Factors' % share of 5 Provinces to CALABARZON total by Subsector	- 4 locational factors change the weight by subsector; 1) Existing Industrial agglomeration (1988 employment base) 2) Recent locational trends (BOI approved 1985 to 1990) 3) Labor force and market volume (1990 urban population) 4) Land potentials (weighted by land cost)
STEP 4-2 Incremental employment and Industrial Site Demand by Provinces and by Subsector, 1988 to 2000	- Calculation (outputs of Step 3-2 or 3-4/ outputs of Step 4-1)