

Appendix A-1

The Regression Equation for Cyclical Periods: RBIs, Non-RBIs and Total Manufacturing, 1981-1985, 1985-1989, 1989-1993 and 1993-1997

	Periods	LnK	LnL	R ² adjusted	SEE
Total RBIs	1981-1985	0.685687	0.31078	0.977004	0.103663
		<i>3.233082*</i>	<i>1.74994</i>		
	1985-1989	-0.32997	1.49557	0.993632	0.059784
		<i>-0.59065</i>	<i>2.306635</i>		
	1989-1993	0.379047	0.612757	0.991229	0.021828
		<i>2.064489</i>	<i>2.198249</i>		
	1993-1997	0.719291	0.426731	0.998977	0.006382
		<i>39.68383***</i>	<i>5.864913**</i>		

	Periods	LnK	LnL	R ² adjusted	SEE
Non-RBIs	1981-1985	0.53749	0.309879	0.970435	0.078013
		<i>5.56548**</i>	<i>1.307053</i>		
	1985-1989	-0.20266	2.104861	0.944219	0.107035
		<i>-0.68039</i>	<i>4.380409**</i>		
	1989-1993	0.826119	-0.09929	0.995968	0.021806
		<i>7.089031**</i>	<i>-0.39464</i>		
	1993-1997	1.352624	-0.34448	0.973949	0.050729
		<i>4.147416**</i>	<i>-0.57863</i>		

	Periods	LnK	LnL	R ² adjusted	SEE
Total Mfg	1981-1985	0.647385	1.007282	0.918557	0.037872
		<i>4.543591**</i>	<i>1.793664</i>		
	1985-1989	-0.1879	1.511862	0.995038	0.016012
		<i>-0.23342</i>	<i>2.774818</i>		
	1989-1993	0.71708	0.145639	0.992401	0.024645
		<i>3.103654*</i>	<i>0.345052</i>		
	1993-1997	1.022375	-0.03165	0.991301	0.024276
		<i>7.165297**</i>	<i>-0.08645</i>		

Notes: Number in italic is t-statistic value

*, ** and *** means the coefficient significant at 10%, 5% and 1% level.

Appendix A-2

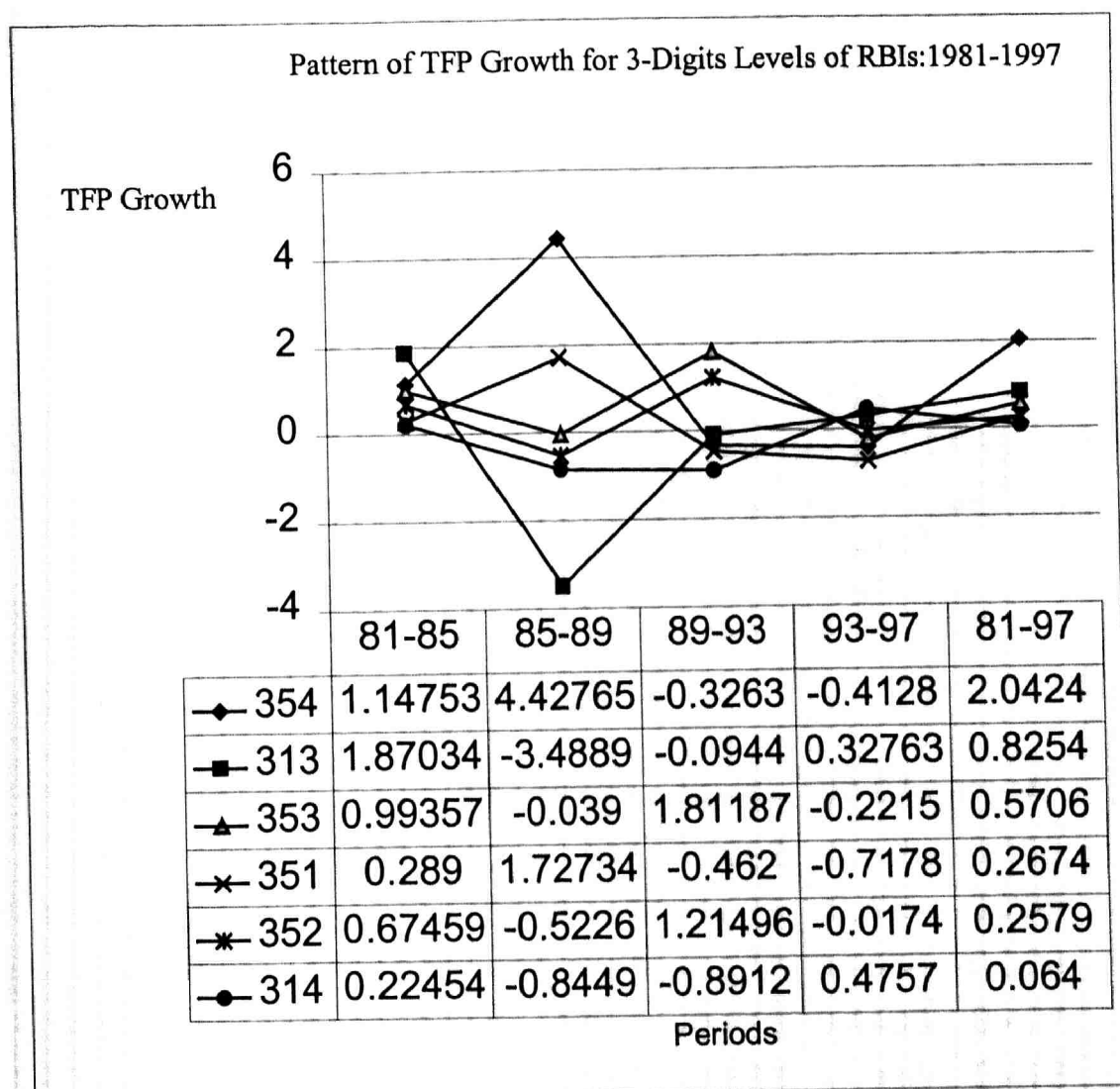
Resource Based Industry: 3-Digits Levels Classifications

Industry Code	Industry Description
311-312	Food Manufacturing
313	Beverage Industry
314	Tobacco Manufactures
331	Manufacture of Wood, and Wood Products
332	Manufacture of Furniture and Fixture
341	Manufacture of Paper and Paper Products
342	Printing, Publishing and Allied Industries
351	Manufacture of Industrial Chemicals
352	Manufacture of other Chemical Products
353	Crude Oil Refineries
354	Manufacture of miscellaneous products of petroleum and coal
355	Manufacture of Rubber Products
356	Manufacture of Plastic Products, n.e.c
369	Manufacture of Non-metallic mineral products

Source: Department of Statistics (DOS), Malaysia.

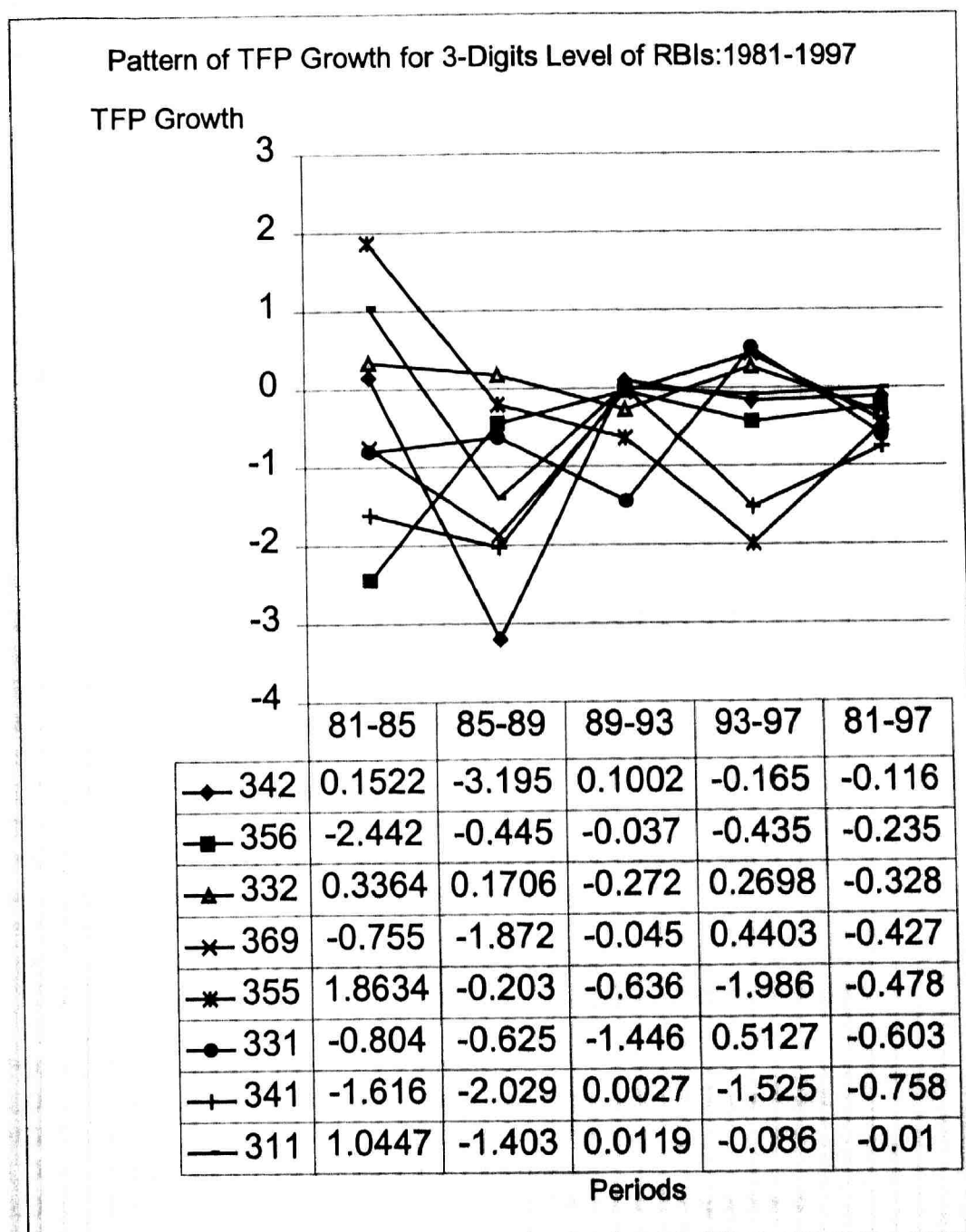
Note: There are 14 RBIs were identified in Eight Malaysia Plan (2001-2005)

Appendix A-3



Source: Department of Statistics, Annual Survey of Manufacturing, 1981-1997

Appendix A-3



Source: Department of Statistics, Annual Survey of Manufacturing, 1981-1997

Appendix A-4

Resource Based Industry - 5 digits level classifications

Code	Industry description
31110	Slaughtering, preparing and preserving meat
31121	Ice cream
31129	Other dairy products
31131	Pineapple canning
31139	Other canning and preserving of fruits and vegetables
31140	Canning, preserving and processing of fish, crustacean and similar foods
31151	Manufacture of coconut oil
31152	Manufacture of palm oil
31153	Manufacture of palm kernel oil
31159	Other vegetable and animal oils and fats
31161-62	Small and large rice mills
31163	Flour mills
31164	Sago and tapioca factories
31169	Other grain milling
31171	Biscuit factories
31172	Bakeries
31180	Sugar factories and refineries
31190	Manufacture of cocoa, chocolate and sugar confectionery
31211	Ice factories
31212	Coffee factories
31214	Meehon, noodles and related products
31215	Spices and curry powder
31219	Other food products, n.e.c
31220	Manufacture of prepared animal feeds
31310-30	Distilling, rectifying, blending spirits and malt liquors and malt
31340	Soft drinks and carbonated water industries
33111	Sawmills
33112	Plywood, hardboard and particle board mills
33113-14	Planning mills, window and door mills and joinery works include prefabricated wooden houses
33119	Manufacture of other wood products
33120	Manufacture of wooden and cane containers and small can ware
33190	Manufacture of wood and cork products, n.e.c
34110	Manufacture of pulp, paper and paperboard
34120	Manufacture of containers and boxes of paper and paperboard
34190	Manufacture of pulp, paper and paperboard articles, n.e.c
35111	Manufacture of industrial gases
35119	Manufacture of other basic industrial chemicals, except fertilizers
35120	Manufacture of fertilizers and pesticides
35130	Manufacture of synthetic, resins, plastic and materials and man-made fibres except glass

Code	Industry description
35210	Manufacture of paints, varnishes and lacquers
35220	Manufacture of drugs and medicines
35231	Manufacture of soap and cleaning preparation
35239	Manufacture of perfumes, cosmetics and other toilet preparations
35290	Manufacture of chemical products, n.e.c
35510	Tyre and tube industries
35591	Rubber remilling and rubber latex processing
35592	Rubber smokehouse
35593	Manufacture of rubber footwear
35599	Manufacture of rubber products, n.e.c
36910	Manufacture of structural clay products
36921	Manufacture of hydraulic cement
36922	Manufacture of lime and plaster
36991	Cement and concrete products
36992	Cut-stone and stone products
36999	Other non-metallic mineral products, n.e.c

Note: n.e.c = not elsewhere classified

Source: Department of Statistics (DOS), Malaysia

Appendix A-5

The Estimated Regression Equation for all 61, 5-Digits RBIs

$Ln Y$	$Ln K$	$Ln L$	$\bar{R}^2$	SEE
31110	0.869865 2.043240*	-0.300987 -0.484266	0.873090	0.290533
31121	0.829118 4.081707***	-0.092727 -0.156331	0.712574	0.171970
31129	0.226582 1.044759	1.133035 2.930363**	0.795819	0.124442
31131	-0.538259 -0.833683	-0.411903 -1.235091	0.111136	0.307232
31139	0.557329 5.034927***	0.853892 2.109461**	0.928975	0.098631
31140	0.734089 4.093616***	-0.082081 -0.137586	0.893955	0.181016
31151	0.200676 0.994429	0.642909 3.848720***	0.832271	0.195285
31152	0.021659 0.197069	1.690874 4.245691***	0.572470	0.277997
31153	0.765980 4.335640***	-0.174681 -0.369901	0.571829	0.259413
31159	0.031366 0.206215	1.013456 1.695596	0.053598	0.456636
31161-62	2.331251 4.305186***	-1.044009 -0.902613	0.554477	0.436650
31163	1.081572 6.354342***	0.015364 0.403871	0.724348	0.249758
31164	0.152607 2.424253**	0.288802 2.058866*	0.296633	0.105227
31169	-0.075003 -0.813454	0.732269 2.954769**	0.310173	0.236595
31171	0.468379 3.791101***	1.306716 5.676177***	0.974679	0.108886
31172	0.859615 7.454519***	0.052212 0.208929	0.990551	0.074815
31180	0.426833 1.305834	-0.480094 -0.708772	0.109355	0.351555
31190	0.748634 4.610036***	0.534996 0.980465	0.932827	0.144341
31211	2.123373 4.299856***	-0.135673 -0.257594	0.709287	0.188985
31212	-0.054728 -0.165160	1.103430 0.482834	0.038091	0.682840

31214	0.791737 2.988275***	-0.184509 -0.304472	0.857613	0.156025
31215	0.568954 7.142377***	0.587884 2.290725**	0.966721	0.133432
31219	0.264464 0.912237	0.743627 1.518581	0.843694	0.217470
31220	0.894223 7.689466***	1.536912 2.873948**	0.872189	0.160429
31310-30	-0.298719 -0.632526	-0.970349 -1.783528	0.231437	0.212047
31340	0.776802 6.503979***	-0.774676 -2.272566**	0.715891	0.180960
33111	0.477680 3.300146***	0.918668 3.141947***	0.888222	0.135812
33112	0.258733 1.003226	1.072918 2.321686**	0.958471	0.198261
33113-14	0.555921 1.599578	0.721068 1.276122	0.974497	0.126788
33119	0.832251 5.471238***	0.076427 0.265527	0.941361	0.192924
33120	0.626741 6.413621***	0.792827 2.848949**	0.796483	0.209218
33190	1.325211 4.388398***	-1.321137 -2.987135***	0.754201	0.286916
34110	0.350239 2.944967**	0.704436 2.150974**	0.925619	0.301064
34120	0.421664 2.412416**	0.749507 2.248169**	0.984229	0.119679
34190	2.155507 4.493197***	-1.905451 -1.755949	0.845508	0.474005
35111	0.692281 8.435408***	0.504024 2.270477**	0.973428	0.173722
35119	1.011137 3.611260***	-0.401951 -0.476835	0.932546	0.297274
35120	0.646520 3.748517***	1.718435 1.348245	0.505081	0.534683
35130	0.378891 1.945921*	0.801568 1.943388*	0.977588	0.204703
35210	0.163494 1.124750	1.531091 6.158738***	0.977438	0.104572
35220	0.693009 10.65013***	-0.251472 -1.238558	0.978079	0.085108
35231	0.729007 5.735203***	0.062825 0.266369	0.925394	0.143090

35239	0.615341 2.264974**	0.306326 0.822318	0.593754	0.318005
35290	1.162904 11.16405***	-0.435786 -1.414385	0.960944	0.126680
35510	0.803833 8.772890***	0.167393 0.707148	0.951291	0.094752
35591	0.725624 2.433954**	-0.631028 -1.632681	0.265553	0.277453
35592	0.389820 3.472013***	0.686510 5.432442***	0.970322	0.167332
35593	0.918606 3.763094***	1.091078 2.408110***	0.719510	0.238977
35599	0.491425 1.194337	0.711764 1.201624	0.979144	0.160351
36910	0.656521 8.984055***	0.513485 2.510890**	0.959124	0.141879
36921	0.791284 5.864141***	1.022087 1.375540	0.856753	0.234715
36922	0.600845 16.40740***	0.045433 0.814236	0.955541	0.158421
36991	0.957549 11.89285***	0.028729 0.341201	0.921111	0.174438
36992	0.251393 3.088950***	1.175750 6.765686***	0.896703	0.200050
36999	0.261449 4.234933***	1.047621 7.076657***	0.949511	0.228879

Notes:

Value in parentheses is t-statistic

*, **, *** indicates that the variables significant at 10, 5 and 1 % respectively.

Appendix A-6

Percentage Contribution of Gross Exports RBIs and Non-RBIs: 1981-2000

Year	RM million			As % of Total manufacturing	
	Total RBI	Non-RBI	Total Mfg	RBI	Non-RBI
1981	1760.0	1679.0	6383.6	27.57	72.43
1982	1822.8	1740.8	7511.5	24.27	75.73
1983	2496.6	2413.6	9748.6	25.61	74.39
1984	3163.0	3079.0	12466.7	25.37	74.63
1985	3132.5	3047.5	12470.8	25.12	74.88
1986	3505.7	3419.7	15351.9	22.84	77.16
1987	4757.3	4670.3	20343.8	23.38	76.62
1988	6220.5	6132.5	26849.6	23.17	76.83
1989	7748.1	7659.1	36572.1	21.19	78.81
1990	9170.3	7180.3	46840.5	19.58	80.42
1991	10765.8	10674.8	61319.4	17.56	82.44
1992	13090.0	12998.0	71457.6	18.32	81.68
1993	16588.2	16495.2	89694.2	18.49	81.51
1994	21402.5	21308.5	120294.4	17.79	82.21
1995	25963.3	25868.3	147253.0	17.63	82.37
1996	28687.2	28591.2	158540.2	18.09	81.91
1997	32267.9	32170.9	178945.1	18.03	81.97
1998	38390.2	38292.2	237648.9	16.15	83.85
1999	41913.2	41814.2	271730.2	15.42	84.58
2000	50480.5	48480.5	317936.6	15.88	84.12
Average % of contribution				20.57	79.43

Source: Data calculated from Bank Negara Monthly Bulletin, January 2001.

Appendix A-7

Ranking for Resource Based Industry: 3-Digits Levels Classifications

Industry Code	Industry Description	Rank
311-312	Food Manufacturing	14
313	Beverage Industry	2
314	Tobacco Manufactures	6
331	Manufacture of Wood, and Wood Products	12
332	Manufacture of Furniture and Fixture	9
341	Manufacture of Paper and Paper Products	13
342	Printing, Publishing and Allied Industries	7
351	Manufacture of Industrial Chemicals	4
352	Manufacture of other Chemical Products	5
353	Crude Oil Refineries	3
354	Manufacture of miscellaneous products of petroleum and coal	1
355	Manufacture of Rubber Products	11
356	Manufacture of Plastic Products, n.e.c	8
369	Manufacture of Non-metallic mineral products	10

Source: Department of Statistics (DOS), Malaysia.

Note: There are 14 RBIs were identified in Eight Malaysia Plan (2001-2005)

Ranking for Resource Based Industry: 5-Digits Level Classification

Code	Industry Description	TFP Rank
31110	slaughtering, preparing and preserving meat	15
31121	ice cream	20
31129	other dairy products	47
31131	pineapple canning	3
31139	other canning and preserving of fruits and vegetables	50
31140	canning, preserving and processing of fish, crustacea and similar foods	18
31151	manufacture of coconut oil	23
31152	manufacture of palm oil	54
31153	manufacture of palm kernel oil	14
31159	other vegetable and animal oils and fats	28
31161-62	small and large rice mills	42
31163	flour mills	57
31164	sago and tapioca factories	12
31169	other grain milling	17
31171	biscuit factories	55
31172	bakeries	25
31180	sugar factories and refineries	5
31190	manufacture of cocoa, chocolate and sugar confectionery	46
31211	ice factories	58
31212	coffee factories	8
31214	meehon, noodles and related products	16
31215	spices and curry powder	34
31219	other food products, n.e.c	30
31220	manufacture of prepared animal feeds	61
31310-30	distilling, rectifying, blending spirits and malt liquors and malt	1
31340	soft drinks and carbonated water industries	6
31400	Tobacco Manufactures	27
33111	sawmills	48
33112	plywood, hardboard and particle board mills	44
33113-14	planing mills, window and door mills and joinery works include prefabricated wooden houses	43
33119	manufacture of other wood products	26
33120	manufacture of wooden and cane containers and small can ware	49
33190	manufacture of wood and cork products, n.e.c	9
33200	Manufacture of furniture and fixture	45
34110	manufacture of pulp, paper and paperboard	41
34120	manufacture of containers and boxes of paper and paperboard	36
34190	manufacture of pulp, paper and paperboard articles, n.e.c	4
34200	Printing, publishing and allied industries	33
35111	manufacture of industrial gases	39
35119	manufacture of other basic industrial chemicals, except fertilizers	13
35120	manufacture of fertilizers and pesticides	60
35130	manufacture of synthetic, resins, plastic and materials and man-made fibres except glass	38
35210	manufacture of paints, varnishes and lacquers	53
35220	manufacture of drugs and medicines	11
35231	manufacture of soap and cleaning preparation	22
35239	manufacture of perfumes, cosmetics and other toilet preparations	24
35290	manufacture of chemical products, n.e.c	19
35300	Crude oil refineries	10
35400	Manufacture of other chemical products	2
35510	tyre and tube industries	29
35591	rubber remilling and rubber latex processing	7
35592	rubber smokehouse	32
35593	manufacture of rubber footwear	59
35599	manufacture of rubber products, n.e.c	35
35600	Manufacture of plastic products, n.e.c	40
36910	manufacture of structural clay products	37
36921	manufacture of hydraulic cement	56
36922	manufacture of lime and plaster	21
36991	cement and concrete products	31
36992	cut-stone and stone products	51
36999	other non-metallic mineral products, n.e.c	52

Strategic Emphasis for Resource Based Industry in Eight Malaysia Plan (2001-2005)

Industry	Future Challenges	Products or Sub products	Special issues
Wood based products	Inadequate of raw material supply. Forest plantation projects (including rubber forest plantation)	Panel products (interior décor) Up-market goods (household & home office furniture). Builders' woodwork (solid wood doors and windows). Ornamental wood-based products.	Efforts towards R&D activities and develop new technologies.
Rubber products	Industrial rubber goods (IRG)	Bridge bearing, Engine mounts and suspension bushes.	Warranty scheme (ISO 9000) for quality control to demonstrate best manufacturing practices.
Palm-oil based products	Food and non-food sub sector Local use of palm oil Set up methyl ester plans	Trans-free margarine, shortening and specialty products. Oleo chemical products.	Concentrated on R&D to produced better quality products.
Cocoa-based products	Developing Malaysian brand names for cocoa-based products Commercialize new cocoa-based products (cosmetics & pharmaceuticals)	Chocolates, beverages and confectionary.	Intensify R&D activities through products development.

Appendix A-9 (cont'd)

Industry	Future Challenges	Products or Sub products	Special issues
Food products	Providing adequate cold room and refrigerated truck facilities & related services. Hub for halal food production & obtain quality & halal certification.	Various food products	Granting full tax deduction on investment in Wholly owned subsidiaries. 10 years for full tax exemption on statutory income. Market promotion as well as improving packaging and labeling.
Ceramic products*	Improve quality and design for the production of advanced ceramic	Ceramic disc elements, ceramic components for electrical Tools for the textile, metal and engineering industries.	Upgrading and modernizing existing industries
Chemical products	Strengthening linkages with other industries	Petrochemicals, inorganic chemicals, oleo chemicals & Industrial gases	To cater for petrochemical industries at Kertih-Gebeng corridor, Tanjung Langsat and Pulau Bunting-Yan
Pharmaceutical industry	Consolidation of local manufactures through strategic alliances in disciplines such Such as medicinal chemistry, biotechnology and genetic engineering.	Cephalosporin (an antibiotic group), Cytokines (cancer treatment) and Artemisinin (treatment for malaria)	Establish integrated manufacturing plants for patented pharmaceutical with R&D facilities to promote contract manufacturing. There is also the potential to use tropical flora and microbes to produce active ingredients and to manufacture traditional herbal medicine for the local and export markets.

*Note: * the industry has identified in IMP2 with potential for development under Materials Industry Group.*

Source: Extracted from Eight Malaysia Plan (2001-2005)