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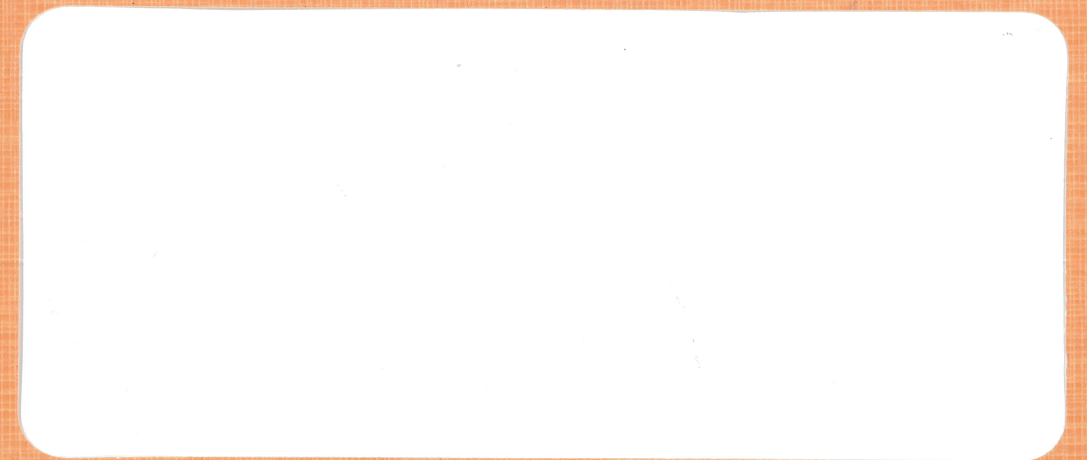
Discussion Paper

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DISCUSSION PAPER

No: 8503

A DISAGGREGATED EXPORTS
FORECASTING MODEL FOR TAIWAN

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A Disaggregated Exports Forecasting Model for Taiwan

I. Introduction

This paper supplies a detailed econometric model with the purpose of forecasting the future of Taiwan's exports up to the year 2000.

Main characteristics of the model are as follows:

- (1) The INFORUM-type I-O model forms the backbone of this trade model;
- (2) The Almon function is used for estimation;
- (3) Linkage to four of Taiwan's major trading partners is provided;
- (4) While the I-O model has 76 sectors, only 61 sectors are related to trade.

However, a corresponding table between these I-O sectors and the SITC code, up to four digits, is provided so that the relation to the common trade classification can easily be traced back.

A short description of the whole INFORUM-type model follows in the next section. The structure of the trade model is then introduced in Section III, and in Section IV all empirical results, except forecasting, are presented. 12 forecast scenarios are given in Section V.

II. The INFORUM-type Interindustry Econometric Model

The INFORUM-type model is an econometric model that takes into consideration the I-O transaction accounts. There are two major parts of such a model: a real-side model and a price-income-side model. These distinguish whether value-

added items are taken into consideration. If no value-added is excluded, the model has only the real side. If value-added is included, the model is completed with the price-income side.

The inclusion of value-added items would make, among other variables, GNP and, correspondingly, disposable income endogeneous. This poses considerable complications to the model. Because of this, most INFORUM models still have only the real-side structure. This is the model we are going to introduce below.

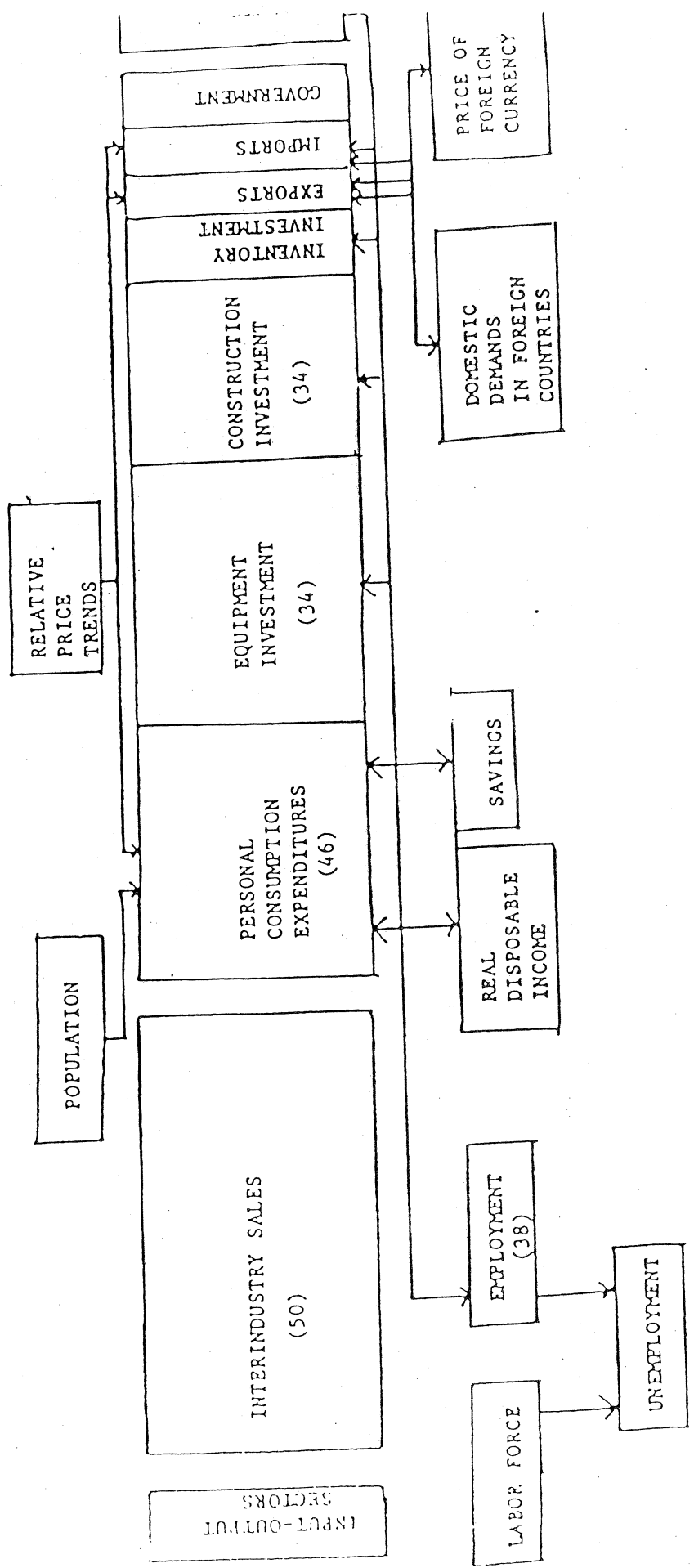
The skeleton of the model is best displayed in a figure, like the one given in Nyhus (1981), we reproduce it here in Figure 1.

Starting with some exogeneous variables, such as population, prices, disposable income, savings and foreign demand, one can solve for the values of final demand items. Complications may arise because some categories of final demand are functions of industrial outputs, while the output itself is composed of final and intermediate demand. If the model is well developed, however, output and final demand can be simultaneously solved, and consequently the solution for intermediate demand is trivial.

The final step of the model is then to calculate the value of employment or unemployment as affected by the level of output.

In general, each category of final demand should be made as disaggregated as the I-0 sectors. However, final demand data in I-0 classification form are usually not abundant enough to form a time series long enough for econometric

FIGURE 1. THE INFORUM-TYPE INTERINDUSTRY ECONOMETRIC MODEL



SOURCE : NYHUS (1981) , P.4

use. Thus, we resort to national account data. In this case, one has to sacrifice the requirement of having the I-O sectors. A way to amend this shortcoming is to use a bridge matrix. Ideally, we need many bridge matrices, one for each category of final demand each year. In reality, however, this is impractical, at least in view of the cost that might be incurred. Usually, a bridge matrix of one (base) year is used for all.

A completed INFORUM-type model would involve more problems and, correspondingly, more assumptions and techniques to solve them. For example, the problem of coefficient change. We refer interested readers to such works as Almon, et al. (1966, 1974) and Nyhus (1981, 1983) for more information. In the meantime, we shall return to the trade sub-model.

III. The Structure of the Trade Model

Although trade is part of the INFORUM model, we treat exports as an independent sub-model. Theoretically, this is not incorrect because exports are not a function of any domestic variable. Thus no problem of feedback or simultaneity would arise. On the other hand, it is generally assumed that exports create domestic income to full extent. This means that calculation of the impact of exports on GNP is redundant.

The model is displayed in Figure 2. Each of Taiwan's export sectors is assumed to be a function of relative prices and foreign demand. Foreign demand is an aggregate concept. It is formed by the domestic demand of the four major trading partners and is influenced by the level of world exports. World exports in SITC groups is assumed to have a single relation with world exports in total.

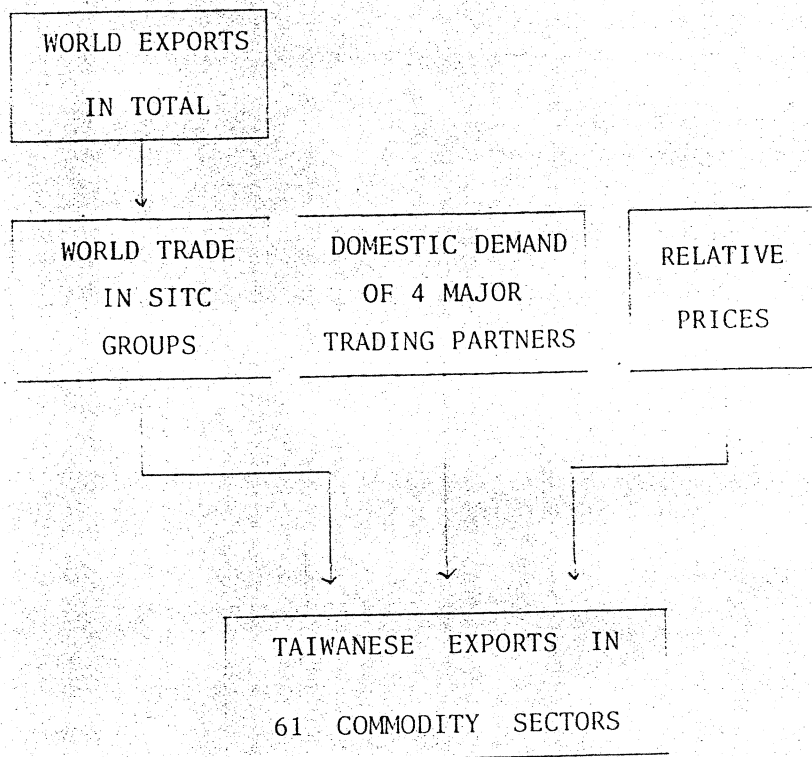


Figure 2. The Trade Sub-model

A description of each variable is given below.

III.1 Relative Prices

The relative price is the ratio of domestic price to foreign price in the same sector. In this model the export price is used as the domestic price.

The data on export price are not complete; it stops after 1977, although data for exports range from 1961 to 1982.

Fortunately, we have domestic wholesale price data from national accounts. After careful scrutiny, we find a close relationship between these two sets of data in the overlapping time interval. Projection of export prices from 1978 to 1982 is made using simple regression without logarithms, and with the help of a bridge matrix.

The foreign price is adopted from the INFORUM U.S. model.

Relative prices are formed from these two sets of price data. Based on the hypothesis, as formulated by Junz and Rhomberg (1973), that the impact of relative price on trade flows is not fully reflected until years later, we consider, therefore, price variables with up to a five-year lag. However, instead of estimating the lag variables themselves, we have adapted the coefficients of these variables from the U.S. model. Using these coefficients as weights, we then calculate a new time series of relative prices.

Symbollically, this is equivalent to saying that instead of estimating the following assumed equation:

$$(1) X_t = a + b_1 \cdot P_t + b_2 \cdot P_{t-1} + \dots + b_6 \cdot P_{t-5} + c \cdot Y_t,$$

where X_t is the export flow,

P_t is the price in t-period, and

Y_t represents any other explanatory variable,

We calculate the following new variable:

$$(2) P_t' = d_1 \cdot P_t + d_2 \cdot P_{t-1} + \dots + d_6 \cdot P_{t-5},$$

where

$$d_i = b_i / \sum b_j, \quad \text{for all } i,$$

and use this new variable to explain the trade flow, i.e.,

$$(3) X_t = a + e \cdot P_t' + c \cdot Y_t.$$

If the weights are correctly given, Equations (1) and (3) should lead to identical estimation results.

The corresponding weights used for each sector in the model are listed in Appendix A.

III.2 Foreign Demand

An index of foreign demand for Taiwan's exports is made according to

the following formula:

$$(4) \text{ FDM}_i = w_{1i} \cdot \text{DD}_{\text{usi}} + w_{2i} \cdot \text{DD}_{\text{Ji}} + w_{3i} \cdot \text{DD}_{\text{ci}} + w_{4i} \cdot \text{DD}_{\text{ei}} + w_{5i} \cdot \text{DD}_{\text{ri}},$$

where FDM_i is the foreign demand of the i th sector,

DD_{usi} is the domestic demand in USA,

DD_{Ji} is that in Japan,

DD_{ci} is that in Canada,

DD_{ei} is that in the EEC,

DD_{ri} is that in the rest of the world, and

w_{ki} 's are the weights attached to these countries (regions).

Weights are the export shares to these regions in the base year (1979).

The assumption of constant weights over all the years is just for computational convenience.

The EEC component should be clarified further. The weight attached to it is Taiwan's export share to the 9 EEC countries plus Australia and New Zealand, while the index of domestic demand is approximated by the German data. Although INFORUM does have an index for almost every EEC country, we justify the use of only one country's index on the grounds that Germany absorbs about half of all of Taiwan's exports to the EEC, and that countries of these groups (the EEC countries, New Zealand and Australia) are at a similar level of industrialization.

Some interesting phenomena can be observed from the export share table which is given in Appendix B. For example, while most of the paddy rice goes to the rest of the world, the USA absorbs about 74% of other crops from Taiwan.

The USA is also the largest market for the following products from Taiwan:

- Sector 4 -- Crops for processing (44%)
- Sector 5 -- Horticultural crops (56%)
- Sector 19 -- Tobacco & alcoholic beverages (91%)
- Sector 23 -- Non-alcoholic beverages (96%)
- Sector 34 -- Pulp, paper & paper products (46%)
- Sector 40 -- Plastics & plastic products (49%)
- Sector 46 -- Cement products (65%)
- Sector 55 -- Household electrical appliances (58%)

It is also interesting to note that, while the USA absorbs most of the cement products from Taiwan, Japan takes most of the cement (as material, 99%).

Other important products exported to Japan are:

- Sector 26 -- Artificial fibers
- Sector 27 -- Artificial fabrics
- Sector 47 -- Glass
- Sector 50 -- Steel & Iron products
- Sector 54 -- Machinery
- Sector 56 -- Communication equipment, and
- Sector 58 -- Ship-building materials and ships

We assume that the demand for the exports to the rest of the world can be represented by the index of world exports. We assume, to generate future data on world exports in disaggregated sectors, that they are log functions of the world exports in total. Since each has its own function, they can have different growth patterns, despite the single movement of world trade in total.

Since future values of other domestic demands are adapted directly from the corresponding country models of INFORUM, the only room left for maneuver is the manipulation of world trade in total. This is the background of most of the scenarios of forecasting to be discussed in Section V. Since different country models use different I-O sector classifications, various conversion tables are developed. In doing this, we assume equal weights for disaggregation. Tables of SITC group names and conversion tables from these groups to I-O sectors are given in Appendix C.

IV. Empirical Results

As explained above, our export flow is a function of two variables: relative price and foreign demand. The functional form we use is the Almon function (See Almon (1979)), i.e.,

$$(5) \quad S_i = (a + b \cdot Y_{fi}) \cdot (P_d/P_f)_i^c,$$

where X_i is the exports of Sector i ,

Y_{fi} is the foreign demand index, and

$(P_d/P_f)_i$ is the relative price index.

The rationals behind our preference for this function over the commonly used CES-derived function is stated in Almon, et al. (1974, p. 125):

"the elasticity with respect to domestic demand ... frequently turns out to be larger than 1.0, sometimes as high as 3.0. ... If (imports) already supply 30% of domestic demand (in the base year), (a doubling of domestic demand would mean) a 120 percent of import share (in the next period)."

Although this statement is more an empirical rectification than a theoretical reason, we retain the use of Equation (5). However, this equation is non-linear in parameters. Estimation will be much simplified if a correct start value of c is given. Thus the CES-derived demand function is still useful, in that it provides an a priori coefficient, c , for estimating Equation (5), and in that it serves as basis for comparison with Equation (5). The CES-derived demand function for exports has the following form:

$$(6) \quad X_i = a(Y_{fi})^b (P_d/P_f)_i^c.$$

Detailed estimation procedure can be found in Almon, et al. (1974, p. 126). Estimated results are reported in Appendix D, where four tables are given. In Table D.1, we estimate Equation (6) with the price variable unadjusted; in Table D.2, Equation (6) is estimated with the adjusted price variable as explained in Section III.1; Table D.3 gives the results of the estimation of Equation (5) without a priori price elasticities; and Table D.4 gives the results of those with a priori price elasticities from Table D.2.

IV.1 The Data

Unpublished data on exports have been supplied by the council of Economic Planning and Development directly, with the kind permission of K.C. Lee and J.C. Chao. Some macro data, like wholesale prices, are drawn from the Taiwan Statistical Data Book, 1982. Data for foreign demand and foreign prices come from the data bank and models of INFORUM.

IV.2 Elasticities (See Table D.4 for figures)

Most of the price elasticities are reasonable. They are either negative or zero. A zero value is superimposed by computation as the lower limit, since positive price elasticity cannot be explained. Unfortunately, for those with negative values, there are no criteria to determine whether they are significantly different from zero. Some sectors with large absolute values of elasticity are:

Sector 6 -- Hogs (-2.2)

Sector 19 -- Tobacco & alcoholic beverages (-2.6)

Sector 23 -- Non-alcoholic beverages (-3.0)

Sector 27 -- Artificial fabrics (-4.4)

Sector 30 -- Miscellaneous fabrics, apparel & accessories (-5.8)

Sector 34 -- Pulp, paper & paper products (-3.0)

Sector 49 -- Steel & iron (-3.1)

This suggests that the exports of these sectors are sensitive to price change. However, they form only a minor fraction of the total exports, and thus elasticity pessimism may still prevail.

By and large, we can say that Taiwan's exports are income elastic, i.e., they rely on the prosperity of foreign countries. One exception is Section 31, Lumber: income elasticity is negative in this sector! The corresponding price elasticity is zero. It seems that nothing can be done to encourage exports from this sector.

V. Forecasting

We project, on the basis of the estimation results (given in Table D.4 in Appendix D), the exports in real terms for the period between 1983 and 2000. Since no forecast is absolutely correct, we try 12 scenarios for each sector. As we have 61 sectors, this amounts to a report of 732 pages. They will not, therefore, be attached in this paper. (They are obtainable from CHIER upon request.)

These scenarios are

Scenario	Relative price assumption	Total world exports assumption
1	Price unchanged since 1982	Annual growth rate = 2%
2	" "	" " = 5%
3	" "	" " = 10%
4	Price forecasted with trend calculated from 1966-82 data	" " = 2%
5	" "	" " = 5%
6	" "	" " = 10%
7	Price forecasted with trend calculated from 1977-82 data	" " = 2%
8	" "	" " = 5%
9	" "	" " = 10%
10	Same as Scenario 7, but with direct judgement in selected sectors	" " = 2%

11	"	"	"	"	= 5%
12	"	"	"	"	= 10%

Note that there are no complete time series for Sector 3 (Sugar cane) and Sector 12 (Crude petroleum and natural gas) eligible for use in regression.

The following graphs and figures show the total exports in real terms as estimated from these scenarios. For simplification, only data at five-year intervals are used.

In the first three scenarios, we assumed that relative prices remain at the 1982 level. This may not be too implausible because it represents identical movement of domestic and foreign prices. In an economy as open as Taiwan, the domestic price may quite possibly follow the path of the world price, taking into consideration a time lag, as we have done in this paper.

These three scenarios are the most modest, especially Scenario 1 where the annual growth rate of total exports is as low as 4% between 1995 and 2000. In Scenario 1, total world exports are assumed to grow at 2% per annum, in Scenario 2, 5%, and in Scenario 3, 10%.

In the second set of scenarios (4-6), we use the projected value of relative price based on the 1966-1982 regression on time:

$$(7) \ln P_t = a + b.t$$

And in Scenarios 7-9, price projection is based on the 1977-1982 regression.

Table 1 12 Forecasting Scenarios of Taiwan's Total Exports

	1980	1985	1990	1995	2000
SC1	639.7	923.78 (8%)	1218.10 (6%)	1521.44 (5%)	1846.77 (4%)
SC2	639.7	949.59 (8%)	1312.21 (7%)	1724.03 (6%)	2222.37 (5%)
SC3	639.7	1000.61 (9%)	1565.82 (9%)	2505.49 (10%)	4423.13 (12%)
SC4	639.7	1040.95 (10%)	1765.44 (11%)	2820.53 (10%)	4795.83 (11%)
SC5	639.7	1068.57 (11%)	1901.18 (12%)	3258.86 (11%)	6175.27 (14%)
SC6	639.7	1123.32 (12%)	2262.93 (15%)	4868.17 (17%)	13199.09 (22%)
SC7	639.7	973.84 (9%)	1470.51 (9%)	2275.25 (9%)	3969.37 (12%)
SC8	639.7	1000.11 (9%)	1589.47 (10%)	2661.10 (11%)	5253.24 (15%)
SC9	639.7	1052.1 (10%)	1906.97 (13%)	4039.88 (16%)	11862.58 (24%)
SC10	639.7	973.73 (9%)	1471.06 (9%)	2277.77 (9%)	3974.70 (12%)
SC11	639.7	999.99 (9%)	1590.00 (10%)	2663.73 (11%)	5259.05 (15%)
SC12	639.7	1051.96 (10%)	1907.45 (13%)	4092.91 (16%)	11870.75 (24%)

Note: Figures in parentheses are average annual growth rates

Fig. 1 Scenarios 1-3 of Taiwan's Total Exports

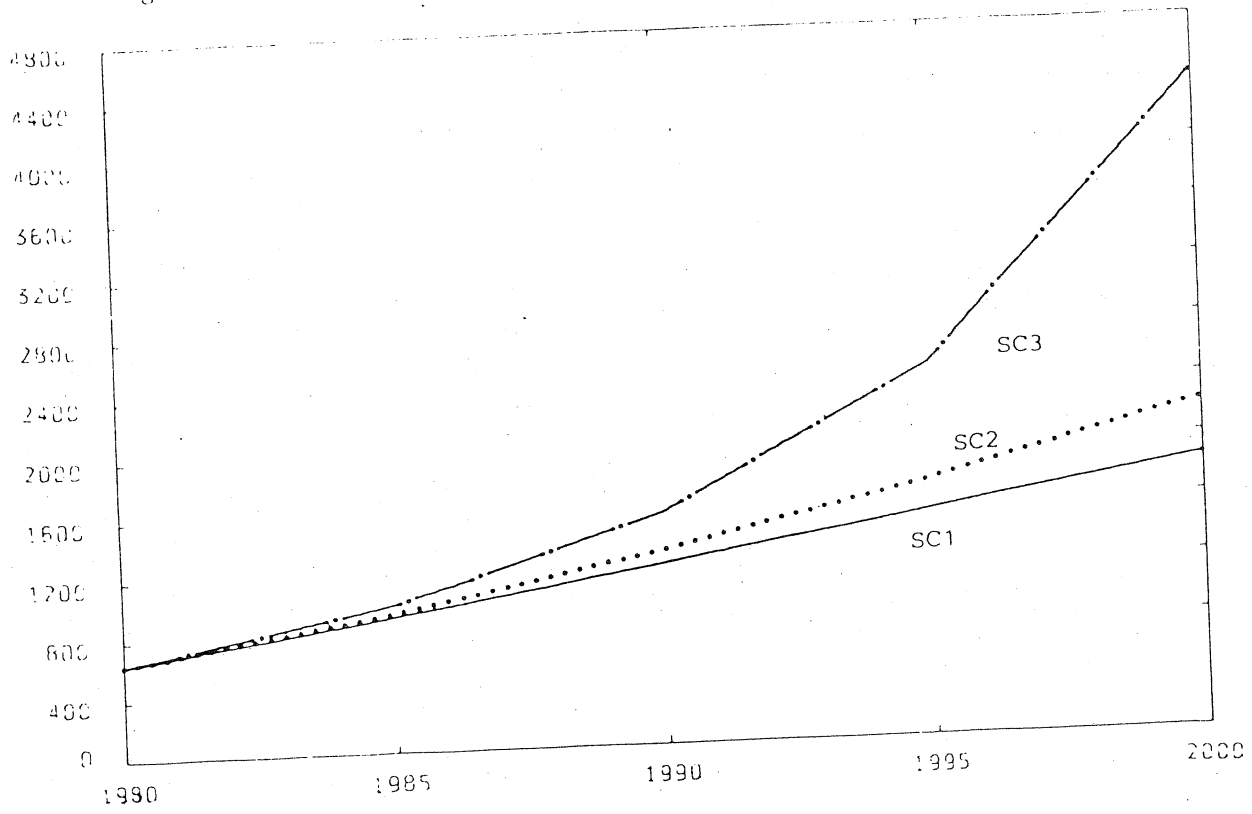


Fig. 2 Scenarios 4-6 of Taiwan's Total Exports

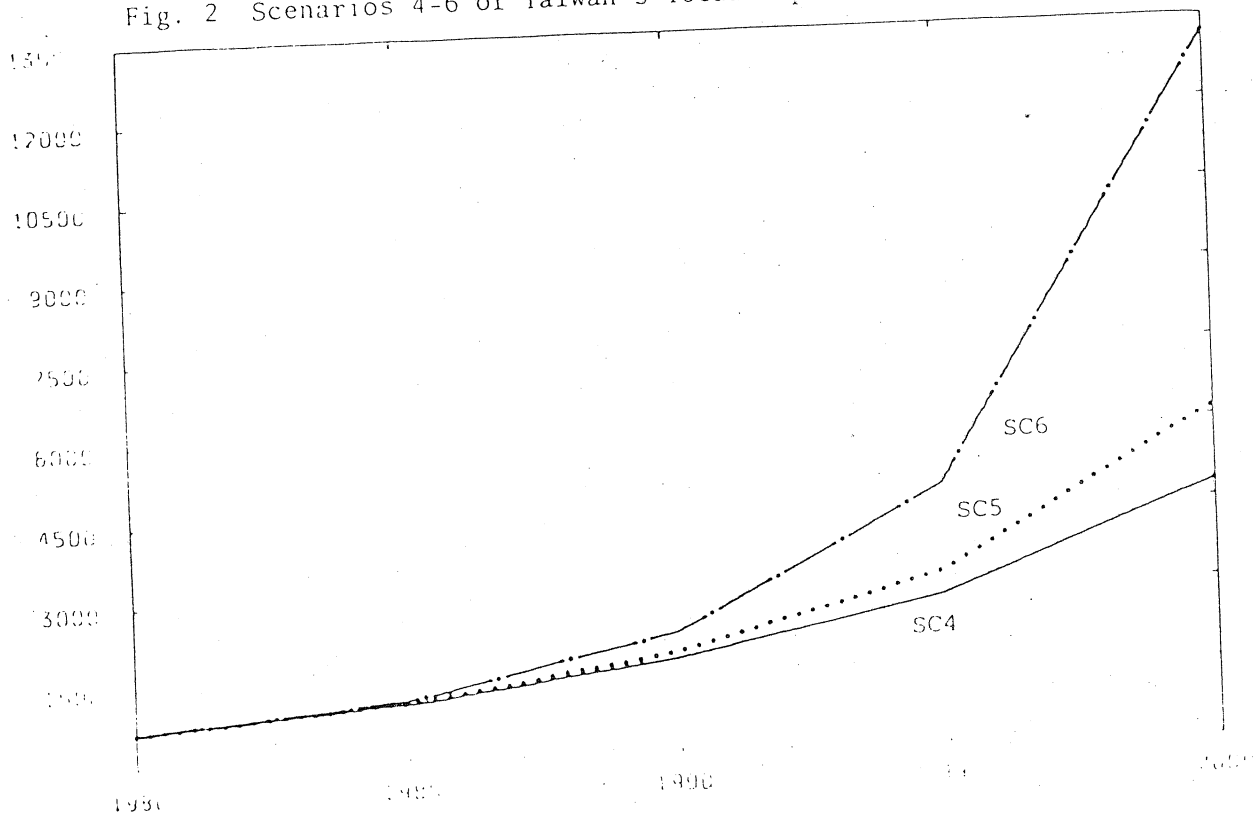


Fig. 3 Scenarios 7-9 of Taiwan's Total Exports

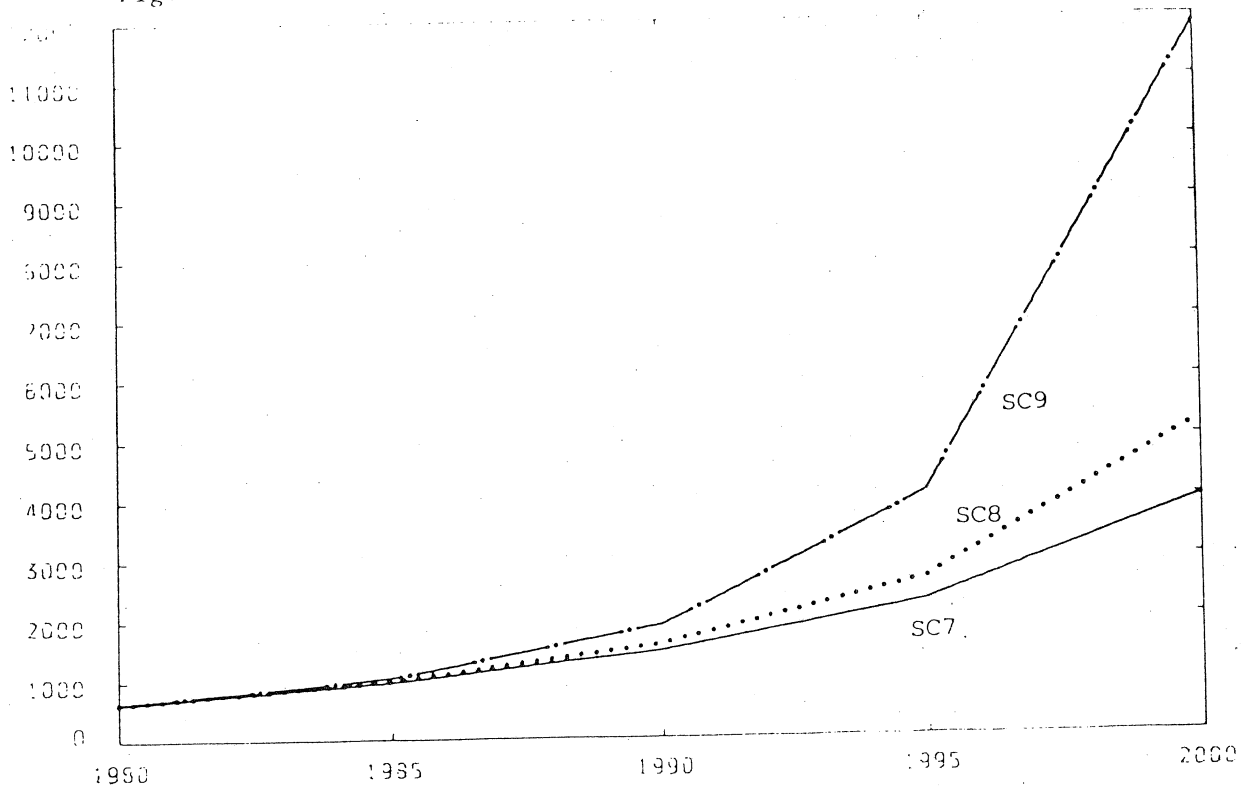
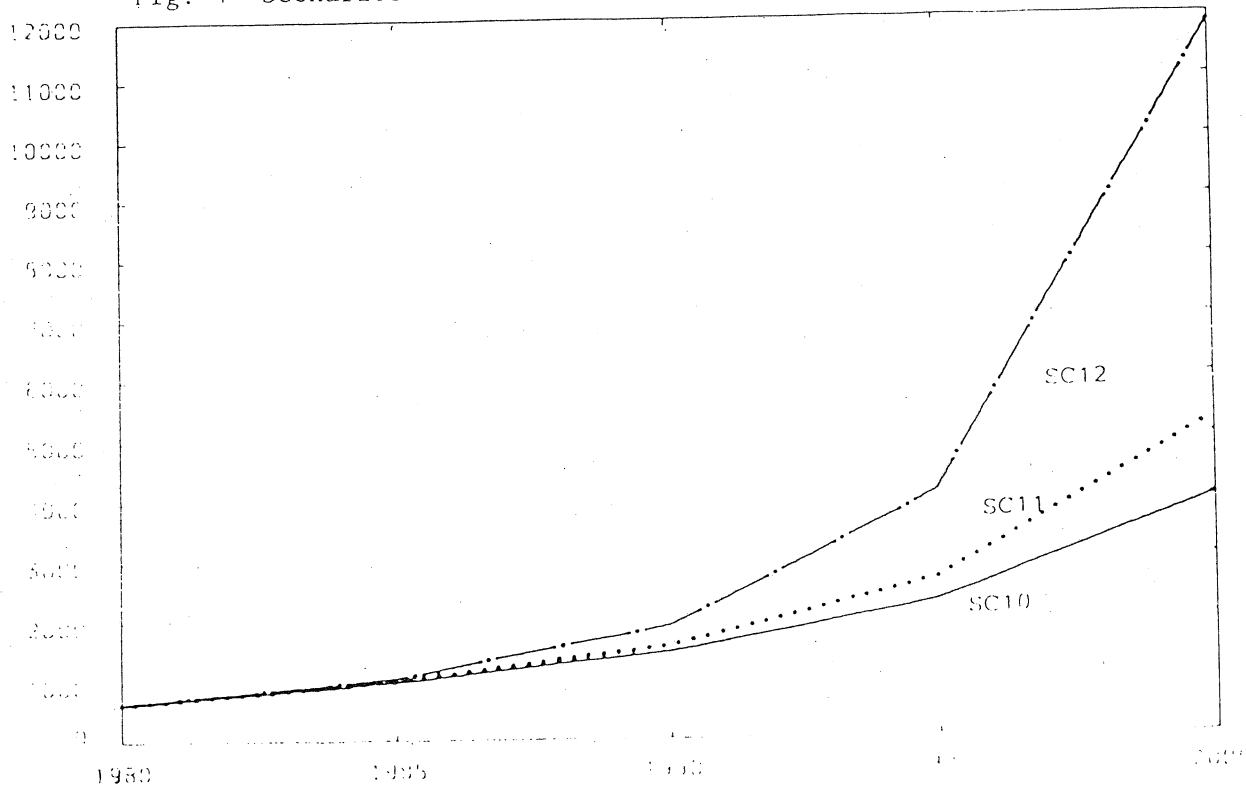


Fig. 4 Scenarios 10-12 of Taiwan's Total Exports



While we observed from Section IV.2 that price effects are negative, unchanged relative prices lead to smaller growth of total exports from Taiwan than do prices with trend. This implies that some important sectors have had negative trends of relative prices in the past, and such negative trends were more serious in the period 1977-1982 than in 1966-1982. This phenomenon is especially obvious in the following sectors: Sectors 23-29 and Section 51-53.

VI. Concluding Remarks

Though there is not much to be concluded from a technical paper like this, some words have to be said at least for future reference.

This work has been done for two purposes:

1. It provides future forecasts for possible policy consideration;
2. It is the beginning of long-term project -- the building of a complete INFORUM-type model for Taiwan.

The first purpose is perhaps well fulfilled. We have made estimations and forecasts on disaggregated data, which has been done with linkage to models of most of Taiwan's major trading partners. We are, therefore, confident that the results are reasonable.

Although this paper has also fulfilled the second purpose, there is still much to do in the future. It is hoped that a complete and better model of the INFORUM-type can be finished in due course.

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 (not attached due to space limit)

Appendix A

Weights for Calculating Relative Price Indices

Sector	Weights used in time lag					
	0	-1	-2	-3	-4	-5
1TAINT	0.6030	0.1347	0.0000	0.0478	0.1272	0.0873
2TAINT	0.6030	0.1347	0.0000	0.0478	0.1272	0.0873
3TAINT	0.1291	0.0000	0.0307	0.1522	0.2957	0.3924
4TAINT	0.6030	0.1347	0.0000	0.0478	0.1272	0.0873
5TAINT	0.5067	0.1979	0.0459	0.0145	0.0572	0.1678
6TAINT	0.6081	0.2614	0.0718	0.0000	0.0066	0.0521
7TAINT	0.6081	0.2614	0.0718	0.0000	0.0066	0.0521
8TAINT	0.6081	0.2614	0.0718	0.0000	0.0066	0.0521
9TAINT	0.2811	0.0000	0.0275	0.1875	0.3037	0.2002
10TAINT	0.2103	0.3099	0.1987	0.0408	0.0000	0.2404
11TAINT	0.1199	0.0961	0.1007	0.1384	0.2137	0.3313
12TAINT	0.2059	0.1759	0.2057	0.2297	0.1829	0.0000
13TAINT	0.2239	0.1903	0.2056	0.2153	0.1649	0.0000
14TAINT	0.0746	0.1531	0.1532	0.1377	0.1696	0.3118
15TAINT	0.0000	0.2407	0.2427	0.1503	0.1076	0.2588
16TAINT	0.1939	0.0000	0.0975	0.2809	0.3446	0.0830
17TAINT	0.0000	0.1551	0.2010	0.1949	0.1933	0.2551
18TAINT	0.6081	0.2614	0.0718	0.0000	0.0066	0.0521
19TAINT	0.0000	0.1623	0.1863	0.1608	0.1745	0.3162
20TAINT	0.1778	0.0000	0.0793	0.2463	0.3314	0.1651
21TAINT	0.0000	0.2407	0.2427	0.1503	0.1076	0.2588
22TAINT	0.4533	0.2873	0.1293	0.0199	0.0000	0.1102
23TAINT	0.0000	0.1331	0.1729	0.1773	0.2044	0.3123
24TAINT	0.1248	0.0000	0.0567	0.1945	0.3128	0.3111
25TAINT	0.2973	0.1832	0.1266	0.1127	0.1267	0.1535
26TAINT	0.6570	0.1442	0.0000	0.0497	0.1182	0.0309
27TAINT	0.3591	0.1372	0.1249	0.1878	0.1910	0.0000
28TAINT	0.4494	0.0000	0.0103	0.2037	0.3035	0.0331
29TAINT	0.2168	0.0000	0.0151	0.1496	0.2912	0.3273
30TAINT	0.3374	0.1041	0.0745	0.1420	0.2000	0.1420
31TAINT	0.3581	0.2562	0.1076	0.0000	0.0203	0.2574
32TAINT	0.1222	0.0000	0.0796	0.2319	0.3279	0.2385
33TAINT	0.0000	0.1721	0.2107	0.1883	0.1777	0.2512
34TAINT	0.1743	0.2219	0.1840	0.1238	0.1050	0.1910
35TAINT	0.1920	0.1267	0.1731	0.2374	0.2259	0.0449
36TAINT	0.3880	0.0436	0.0538	0.2016	0.2702	0.0427
37TAINT	0.3753	0.0664	0.0232	0.1169	0.2186	0.1995
38TAINT	0.4963	0.1411	0.0251	0.0528	0.1285	0.1563
39TAINT	0.0000	0.1219	0.0694	0.0198	0.1501	0.6385
40TAINT	0.2234	0.0595	0.0586	0.1446	0.2413	0.2726
41TAINT	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667
42TAINT	0.4533	0.2873	0.1293	0.0199	0.0000	0.1102
43TAINT	0.1778	0.0000	0.0793	0.2463	0.3314	0.1651
44TAINT	0.2459	0.0898	0.1018	0.1821	0.2311	0.1493
45TAINT	0.2168	0.1307	0.0475	0.0295	0.1386	0.4369

Appendix A (Cont'd)

Sector	Weights used in time lag					
	0	-1	-2	-3	-4	-5
46TAINT	0.2186	0.1381	0.0942	0.0979	0.1597	0.2913
47TAINT	0.3204	0.1263	0.1350	0.2087	0.2097	0.0000
48TAINT	0.0000	0.0014	0.0038	0.0711	0.2673	0.6564
49TAINT	0.2850	0.1682	0.1491	0.1287	0.1326	0.1366
50TAINT	0.1049	0.1450	0.0836	0.0405	0.1360	0.4901
51TAINT	0.2590	0.2401	0.2164	0.1764	0.1081	0.0000
52TAINT	0.1851	0.2013	0.2078	0.1939	0.1491	0.0628
53TAINT	0.1934	0.2045	0.1924	0.1664	0.1353	0.1081
54TAINT	0.2160	0.1215	0.0708	0.0801	0.1662	0.3454
55TAINT	0.2537	0.2348	0.1993	0.1534	0.1033	0.0553
56TAINT	0.1465	0.1826	0.2327	0.2501	0.1882	0.0000
57TAINT	0.2406	0.1141	0.0504	0.0626	0.1641	0.3682
58TAINT	0.0634	0.1626	0.1962	0.1939	0.1850	0.1991
59TAINT	0.1154	0.1894	0.1355	0.0707	0.1121	0.3769
60TAINT	0.2797	0.2160	0.0881	0.0000	0.0560	0.3602
61TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
62TAINT	0.2250	0.1470	0.1835	0.2365	0.2080	0.0000
63TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
64TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
65TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
66TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
67TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
68TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
69TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
70TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
71TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
72TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
73TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
74TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
75TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527
76TAINT	0.1961	0.0000	0.0757	0.2452	0.3302	0.1527

Appendix B

Trade Share by Countries of Destination of Taiwan's Exports

SECTOR	YEAR 1979										ROW
	SHARE OF TAIWANESE EXPORTS GOING TO:										
	USA	JAPAN	CANADA	EEC	NZ	MIDDLE EAST	HK S.	SING KOREA			
1	0.001697	0.014046	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.984257
2	0.739993	0.000002	0.004569	0.112726	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.142709
3	0.045564	0.000911	0.000000	0.003172	0.000000	0.000000	0.000000	0.005704	0.016917	0.000000	0.944650
4	0.435620	0.010522	0.000189	0.014024	0.059073	0.000785	0.000000	0.030523	0.000000	0.000000	0.463656
5	0.561306	0.031521	0.019088	0.025853	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.330925
6	0.300671	0.048908	0.000000	0.409360	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.241061
7	0.067595	0.017957	0.014782	0.796147	0.000081	0.000081	0.000081	0.026764	0.000000	0.000000	0.076675
8	0.018852	0.003871	0.000031	0.009420	0.000292	0.000292	0.000292	0.035411	0.000000	0.000000	0.932123
9	0.074819	0.166064	0.009456	0.151804	0.000000	0.000000	0.000000	0.135810	0.000000	0.000000	0.462047
10	0.157196	0.045997	0.019751	0.555747	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.221309
11	0.004403	0.005532	0.000000	0.441103	0.000000	0.000000	0.000000	0.003210	0.000000	0.000000	0.545752
12	0.000000	0.000000	0.000000	0.001307	0.922673	0.000000	0.000000	0.000000	0.000000	0.000000	0.076021
13	0.000000	0.000019	0.000000	0.755606	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.044375
14	0.094500	0.253695	0.121390	0.018698	0.189688	0.000000	0.000000	0.220286	0.000000	0.000000	0.101742
15	0.000000	0.000000	0.000000	0.085242	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.914759
16	0.151489	0.029492	0.000000	0.585800	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.233218
17	0.239822	0.323891	0.000000	0.039645	0.000000	0.000000	0.000000	0.074244	0.000000	0.000000	0.322398
18	0.361050	0.130897	0.061492	0.312336	0.000000	0.000000	0.000000	0.103117	0.000000	0.000000	0.031108
19	0.913563	0.013335	0.001159	0.070776	0.000000	0.000000	0.000000	0.000253	0.000000	0.000000	0.000913
20	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
21	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000
22	0.001514	0.221321	0.000000	0.000000	0.000000	0.000000	0.000000	0.449817	0.000000	0.000000	0.327348
23	0.964680	0.017360	0.000000	0.016375	0.000000	0.000000	0.000000	0.001385	0.000000	0.000000	0.000000
24	0.088862	0.062106	0.089117	0.549855	0.000088	0.000088	0.000088	0.029732	0.000000	0.000000	0.180239
25	0.065617	0.249289	0.035964	0.337166	0.000032	0.000032	0.000032	0.011879	0.000000	0.000000	0.300034
26	0.302495	0.522815	0.067981	0.068925	0.012512	0.012512	0.012512	0.005905	0.000000	0.000000	0.019368
27	0.106948	0.510026	0.000858	0.035547	0.000001	0.000001	0.000001	0.280024	0.000000	0.000000	0.066596
28	0.013744	0.244110	0.000000	0.099642	0.000157	0.000157	0.000157	0.596840	0.000000	0.000000	0.045507
29	0.004284	0.255293	0.000160	0.542394	0.000000	0.000000	0.000000	0.094374	0.000000	0.000000	0.103496
30	0.077547	0.412340	0.000301	0.146896	0.000011	0.000011	0.000011	0.126303	0.000000	0.000000	0.236602

Appendix B(Cont'd)

31	0.046384	0.078758	0.032091	0.060243	0.000000	0.037530	0.744994
32	0.033367	0.100493	0.001454	0.492655	0.000000	0.124617	0.247416
33	0.101512	0.132046	0.013091	0.105877	0.000000	0.091750	0.555723
34	0.463522	0.072184	0.066436	0.011252	0.000070	0.307763	0.078753
35	0.154174	0.287422	0.001127	0.046797	0.000000	0.471939	0.038450
36	0.408389	0.452612	0.017175	0.072644	0.000000	0.017756	0.031425
37	0.191871	0.306840	0.001828	0.056892	0.000000	0.071598	0.370971
38	0.232272	0.220279	0.259746	0.171459	0.060656	0.022480	0.033109
39	0.235083	0.304602	0.004407	0.324636	0.015485	0.020004	0.095783
40	0.488930	0.381908	0.009938	0.071266	0.003475	0.024148	0.020334
41	0.235355	0.314541	0.000023	0.184871	0.210909	0.032278	0.022023
42	0.269439	0.298206	0.002472	0.191881	0.001141	0.081876	0.154985
43	0.340100	0.388004	0.008156	0.228514	0.001385	0.011442	0.022400
44	0.269438	0.298205	0.002469	0.191877	0.001139	0.081884	0.154989
45	0.003241	0.994430	0.000000	0.002329	0.000000	0.000000	0.000000
46	0.647225	0.332643	0.000000	0.011687	0.000000	0.004474	0.003970
47	0.160232	0.624659	0.032150	0.163412	0.000000	0.013459	0.006089
48	0.073366	0.371676	0.013842	0.486463	0.000103	0.008086	0.046465
49	0.169148	0.463186	0.001023	0.196556	0.002976	0.081350	0.085760
50	0.134120	0.696702	0.002606	0.135586	0.000346	0.015109	0.015532
51	0.119200	0.148868	0.043853	0.145109	0.305843	0.003939	0.233189
52	0.060188	0.406173	0.000070	0.303274	0.004267	0.067852	0.158177
53	0.290403	0.281660	0.037123	0.186743	0.014241	0.043942	0.145888
54	0.185235	0.634455	0.000578	0.148053	0.000027	0.008050	0.023603
55	0.576162	0.364711	0.002652	0.033405	0.000005	0.021371	0.001695
56	0.102988	0.765989	0.000409	0.084240	0.000398	0.042220	0.003757
57	0.381672	0.534675	0.000096	0.067305	0.000223	0.009833	0.006196
58	0.000298	0.996716	0.000039	0.000368	0.000000	0.000021	0.002559
59	0.136768	0.664421	0.000117	0.155009	0.000038	0.008626	0.035012
60	0.141703	0.507518	0.000013	0.161050	0.000000	0.149972	0.039745
61	0.193198	0.321823	0.000704	0.140461	0.018740	0.178277	0.146797
62	0.113604	0.407194	0.000000	0.010617	0.000000	0.113162	0.355423

Appendix C

Conversion Table and Groups Name

C.1 Names of the SITC Groups

Serial No.	Contents	SITC Four-digit Code				
(1)	MEAT AND LIVE ANIMALS	2	11	199	2911	2919
(2)	DAIRY AND EGGS	1	201	299		
(3)	FISH	1	301	399		
(4)	GRAINS UNMILLED	3	401	419	421	430 459
(5)	GRAINS MILLED	2	422	422	460	499
(6)	FRESH FRUITS AND VEGETABLES	2	501	519	540	549
(7)	PRESERVED FRUITS AND VEGETABLES	2	520	539	551	599
(8)	SUGAR	1	611	699		
(9)	COFFEE, TEA, COCOA, ETC	1	711	799		
(10)	FEED STUFFS	1	811	899		
(11)	FATS AND OILS	3	911	999	2211	2249 4111 4999
(12)	BEVERAGES	1	1110	1129		
(13)	TOBACCO AND TOBACCO PRODUCTS	1	1201	1999		
(14)	HIDES, LEATHER, FURS	2	2101	2199	6111	6199
(15)	RUBBER (INCL. SYNTH) -- CRUDE	1	2311	2399		
(16)	CRUDE WOOD	1	2411	2499		
(17)	PULP AND PAPER	1	2511	2599		
(18)	SILK, OTH. NON-MANMADE FIBERS	2	2611	2619	2640	2699
(19)	WOOL	1	2621	2629		
(20)	COTTON	1	2631	2639		
(21)	CRUDE FERTILIZERS	1	2711	2719		
(22)	MARBLE, SAND, AND OTH. CRUDE MIN	1	2731	2799		
(23)	IRON ORE AND SCRAP	1	2811	2829		
(24)	NONFERROUS ORES AND SCRAP	1	2811	2899		
(25)	VEGETABLE MATERIALS, NES	1	2921	2999		
(26)	COAL, COKE	1	3211	3219		
(27)	CRUDE PETROLEUM	1	3310	3310		
(28)	PETROLEUM PRODUCTS	1	3321	3399		
(29)	GAS, NATURAL AND SYNTHETIC	1	3411	3499		
(30)	ELECTRICAL ENERGY	1	3510	3510		
(31)	CHEMICAL ELEMENTS	1	5121	5199		
(32)	DYEING, TANNING, AND COAL CHEM	1	5201	5399		
(33)	MEDICINAL CHEMICALS	1	5401	5499		
(34)	PERFUME MAT. AND OTH. CHEM. NES	2	5501	5599	5991	5997
(35)	MANUFACTURED FERTILIZERS	1	5601	5699		

Appendix C.1 (Cont'd)

(35)	MANUFACTURED FERTILIZERS	1	5601	5699
(36)	EXPLOSIVES	1	5701	5799
(37)	PLASTIC MATERIALS	1	5801	5899
(38)	RUBBER MANUFACTURES	1	6210	6299
(39)	VENEERS, PLYWOOD	1	6310	6399
(40)	NEWSPRINT	1	6411	6411
(41)	KRAFTPAPER	1	6413	6413
(42)	FIBREBOARD	1	6416	6416
(43)	OTHER PAPER AND PAPERBOARD	3	6412	6412 6414 6415 6417 6419
(44)	ART. OF PAPER AND PAPERBOARD	1	6421	6429
(45)	YARNS AND THREADS	1	6511	6519
(46)	COTTON FABRICS	1	6521	6529
(47)	OTH TEXT FAB EXC FLOOR COVERINGS	1	6531	6569
(48)	FLOOR COVERINGS	1	6571	6579
(49)	STONE AND BRICKS	1	6601	6639
(50)	GLASS	1	6641	6659
(51)	POTTERY, PEARLS, PRECIOUS GEMS	1	6661	6699
(52)	PIG IRON	1	6711	6719
(53)	IRON AND STEEL INGOTS AND BARS	1	6721	6739
(54)	UNIVERSALS AND PLATES	1	6741	6749
(55)	HOOPS AND RAIL TRACK	1	6750	6769
(56)	WIRE AND TUBES	1	6770	6789
(57)	IRON AND STEEL CASTINGS	1	6791	6799
(58)	COPPER	1	6821	6829
(59)	ALUMINUM	1	6841	6849
(60)	LEAD AND ZINC	1	6851	6859
(61)	OTHER NONFERROUS METALS	3	6811	6819 6831 6839 6871 6899
(62)	FINISHED STRUCTURAL PARTS	1	6911	6919
(63)	METAL CONTAINERS	1	6921	6929
(64)	WIRE PRODUCTS	1	6931	6939
(65)	HARDWARE	1	6941	6999
(66)	BOILERS AND TURBINES	2	7111	7113 7116 7116
(67)	AIRCRAFT ENGINES	1	7114	7114
(68)	INTERNAL COMBUSTION ENGINES	1	7115	7115
(69)	OTHER POWER MACHINERY	1	7117	7119
(70)	AGRICULTURAL MACHINERY	1	7121	7129
(71)	OFFICE MACHINES	2	7141	7142 7149 7149
(72)	COMPUTER AND RELATED EQUIPMENT	1	7143	7143
(73)	METAL-WORKING MACHINERY	1	7151	7159
(74)	TEXTILE AND LEATHER MACHINERY	1	7171	7179
(75)	PAPER MILL MACHINES	1	7181	7181
(76)	PRINTING MACHINES	1	7182	7182

Appendix C.1 (Cont'd)

(	77)	FOOD PROCESSING MACHINES	1	7183	7183
(	78)	CONSTRUCTION MACHINES	1	7184	7184
(	79)	MINERAL CRUSHING MACHINES	1	7185	7185
(	80)	HEATING AND COOLING EQUIPMENT	1	7191	7191
(	81)	PUMPS	1	7192	7192
(	82)	MECHANICAL HANDLING EQUIPMENT	1	7193	7193
(	83)	ALL OTHER NON-ELECTRICAL, NES	1	7195	7199
(	84)	ELECTRIC POWER MACHINES	1	7221	7221
(	85)	ELECTRICAL DISTRIB. EQUIP	1	7222	7239
(	86)	TELEVISION SETS AND RADIOS, ETC	1	7241	7249
(	87)	APPLIANCES, DOMESTIC	2	7250	7250 7194 7194
(	88)	MEDICAL ELECTRICAL APPLIANCES	1	7261	7269
(	89)	BATTERIES	1	7291	7291
(	90)	LAMPS	1	7292	7292
(	91)	TRANSISTORS	1	7293	7293
(	92)	ELECTRICAL MEASURING INSTRUMENTS	1	7295	7295
(	93)	OTHER ELECTRICAL MACH., NEW	2	7294	7294 7296 7299
(	94)	RAILWAY VEHICLES	1	7311	7319
(	95)	PERSONAL AUTOS	1	7321	7321
(	96)	BUSSES AND TRUCKS	1	7322	7325
(	97)	AUTO BODIES AND CHASSIS	1	7326	7328
(	98)	MOTORCYCLES	1	7329	7329
(	99)	ROAD VEHICLES	1	7331	7339
(	100)	AIRCRAFT AND PARTS	1	7341	7349
(	101)	WARSHIPS	1	7351	7351
(	102)	SHIPS AND BOATS	1	7353	7359
(	103)	SANITARY, PLUMBING, HEAT. FIXTURES	1	8121	8129
(	104)	FURNITURE	1	8210	8210
(	105)	TRAVEL GOODS, HANDBAGS	1	8310	8310
(	106)	CLOTHING	1	8411	8499
(	107)	FOOTWEAR	1	8510	8510
(	108)	SCIENTIFIC, MEDICAL INSTRUMENTS	2	8611	8613 8617 8619
(	109)	PHOTOGRAPHIC SUPPLIES	3	8614	8616 8623 8624 8630 8630
(	110)	WATCHES AND CLOCKS	1	8641	8649
(	111)	MUSICAL INSTRUMENTS	1	8914	8919
(	112)	PHONOGRAPHS AND RECORDS	1	8911	8912
(	113)	PRINT MATTER	1	8921	8929
(	114)	ART	2	8930	8930 8960 8960
(	115)	TOYS AND CARRIAGES, GAMES	1	8941	8949
(	116)	OFFICE SUPPLIES	1	8951	8951
(	117)	JEWELRY	1	8971	8979
(	118)	MANUFACTURES, NES	1	8991	8999
(	119)	COMMERCIAL AND TRANSACT., NSK	1	9110	9999

Appendix

C.2 Conversion Table, SITC to I-0 (76) Sectors

1	4	60.250	70.250	80.250	180.250
2	1	251.000			
3	1	91.000			
4	4	10.250	20.250	40.250	50.250
5	2	150.500	210.500		
6	1	31.000			
7	2	170.500	250.500		
8	1	161.000			
9	2	240.500	250.500		
10	0	240.500			
11	2	220.500	420.500		
12	2	190.500	230.500		
13	1	191.000			
14	1	361.000			
15	1	371.000			
16	1	311.000			
17	1	341.000			
18	1	301.000			
19	1	301.000			
20	1	301.000			
21	1	381.000			
22	2	130.500	140.500		
23	1	111.000			
24	1	111.000			
25	1	51.000			
26	1	101.000			
27	1	121.000			
28	1	411.000			
29	1	121.000			
30	1	621.000			
31	3	200.330	430.330	440.340	
32	1	441.000			
33	2	340.500	440.500		
34	1	441.000			
35	1	381.000			
36	1	441.000			
37	1	401.000			
38	1	371.000			
39	1	321.000			
40	1	351.000			
41	1	341.000			
42	1	341.000			
43	1	341.000			
44	1	341.000			
45	1	261.000			
46	1	281.000			
47	1	241.000			

Note: Column 1 shows the number of SITC groups as given in Table C.1; Column 2 shows in how many sectors this SITC group will be broken down. Each of the other columns indicates the number of the I-0 sector and the share of the SITC group attached. For example, 60.250 means the I-0 sector number 60 with a weigh of 0.25 belongs to this SITC group.

Appendix C.2 (Cont'd)

48	1	271.000						
49	2	450.500	460.500					
50	1	471.000						
51	1	481.000						
52	1	491.000						
53	1	491.000						
54	1	501.000						
55	1	501.000						
56	1	501.000						
57	1	501.000						
58	1	531.000						
59	2	510.500	520.500					
60	1	531.000						
61	1	531.000						
62	1	531.000						
63	1	531.000						
64	1	531.000						
65	1	531.000						
66	1	541.000						
67	1	541.000						
68	1	541.000						
69	1	541.000						
70	1	541.000						
71	1	541.000						
72	1	551.000						
73	1	541.000						
74	1	541.000						
75	1	541.000						
76	1	541.000						
77	1	541.000						
78	1	541.000						
79	1	541.000						
80	1	541.000						
81	1	541.000						
82	1	541.000						
83	1	541.000						
84	1	571.000						
85	1	571.000						
86	1	551.000						
87	1	551.000						
88	1	571.000						
89	1	571.000						
90	1	571.000						
91	1	571.000						
92	1	571.000						
93	1	571.000						
94	1	601.000						
95	1	591.000						
96	1	591.000						
97	1	591.000						
98	1	591.000						
99	1	591.000						
100	1	601.000						
101	1	581.000						
102	1	581.000						
103	4	460.250	500.250	520.250	530.250			
104	4	330.250	500.250	520.250	530.250			
105	2	360.500	400.500					
106	1	301.000						
107	3	360.330	370.330	400.340				
108	1	571.000						
109	1	571.000						
110	1	571.000						
111	1	571.000						
112	1	401.000						
113	1	351.000						
114	1	351.000						
115	1	401.000						
116	1	351.000						
117	1	141.000						
118	1	611.000						
119	1	621.000						

Regression Results of Export Functions

D.1 The CES Function without Lagged Variable

3	0.1096623E 01	0.5602026E 00	0.4136035E 00	#IND. VAR, SEE, RSQ, RBAR
	- .2010624E 00	0.1312493E 02	0.9858303E 00	RHO, AAPE, LASTERROR
INTERCEPT	- .1978404E 02	- .1692069E 01		
LP1	- .6584470E 00	- .2279086E 00		
LFD:11	0.7014319E 01	0.2049905E 01		
3	0.7578650E 00	0.7067385E 00	0.6534182E 00	#IND VAR, SEE, RSQ, RBAR
	0.1916909E 00	0.5725028E 01	- .6728516E 00	RHO, AAPE, LASTERROR
INTERCEPT	- .5284698E 02	- .3952258E 01		
LP2	- .2136153E-01	- .3096438E-01		
LFD:12	0.1429395E 02	0.4196026E 01		
3	0.6296732E 00	0.4462902E-01	- .6776756E-01	#IND. VAR, SEE, RSQ, RBAR
	0.6138338E 00	0.4509335E 01	- .5364494E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.9484393E 01	0.2725611E 01		
LP4	- .1222654E 00	- .1684830E 00		
LFD:14	0.7386607E 00	0.7870203E 00		
3	0.3359499E 00	0.2004301E 00	0.1063631E 00	#IND. VAR, SEE, RSQ, RBAR
	0.5863343E 00	0.2160019E 01	- .1800251E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.5648930E 01	0.1287921E 01		
LP5	0.8191721E 00	0.1342871E 01		
LFD:15	0.9968219E 00	0.1862547E 01		
3	0.8276570E 00	0.4057154E 00	0.3357996E 00	#IND. VAR, SEE, RSQ, RBAR
	0.5439304E 00	0.6470902E 01	0.1419647E 01	RHO, AAPE, LASTERROR
INTERCEPT	0.1655246E 02	0.2549810E 01		
LP6	- .1875055E 01	- .3291841E 01		
LFD:16	0.9453542E 00	0.5834589E 00		
3	0.9671086E 00	0.7636447E 00	0.7358383E 00	#IND. VAR, SEE, RSQ, RBAR
	0.4471266E 00	0.6866658E 01	0.8738708E-01	RHO, AAPE, LASTERROR
INTERCEPT	- .3539322E 02	- .1798996E 01		
LP7	- .1498983E 01	- .9977291E 00		
LFD:17	0.1239206E 02	0.4360016E 01		
3	0.4026994E 00	0.4649554E 00	0.4020090E 00	#IND. VAR, SEE, RSQ, RBAR
	0.3703738E 00	0.2277938E 01	- .5527115E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.7699284E 01	0.4337064E 01		
LP8	- .6698541E 00	- .1900066E 01		
LFD:18	0.2080550E 01	0.3744923E 01		
3	0.1617945E 01	0.6820593E 00	0.6446544E 00	#IND. VAR, SEE, RSQ, RBAR
	0.1351941E-01	0.1192998E 02	- .8934059E 00	RHO, AAPE, LASTERROR
INTERCEPT	- .1655990E 01	- .1230596E 00		
LP9	- .4339671E 01	- .1734352E 01		
LFD:19	0.9189202E 01	0.6007085E 01		
3	0.3919098E 00	0.5889357E 00	0.5067228E 00	#IND VAR, SEE, RSQ, RBAR
	0.3521123E 00	0.2856415E 01	0.4035606E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.3743733E 01	0.2672697E 00		
LP10	- .1693521E 01	- .3482696E 01		
LFD:110	0.3293294E 01	0.1114452E 01		

Appendix D.1 (Cont'd)

3	0.1036547E 01	0.4412857E 00	0.3789075E 00	#IND. VAR, SE, RSQ, RBAR
	0.4008269E-01	0.8236067E 01	0.6854897E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.2334251E 02	0.6807253E 01	
LP11		0.6334488E 00	0.9768077E 00	
LFD:11		- .3692245E 01	- .2984957E 01	
3	0.8107820E 00	0.6237876E 00	0.5162984E 00	#IND. VAR, SE, RSQ, RBAR
	0.7/31831E-01	0.8907877E 01	0.3661594E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.4075736E 02	0.1970601E 01	
LP13		- .7346125E 01	- .2903683E 01	
LFD:13		0.1938393E 01	0.7656921E 00	
3	0.3518403E 00	0.5813974E 00	0.4976770E 00	#IND. VAR, SE, RSQ, RBAR
	0.3117361E 00	0.2250024E 01	- .1019478E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.1409009E 02	0.5707228E 01	
LP14		- .2068765E 01	- .3695738E 01	
LFD:14		0.1738204E 01	0.2212896E 01	
3	0.2705860E 01	0.6555083E-01	- .4438435E-01	#IND. VAR, SE, RSQ, RBAR
	0.5224487E 00	0.2462325E 02	0.3082787E 01	RHO, AAPE, LASTERROR
INTERCEPT		0.3115993E 02	0.7614347E 00	
LP15		- .8311362E 00	- .1690433E 00	
LFD:15		- .3421382E 01	- .8783855E 00	
3	0.2647747E 00	0.6642326E 00	0.6247306E 00	#IND. VAR, SE, RSQ, RBAR
	0.1716080E 00	0.1388077E 01	0.1967354E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.2098766E 02	0.1963496E 02	
LP16		- .1233724E 00	- .5794864E 00	
LFD:16		- .1313404E 01	- .3754727E 01	
3	0.3136844E 00	0.8517467E 00	0.8343052E 00	#IND. VAR, SE, RSQ, RBAR
	0.6/03711E 00	0.1792914E 01	- .1781902E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.9556343E 01	0.1158280E 01	
LP17		- .1078222E 01	- .1035884E 01	
LFD:17		0.2580296E 01	0.4014097E 01	
3	0.3150852E 01	0.1913518E 00	0.7583059E-01	#IND. VAR, SE, RSQ, RBAR
	- .1569989E 00	0.4945363E 08	0.4410934E 00	RHO, AAPE, LASTERROR
INTERCEPT		- .9362629E 02	- .1617094E 01	
LP18		0.7125772E 01	0.1586716E 01	
LFD:18		0.1476091E 02	0.1776408E 01	
3	0.7231648E 00	0.7396994E 00	0.7090757E 00	#IND. VAR, SE, RSQ, RBAR
	0.1517419E 00	0.5491764E 01	- .7329636E 00	RHO, AAPE, LASTERROR
INTERCEPT		- .6034746E 02	- .3897993E 01	
LP19		0.1724208E 01	0.2229413E 01	
LFD:19		0.1387746E 02	0.5257263E 01	
3	0.5268687E 00	0.5545980E 00	0.5021977E 00	#IND. VAR, SE, RSQ, RBAR
	0.1147867E 00	0.3269258E 01	0.6445637E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.1199787E 02	0.2416105E 01	
LP20		- .9278641E 00	- .1610015E 01	
LFD:20		0.1113001E 01	0.2026633E 01	

Appendix D.1 (Cont'd)

3	0.3120783E 01	0.4803173E 00	0.4191782E 00	#IND. VAR, SEF, RSQ, RBAR
	0.5018413E-01	0.1163509E 09	0.3876723E 01	RHO, AAPE, LASTERROR
INTERCFPT		0.6477513E 02	0.4347821E 01	
LP21		- .2855497E 01	- .1018972E 01	
LFDH21		- .9727407E 01	- .2537406E 01	
3	0.2469029E 01	0.1308777E 00	0.1499479E-01	#IND. VAR, SEE, RSQ, RBAR
	0.3781800E 00	0.9602864E 08	0.4245392E 01	RHO, AAPE, LASTERROR
INTERCEPT		0.1680044E 02	0.1307660E 01	
LP22		0.5709947E 00	0.2387482E 00	
LFDH22		- .2978550E 01	- .1470201E 01	
3	0.1639369E 01	0.6555258E 00	0.6124666E 00	#IND. VAR, SEE, RSQ, RBAR
	- .1534951E 00	0.1439966E 02	- .5327952E 00	RHO, AAPE, LASTERROR
INTERCFPT		- .1203731E 03	- .3610281E 01	
LP23		0.5461058E 01	0.1663200E 01	
LFDH23		0.2258327E 02	0.5162162E 01	
3	0.1246021E 00	0.5653300E 00	0.5153099E 00	#IND. VAR, SEE, RSQ, RBAR
	0.5351518E 00	0.8054758E 00	- .8823967E-01	RHO, AAPE, LASTERROR
INTERCFPT		0.1193789E 02	0.6712055E 01	
LP24		- .2197202E 00	- .1100114E 01	
LFDH24		0.5191107E 00	0.2701355E 01	
3	0.3238291E 00	0.9334586E 00	0.9256302E 00	#IND. VAR, SEE, RSQ, RBAR
	0.1584930E 00	0.1615371E 01	0.1136627E 00	RHO, AAPE, LASTERROR
INTERCFPT		0.1408729E 01	0.5275633E 00	
LP25		- .1403085E 01	- .3819180E 01	
LFDH25		0.4666280E 01	0.1379865E 02	
3	0.2254160E 01	0.2507187E 00	0.1625680E 00	#IND. VAR, SEE, RSQ, RBAR
	0.6308901E 00	0.1823610E 02	0.2641048E 01	RHO, AAPE, LASTERROR
INTERCFPT		- .8622189E 01	- .9228905E 00	
LP26		0.1928987E 01	0.7909718E 00	
LFDH26		0.2399519E 01	0.1160625E 01	
3	0.4679579E 00	0.9393754E 00	0.9322431E 00	#IND. VAR, SEF, RSQ, RBAR
	0.3391693E 00	0.2485393E 01	- .1061745E 00	RHO, AAPE, LASTERROR
INTERCFPT		0.3147149E 02	0.4115382E 01	
LP27		- .4756965E 01	- .4743481E 01	
LFDH27		0.1852317E 01	0.2962890E 01	
3	0.3149180E 00	0.5394296E 00	0.4841273E 00	#IND. VAR, SEE, RSQ, RBAR
	0.7258765E 00	0.1731603E 01	0.2159653E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.8534807E 01	0.2725461E 01	
LP28		0.1189316E 01	0.2645013E 01	
LFDH28		0.1803778E-01	0.1680438E-01	
3	0.3589265E 00	0.8845909E 00	0.8710134E 00	#IND. VAR, SEE, RSQ, RBAR
	0.2503532E 00	0.2120446E 01	0.3414116E 00	RHO, AAPE, LASTERROR
INTERCFPT		- .7783560E 01	- .1356803E 01	
LP29		- .6300078E 00	- .9680691E 00	
LFDH29		0.5414683E 01	0.8641308E 01	

Appendix D.1 (Cont'd)

3 0. 3796908E 01 0. 4472999E-01 - . 6765471E-01 #IND. VAR, SEE, RSQ, RBAR
 0. 4178780E 00 0. 6715016E 08 - . 1536945E 02 RHO, AAPE, LASTERROR
 INTERCEPT 0. 5494221E 02 0. 8392513E 00
 LP30 - . 7133104E 01 - . 7882823E 00
 LFD130 - . 5620186E 00 - . 9700508E-01

3 0. 3803273E 00 0. 3077034E 00 0. 2262567E 00 #IND. VAR, SEE, RSQ, RBAR
 0. 3214763E 00 0. 2144689E 01 - . 6628742E 00 RHO, AAPE, LASTERROR
 INTERCEPT 0. 8270522E 01 0. 4370139E 01
 LP31 0. 9717308E 00 0. 1702710E 01
 LFD131 - . 2622923E-01 - . 4301986E-01

3 0. 2307997E 00 0. 9349703E 00 0. 9273196E 00 #IND. VAR, SEE, RSQ, RBAR
 0. 7382112E 00 0. 1316887E 01 - . 3667641E 00 RHO, AAPE, LASTERROR
 INTERCEPT 0. 1092436E 02 0. 2482270E 01
 LP32 - . 1071038E 01 - . 1716628E 01
 LFD132 0. 2318988E 01 0. 8547171E 01

3 0. 2967260E 00 0. 9672378E 00 0. 9633834E 00 #IND. VAR, SEE, RSQ, RBAR
 0. 3341538E 00 0. 1711942E 01 - . 3841419E 00 RHO, AAPE, LASTERROR
 INTERCEPT 0. 4952595E 01 0. 2384777E 01
 LP33 - . 7362768E 00 - . 1559807E 01
 LFD133 0. 3309547E 01 0. 1700833E 02

3 0. 1475779E 00 0. 9702637E 00 0. 9667654E 00 #IND. VAR, SEE, RSQ, RBAR
 0. 2713374E 00 0. 9189826E 00 0. 3096848E 00 RHO, AAPE, LASTERROR
 INTERCEPT 0. 2219634E 02 0. 7758670E 01
 LP34 - . 2636113E 01 - . 7447727E 01
 LFD134 0. 1240075E 01 0. 5052659E 01

3 0. 7683601E 00 0. 8532323E 00 0. 8359654E 00 #IND. VAR, SEE, RSQ, RBAR
 0. 4776111E 00 0. 5448934E 01 0. 4903221E-01 RHO, AAPE, LASTERROR
 INTERCEPT - . 2511241E 02 - . 2627470E 01
 LP35 0. 8311322E 00 0. 1185816E 01
 LFD135 0. 7586329E 01 0. 5205162E 01

3 0. 7580407E 00 0. 9088346E 00 0. 8981092E 00 #IND. VAR, SEE, RSQ, RBAR
 0. 7011219E 00 0. 5465336E 01 - . 3811626E 00 RHO, AAPE, LASTERROR
 INTERCEPT - . 4908329E 02 - . 9729637E 01
 LP36 0. 2250011E 00 0. 3190933E 00
 LFD136 0. 1383817E 02 0. 1189279E 02

3 0. 3969503E 00 0. 9122425E 00 0. 9019182E 00 #IND. VAR, SEE, RSQ, RBAR
 - . 1269376E 00 0. 2267573E 01 - . 1473808E 00 RHO, AAPE, LASTERROR
 INTERCEPT 0. 2206592E 01 0. 1454697E 01
 LP37 - . 1313514E 01 - . 2390944E 01
 LFD137 0. 4443996E 01 0. 8400024E 01

3 0. 1728426E 01 0. 1527458E 00 0. 5306891E-01 #IND. VAR, SEE, RSQ, RBAR
 0. 3073212E 00 0. 1516156E 02 - . 1075317E 01 RHO, AAPE, LASTERROR
 INTERCEPT 0. 2750505E 02 0. 2673885E 01
 LP38 - . 1933976E 01 - . 1259066E 01
 LFD138 - . 1378652E 01 - . 1319163E 01

Appendix D.1 (Cont'd)

3	0.5093782E 00	0.8977891E 00	0.8745879E 00	#IND. VAR, SEE, RSQ, RBAR
	0.1475346E 00	0.3481806E 01	-.1101627E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.2871547E 01	0.4827431E 00	
LP39		-.6246793E 00	-.7593292E 00	
LFD:39		0.3009678E 01	0.6542809E 01	
3	0.3235493E 00	0.9676901E 00	0.9638890E 00	#IND. VAR, SEE, RSQ, RBAR
	0.3197248E 00	0.1825809E 01	0.3345032E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.7686163E 01	0.2373410E 01	
LP40		-.1164446E 01	-.1520699E 01	
LFD:40		0.3338416E 01	0.1324491E 02	
3	0.6710683F 00	0.7511973E 00	0.7219265E 00	#IND. VAR, SEE, RSQ, RBAR
	0.5461451E 00	0.4021580E 01	0.4943752E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.1741748E 01	0.3971315E 00	
LP41		-.2411356E 00	-.4059875E 00	
LFD:41		0.2944819E 01	0.6881246E 01	
3	0.5535994E 00	0.5327830E 00	0.4778164E 00	#IND. VAR, SEE, RSQ, RBAR
	0.2447140E-01	0.3599235E 01	-.6298637E-01	RHO, AAPE, LASTERROR
INTERCEPT		0.1671634E 02	0.6144459E 01	
LP42		0.3503348E 00	0.5830216E 00	
LFD:42		-.1655553E 01	-.3936839E 01	
3	0.2436307E 00	0.9396390E 00	0.9325377E 00	#IND. VAR, SEE, RSQ, RBAR
	0.3437140E 00	0.1586818E 01	0.1899929E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.2109962E 01	0.1030072E 01	
LP43		0.1607701E 00	0.4009924E 00	
LFD:43		0.2276886E 01	0.1364931E 02	
3	0.4639959E 00	0.7600852E 00	0.7318600E 00	#IND. VAR, SEE, RSQ, RBAR
	0.6510532E 00	0.2854511E 01	0.3285179E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.6788319E 01	0.2843748E 01	
LP44		-.4645123E 00	-.7062865E 00	
LFD:44		0.2030859E 01	0.5034802E 01	
3	0.4859906E 00	0.3729393E 00	0.2991675E 00	#IND. VAR, SEE, RSQ, RBAR
	0.2591445E 00	0.3181530E 01	0.1297455E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.2054281E 02	0.8140045E 01	
LP45		-.1448383E 01	-.3151355E 01	
LFD:45		0.2611637E-01	0.1096866E 00	
3	0.8266304E 00	0.2445188E 00	0.2866700E-01	#IND. VAR, SEE, RSQ, RBAR
	0.5554802E 00	0.7824061E 01	0.4896564E 00	RHO, AAPE, LASTERROR
INTERCEPT		-.6925390E 00	-.2103390E-01	
LP46		-.2234947E 01	-.5693398E 00	
LFD:46		0.4592879E 01	0.1022993E 01	
3	0.2703773E 00	0.9415181E 00	0.9346379E 00	#IND. VAR, SEE, RSQ, RBAR
	0.5877540E 00	0.1843935E 01	0.2333031E 00	RHO, AAPE, LASTERROR
INTERCEPT		-.1157849E 01	-.3658597E 00	
LP47		0.4104660E 00	0.5647053E 00	
LFD:47		0.2788988E 01	0.1139125E 02	

Appendix D.1 (Cont'd)

3	0.5104357E	00	0.8855121E	00	0.8720430E	00	#IND. VAR, SEE, RSQ, RBAR
	0.7940532E	00	0.3538884E	01	0.8398647E	00	RHO, AAPE, LASTERROR
INTERCEPT	-	2558598E	01	-	5133742E	00	
LP49	-	9299522E	00	-	9293901E	00	
LFD:148	0.	4727295E	01	0.	1121624E	02	
3	0.4507747E	00	0.8389181E	00	0.8199673E	00	#IND. VAR, SEE, RSQ, RBAR
	0.3471611E	00	0.2400135E	01	0.4459923E	00	RHO, AAPE, LASTERROR
INTERCEPT	0.	1270756E	02	0.	2042273E	01	
LP49	-	1935695E	01	-	2178188E	01	
LFD:149	0.	2693318E	01	0.	6016476E	01	
3	0.4702068E	00	0.9077116E	00	0.8969542E	00	#IND. VAR, SEE, RSQ, RBAR
	0.5044639E	00	0.2675465E	01	0.3957577E	00	RHO, AAPE, LASTERROR
INTERCEPT	-	2472976E	01	-	5901973E	00	
LP50	0.	4685202E	00	0.	6074556E	00	
LFD:150	0.	3331699E	01	0.	1252676E	02	
3	0.2668922E	00	0.4811746E	00	0.4201363E	00	#IND. VAR, SEE, RSQ, RBAR
	0.2937645E	00	0.1889905E	01	0.1899872E	00	RHO, AAPE, LASTERROR
INTERCEPT	0.	1881420E	02	0.	7807978E	01	
LP51	-	1497621E	01	-	3586678E	01	
LFD:151	0.	3417937E	00	0.	2017832E	01	
3	0.5108607E	00	0.9286001E	00	0.9202001E	00	#IND. VAR, SEE, RSQ, RBAR
	0.1568093E	00	0.3637655E	01	-	5104790E	00
INTERCEPT	-	7296718E	01	-	1567230E	01	
LP52	0.	4709010E	00	0.	4652479E	00	
LFD:152	0.	3970580E	01	0.	1068477E	02	
3	0.3277038E	00	0.9434189E	00	0.9367622E	00	#IND. VAR, SEE, RSQ, RBAR
	0.1400275E	00	0.1905933E	01	0.2762680E	00	RHO, AAPE, LASTERROR
INTERCEPT	0.	2934442E	01	0.	9873313E	00	
LP53	-	1776590E	01	-	2272536E	01	
LFD:153	0.	4680524E	01	0.	1148143E	02	
3	0.3151345E	00	0.9691631E	00	0.9655352E	00	#IND. VAR, SEE, RSQ, RBAR
	0.6168094E	00	0.1874016E	01	0.4671478E	-01	RHO, AAPE, LASTERROR
INTERCEPT	-	1547689E	01	-	5190600E	00	
LP54	-	5703376E	00	-	1068052E	01	
LFD:154	0.	4532642E	01	0.	2225420E	02	
3	0.4213756E	00	0.9215920E	00	0.9123676E	00	#IND. VAR, SEE, RSQ, RBAR
	0.1792370E	00	0.2769112E	01	0.5795383E	00	RHO, AAPE, LASTERROR
INTERCEPT	-	1761796E	01	-	1596068E	01	
LP55	0.	2052172E	00	0.	4631492E	00	
LFD:155	0.	3334958E	01	0.	6671581E	01	
3	0.8359540E	00	0.9218365E	00	0.9126407E	00	#IND. VAR, SEE, RSQ, RBAR
	0.5327197E	00	0.5089584E	01	-	1604156E	01
INTERCEPT	0.	4507747E	01	0.	2438722E	01	
LP56	-	4518145E	01	-	5277058E	01	
LFD:156	0.	8201436E	01	0.	1042724E	02	

Appendix D.1 (Cont'd)

3	0.4622349E 00	0.9278697E 00	0.9193838E 00	#IND. VAR, SEE, RSQ, RBAR
	0.4830726E 00	0.2897602E 01	0.2143345E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.2490483E 01	0.7479190E 00	
LP57		- .4172510E 00	- .6518486E 00	
LFD:157		0.3348033E 01	0.1475353E 02	
3	0.7967337E 00	0.9205613E 00	0.9092129E 00	#IND. VAR, SEE, RSQ, RBAR
	0.4206882E 00	0.4401510E 01	- .3447857E 00	RHO, AAPE, LASTERROR
INTERCEPT		- .1062535E 02	- .1551156E 01	
LP58		- .6454413E 00	- .1382716E 01	
LFD:158		0.6224996E 01	0.5831668E 01	
3	0.6116703E 00	0.9268596E 00	0.9171076E 00	#IND. VAR, SEE, RSQ, RBAR
	0.1526380E-01	0.4022083E 01	0.2140846E 00	RHO, AAPE, LASTERROR
INTERCEPT		- .6073479E 01	- .1269611E 01	
LP59		- .1512729E 01	- .1319471E 01	
LFD:159		0.6351995E 01	0.1097117E 02	
3	0.1094126E 01	0.8003907E 00	0.7769072E 00	#IND. VAR, SEE, RSQ, RBAR
	- .2781706E 00	0.7372745E 01	- .1883945E 00	RHO, AAPE, LASTERROR
INTERCEPT		- .2169564E 02	- .1524587E 01	
LP60		0.1745726E 01	0.5967832E 00	
LFD:160		0.5862451E 01	0.6612002E 01	
3	0.6774108E 00	0.9128805E 00	0.9026312E 00	#IND. VAR, SEE, RSQ, RBAR
	0.3382750E 00	0.3947418E 01	- .1916466E 00	RHO, AAPE, LASTERROR
INTERCEPT		- .1875403E 02	- .2899197E 01	
LP61		- .4465601E 00	- .4804965E 00	
LFD:161		0.8418662E 01	0.1229836E 02	
3	0.1850021E 01	0.2675354E 00	0.1210425E 00	#IND. VAR, SEE, RSQ, RBAR
	- .1871223E 00	0.1709259E 02	- .7273026E 00	RHO, AAPE, LASTERROR
INTERCEPT		- .2040630E 02	- .5995700E 00	
LP62		0.1023108E 01	0.1662039E 00	
LFD:162		0.5909987E 01	0.1867423E 01	

D.2 The CES Function with Lagged Price Variable

3	0.1100870E 01	0.5567895E 00	0.4090528E 00	#IND VAR, SEF, RSQ, RBAR
	-.2350664E 00	0.1331367E 02	0.9748859E 00	RHO, AAPE, LASTERROR
INTERCEPT		-.2052362E 02	-.1563052E 01	
LP1		0.2884587E 00	0.5566181E-01	
LFD:11		0.6361629E 01	0.2172759E 01	
3	0.7536538E 00	0.7079886E 00	0.6572592E 00	#IND. VAR, SEE, RSQ, RBAR
	0.1694853E 00	0.5698976E 01	-.6356697E 00	RHO, AAPE, LASTERROR
INTERCEPT		-.4818315E 02	-.2719170E 01	
LP2		0.3226639E 00	0.3524923E 00	
LFD:12		0.1323532E 02	0.3355662E 01	
3	0.6090181E 00	0.1062790E 00	0.1135401E-02	#IND. VAR, SEF, RSQ, RBAR
	0.5370382E 00	0.4019880E 01	-.5324154E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.1362800E 02	0.2710782E 01	
LP4		0.1137953E 01	0.1096821E 01	
LFD:14		-.3329292E 00	-.2936528E 00	
3	0.3392714E 00	0.3821413E 00	0.3094521E 00	#IND VAR, SEF, RSQ, RBAR
	0.4231070E 00	0.1930744E 01	-.1255016E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.9209768E 01	0.4514660E 01	
LP5		0.2242794E 01	0.2708012E 01	
LFD:15		0.1089331E 01	0.2338187E 01	
3	0.8126517E 00	0.3939870E 00	0.3115149E 00	#IND. VAR, SEE, RSQ, RBAR
	0.5197459E 00	0.6577388E 01	0.1469315E 01	RHO, AAPE, LASTERROR
INTERCEPT		0.1309271E 01	0.1618347E 00	
LP6		-.2344997E 01	-.3139163E 01	
LFD:16		0.1685461E 01	0.1043204E 01	
3	0.9168447E 00	0.7875746E 00	0.7625834E 00	#IND. VAR, SEF, RSQ, RBAR
	0.4513984E 00	0.6912669E 01	-.1529102E 00	RHO, AAPE, LASTERROR
INTERCEPT		-.3556318E 02	-.2736796E 01	
LP7		-.3096836E 01	-.1738586E 01	
LFD:17		0.1071160E 02	0.3769981E 01	
3	0.4020482E 00	0.4666844E 00	0.4039413E 00	#IND VAR, SEE, RSQ, RBAR
	0.3377016E 00	0.2323313E 01	-.5516186E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.2988679E 01	0.1051895E 01	
LP8		-.8513075E 00	-.1917577E 01	
LFD:18		0.2298881E 01	0.3619457E 01	
3	0.1751374E 01	0.6274568E 00	0.5836282E 00	#IND VAR, SEF, RSQ, RBAR
	0.3379142E-01	0.1295959E 02	-.8942757E 00	RHO, AAPE, LASTERROR
INTERCEPT		-.2227850E 02	-.3291506E 01	
LP9		0.1663383E 01	0.2747264E 00	
LFD:19		0.8542416E 01	0.5280927E 01	
3	0.5927676E 00	0.9107444E-01	-.9071068E-01	#IND. VAR, SEF, RSQ, RBAR
	0.3147200E 00	0.3899692E 01	-.5265369E 00	RHO, AAPE, LASTERROR
INTERCEPT		-.8724715E 01	-.4187797E 00	
LP10		0.7998300E-01	0.8946000E-01	
LFD:10		0.4245736E 01	0.9340005E 00	

3	0. 1058769E 01	0. 4202031E 00	0. 3519917E 00	#IND. VAR, SEF, RSQ, RBAR
	0. 1965010E 00	0. 8689205E 01	0. 1536160E 00	RHO, AAFE, LASTERROR
	INTERCEPT	0. 1734503E 02	0. 1529205E 01	
	LP11	-. 5145529E 00	-. 4565209E 00	
	LFDX11	-. 1642692E 01	-. 6443416E 00	
3	0. 1201707E 01	0. 1735398E 00	-. 6259170E-01	#IND. VAR, SEE, RSQ, RBAR
	0. 3243966E 00	0. 1188707E 02	0. 2946224E 00	RHO, AAFE, LASTERROR
	INTERCEPT	-. 9313319E 01	-. 5163943E 00	
	LP13	-. 1464698E 01	-. 1565102E 00	
	LFDX13	0. 3975733E 01	0. 1002825E 01	
3	0. 3559290E 00	0. 5716118E 00	0. 4859342E 00	#IND. VAR, SEF, RSQ, RBAR
	0. 6296134E-01	0. 2116716E 01	0. 2858124E 00	RHO, AAFE, LASTERROR
	INTERCEPT	-. 1014256E 02	-. 1482298E 01	
	LP14	0. 1727208E 02	0. 3621887E 01	
	LFDX14	0. 4872157E 01	0. 3181007E 01	
3	0. 2708133E 01	0. 6398058E-01	-. 4613934E-01	#IND. VAR, SEF, RSQ, RBAR
	0. 5111549E 00	0. 2442879E 02	0. 3012394E 01	RHO, AAFE, LASTERROR
	INTERCEPT	0. 2455153E 02	0. 1615194E 01	
	LP15	-. 1450700E-01	-. 2312763E-02	
	LFDX15	-. 2957519E 01	-. 8729851E 00	
3	0. 2670590E 00	0. 6584142E 00	0. 6182277E 00	#IND. VAR, SEE, RSQ, RBAR
	0. 1532755E 00	0. 1425500E 01	0. 1832066E 00	RHO, AAFE, LASTERROR
	INTERCEPT	0. 2062374E 02	0. 1101790E 02	
	LP16	-. 6858209E-01	-. 2012680E 00	
	LFDX16	-. 1339408E 01	-. 3394047E 01	
3	0. 1957383E 00	0. 9422741E 00	0. 9354829E 00	#IND. VAR, SEE, RSQ, RBAR
	-. 5528061E-01	0. 9033836E 00	-. 8338165E-01	RHO, AAFE, LASTERROR
	INTERCEPT	-. 3698270E 01	-. 2971483E 01	
	LP17	0. 3073559E 01	0. 5423638E 01	
	LFDX17	0. 4206913E 01	0. 1509750E 02	
3	0. 2937585E 01	0. 2971147E 00	0. 1967025E 00	#IND. VAR, SEE, RSQ, RBAR
	-. 2705958E 00	0. 4556410E 08	0. 3185635E 00	RHO, AAFE, LASTERROR
	INTERCEPT	-. 9208312E 02	-. 2136889E 01	
	LP18	0. 1272361E 02	0. 2236755E 01	
	LFDX18	0. 2268078E 02	0. 2395799E 01	
3	0. 6465902E 00	0. 7919062E 00	0. 7674246E 00	#IND. VAR, SEF, RSQ, RBAR
	-. 1737738E 00	0. 4968249E 01	0. 5883026E-01	RHO, AAFE, LASTERROR
	INTERCEPT	0. 6052571E 01	0. 5054026E 00	
	LP19	-. 2611186E 01	-. 3237624E 01	
	LFDX19	0. 1250595E 01	0. 4770609E 00	
3	0. 5298849E 00	0. 5494837E 00	0. 4964818E 00	#IND. VAR, SEF, RSQ, RBAR
	0. 3527461E 00	0. 3663380E 01	0. 2706337E 00	RHO, AAFE, LASTERROR
	INTERCEPT	-. 1275941E 01	-. 3115704E 00	
	LP20	0. 1281297E 01	0. 1539397E 01	
	LFDX20	0. 3032541E 01	0. 3218490E 01	

Appendix D.2 (Cont'd)

3	0. 2473707E 01	0. 1275816E 00	0. 1125911E-01	#IND. VAR, SEE, RSQ, RBAR
	0. 4119315E 00	0. 9690030E 08	0. 4288207E 01	RHO, AAPE, LASTERROR
INTERCEPT		0. 1927757E 02	0. 2012986E 01	
LP22		0. 4691040E-01	0. 1059310E-01	
LFD:22		- . 2818563E 01	- . 1212415E 01	
3	0. 1674065E 01	0. 6407903E 00	0. 5958892E 00	#IND VAR, SEE, RSQ, RBAR
	- . 7981777E-01	0. 1526837E 02	0. 1687110E 00	RHO, AAPE, LASTERROR
INTERCEPT		- . 2811822E 02	- . 8416392E 00	
LP23		- . 1227440E 02	- . 1435477E 01	
LFD:23		0. 8728526E 01	0. 1187817E 01	
3	0. 1285580E 00	0. 5383565E 00	0. 4840455E 00	#IND. VAR, SEE, RSQ, RBAR
	0. 4724605E 00	0. 7749482E 00	- . 1148491E 00	RHO, AAPE, LASTERROR
INTERCEPT		0. 1042402E 02	0. 8951845E 01	
LP24		- . 1464605E 00	- . 3270068E 00	
LFD:24		0. 5943109E 00	0. 2397339E 01	
3	0. 3619287E 00	0. 9168798E 00	0. 9071010E 00	#IND. VAR, SEE, RSQ, RBAR
	0. 3188810E 00	0. 1992857E 01	- . 3747177E-01	RHO, AAPE, LASTERROR
INTERCEPT		- . 8531662E 01	- . 5105736E 01	
LP25		- . 1552259E 01	- . 2878559E 01	
LFD:25		0. 5310007E 01	0. 1359390E 02	
3	0. 2119471E 01	0. 3375848E 00	0. 2596536E 00	#IND. VAR, SEE, RSQ, RBAR
	0. 4763247E 00	0. 1661783E 02	0. 2544491E 01	RHO, AAPE, LASTERROR
INTERCEPT		0. 1078656E 02	0. 1055420E 01	
LP26		0. 5399517E 01	0. 1713761E 01	
LFD:26		0. 3899097E 00	0. 1681477E 00	
3	0. 3328540E 00	0. 9693279E 00	0. 9657195E 00	#IND. VAR, SEE, RSQ, RBAR
	0. 4638188E 00	0. 1925272E 01	- . 4007607E 00	RHO, AAPE, LASTERROR
INTERCEPT		0. 8093098E 01	0. 4463865E 01	
LP27		- . 5491349E 01	- . 7815025E 01	
LFD:27		0. 1965254E 01	0. 5144334E 01	
3	0. 3174658E 00	0. 5309312E 00	0. 4757466E 00	#IND. VAR, SEE, RSQ, RBAR
	0. 6741050E 00	0. 1794031E 01	0. 9768486E-01	RHO, AAPE, LASTERROR
INTERCEPT		0. 2113032E 02	0. 3044512E 01	
LP28		0. 1787940E 01	0. 2571482E 01	
LFD:28		- . 1301428E 01	- . 8446312E 00	
3	0. 3392609E 00	0. 8968910E 00	0. 8847605E 00	#IND. VAR, SEE, RSQ, RBAR
	0. 1305770E 00	0. 2101309E 01	0. 4576054E 00	RHO, AAPE, LASTERROR
INTERCEPT		- . 1409916E 02	- . 6317765E 01	
LP29		0. 1495484E 01	0. 1754115E 01	
LFD:29		0. 6018476E 01	0. 1203840E 02	
3	0. 3848152E 01	0. 1877097E-01	- . 9666774E-01	#IND. VAR, SEE, RSQ, RBAR
	0. 4265258E 00	0. 6780888E 08	- . 1552022E 02	RHO, AAPE, LASTERROR
INTERCEPT		0. 2002417E 02	0. 4844542E 00	
LP30		- . 6783496E 01	- . 3939639E 00	
LFD:30		- . 1004589E 01	- . 1110148E 00	

3	0.3382655E 00	0.2785027E 00	0.1936207E 00	#IND. VAR, SEE, RSQ, RBAR
	0.4743574E 00	0.2311919E 01	- .7074833E 00	RHO, AAPE, LASTERROR
INTERCFPT		0.1508360E 02	0.3921027E 01	
LP31		0.1138114E 01	0.1447035E 01	
LFDN31		- .3146090E 00	- .3670327E 00	

3	0.1912712E 00	0.9553376E 00	0.9500834E 00	#IND. VAR, SEE, RSQ, RBAR
	0.2826722E 00	0.1104755E 01	- .2224655E 00	RHO, AAPE, LASTERROR
INTERCFPT		- .3031076E 00	- .2438830E 00	
LP32		0.2769630E 01	0.3470335E 01	
LFDN32		0.3468047E 01	0.1291122E 02	

3	0.3166880E 00	0.9626814E 00	0.9582911E 00	#IND. VAR, SEE, RSQ, RBAR
	0.1850830E 00	0.1831917E 01	- .3489742E 00	RHO, AAPE, LASTERROR
INTERCEPT		0.2178492E 01	0.1410414E 01	
LP33		0.1815526E 00	0.2456972E 00	
LFDN33		0.3016893E 01	0.8476101E 01	

3	0.2006489E 00	0.9450312E 00	0.9385642E 00	#IND. VAR, SEE, RSQ, RBAR
	0.1421654E-01	0.1102892E 01	0.4949188E-01	RHO, AAPE, LASTERROR
INTERCFPT		0.6789743E 01	0.4921905E 01	
LP34		- .2663665E 01	- .4712003E 01	
LFDN34		0.1661254E 01	0.5579641E 01	

3	0.7133876E 00	0.8513054E 00	0.8338119E 00	#IND. VAR, SEE, RSQ, RBAR
	0.5076946E 00	0.5952390E 01	0.1013012E 00	RHO, AAPE, LASTERROR
INTERCFPT		- .1792350E 02	- .4146476E 01	
LP35		0.6439148E 00	0.1080582E 01	
LFDN35		0.6798392E 01	0.7165889E 01	

3	0.6775154E 00	0.9271744E 00	0.9186068E 00	#IND. VAR, SEE, RSQ, RBAR
	0.6008768E 00	0.4975043E 01	0.7366943E-01	RHO, AAPE, LASTERROR
INTERCEPT		- .5085462E 02	- .1172229E 02	
LP36		- .1729076E 01	- .2099677E 01	
LFDN36		0.1440519E 02	0.1468172E 02	

3	0.5942798E 00	0.9134194E 00	0.9032334E 00	#IND. VAR, SEE, RSQ, RBAR
	- .2548263E 00	0.2038682E 01	0.9431267E-01	RHO, AAPE, LASTERROR
INTERCFPT		- .5489890E 01	- .2352241E 01	
LP37		- .1440976E 01	- .2454666E 01	
LFDN37		0.4388486E 01	0.8810488E 01	

3	0.1802999E 01	0.7805943E-01	- .3040415E-01	#IND. VAR, SEE, RSQ, RBAR
	0.3821130E 00	0.1649636E 02	- .2118639E 01	RHO, AAPE, LASTERROR
INTERCFPT		0.1570187E 02	0.3524211E 01	
LP38		0.7297605E 00	0.2827373E 00	
LFDN38		- .1252506E 01	- .1151862E 01	

3	0.5093969E 00	0.8977809E 00	0.8745787E 00	#IND. VAR, SEE, RSQ, RBAR
	0.1215074E 00	0.3420630E 01	- .3754120E 00	RHO, AAPE, LASTERROR
INTERCFPT		- .5139957E 00	- .2859239E 00	
LP39		- .6930043E 00	- .7584943E 00	
LFDN39		0.3070424E 01	0.7669836E 01	

Appendix D.2 (Cont'd)

3	0.3274555E 00	0.9669054E 00	0.9630119E 00	#IND. VAR, SEE, RSQ, RBAR
	0.7317936E-01	0.1855750E 01	0.1698418E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.5453508E 01	0.2724380E 01		
LP40	0.1556691E 01	0.1361824E 01		
LFD:140	0.2470840E 01	0.5869268E 01		
3	0.6173092E 00	0.7894636E 00	0.7646947E 00	#IND. VAR, SEE, RSQ, RBAR
	0.3620541E 00	0.3665082E 01	0.8813477E-01	RHO, AAPE, LASTERROR
INTERCEPT	- .1171429E 01	- .6669649E 00		
LP41	0.1658984E 01	0.1812360E 01		
LFD:141	0.3352651E 01	0.7718118E 01		
3	0.5575006E 00	0.5261748E 00	0.4704306E 00	#IND. VAR, SEE, RSQ, RBAR
	- .8319378E-02	0.3621803E 01	- .2929688E-01	RHO, AAPE, LASTERROR
INTERCEPT	0.1850300E 02	0.9146719E 01		
LP42	0.2633725E 00	0.3131895E 00		
LFD:142	- .1619923E 01	- .3514845E 01		
3	0.2312534E 00	0.9456162E 00	0.9392182E 00	#IND. VAR, SEE, RSQ, RBAR
	0.2572469E 00	0.1467441E 01	0.1170216E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.4542529E 01	0.3553297E 01		
LP43	0.1041969E 01	0.1430719E 01		
LFD:143	0.1989844E 01	0.7582170E 01		
3	0.3487936E 00	0.8644294E 00	0.8484799E 00	#IND. VAR, SEE, RSQ, RBAR
	0.2853173E 00	0.2166256E 01	0.1017017E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.1120466E 02	0.6343626E 01		
LP44	0.3181040E 01	0.3737257E 01		
LFD:144	0.5657414E 00	0.1437895E 01		
3	0.5641501E 00	0.1550263E 00	0.5561764E-01	#IND. VAR, SEE, RSQ, RBAR
	0.5856640E 00	0.3598093E 01	- .4028511E-01	RHO, AAPE, LASTERROR
INTERCEPT	0.1112691E 02	0.6784408E 01		
LP45	- .1664489E 01	- .1727924E 01		
LFD:145	0.2051684E 00	0.6321567E 00		
3	0.8432666E 00	0.2138040E 00	- .1082334E-01	#IND. VAR, SEE, RSQ, RBAR
	0.4970521E 00	0.7670815E 01	0.1166382E 00	RHO, AAPE, LASTERROR
INTERCEPT	- .1540686E 02	- .8009808E 00		
LP46	0.5818294E 00	0.1949774E 00		
LFD:146	0.5513300E 01	0.1303135E 01		
3	0.2360935E 00	0.9554088E 00	0.9501628E 00	#IND. VAR, SEE, RSQ, RBAR
	0.5039507E 00	0.1614111E 01	0.1054478E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.3422161E 01	0.2535405E 01		
LP47	0.2060400E 01	0.2390378E 01		
LFD:147	0.2287135E 01	0.7799766E 01		
3	0.5331200E 00	0.8835907E 00	0.8754838E 00	#IND. VAR, SEE, RSQ, RBAR
	0.7925649E 00	0.3598662E 01	0.9549809E 00	RHO, AAPE, LASTERROR
INTERCEPT	- .4355539E 01	- .1574374E 01		
LP48	0.1333481E 01	0.1165070E 01		
LFD:148	0.4071588E 01	0.6814067E 01		

Appendix D.2 (Cont'd)

3	0.4177083E 00	0.8411021E 00	0.8224083E 00	#IND. VAR, SEF, RSQ, RBAR
	0.1881078E 00	0.2462383E 01	0.9692001E-01	RHO, AAPE, LASTERROR
INTERCEPT	0.2153263E 01	0.1129206E 01		
LP49	-.3085052E 01	-.2245750E 01		
LFD:149	0.2744447E 01	0.6414783E 01		
3	0.3756917E 00	0.9410840E 00	0.9341528E 00	#IND VAR, SEF, RSQ, RBAR
	0.2380666E 00	0.2027996E 01	-.5213547E-01	RHO, AAPE, LASTERROR
INTERCEPT	0.1035490E 01	0.1170016E 01		
LP50	0.3372713E 01	0.3194940E 01		
LFD:150	0.3280101E 01	0.1563599E 02		
3	0.3170401E 00	0.2678873E 00	0.1817564E 00	#IND. VAR, SEE, RSQ, RBAR
	0.4840403E 00	0.2146571E 01	0.3714809E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.9863465E 01	0.1109590E 02		
LP51	-.1533936E 01	-.2040561E 01		
LFD:151	0.3934277E 00	0.1900321E 01		
3	0.5139152E 00	0.9277438E 00	0.9192430E 00	#IND. VAR, SEF, RSQ, RBAR
	0.1743414E 00	0.3698781E 01	-.5256214E 00	RHO, AAPE, LASTERROR
INTERCEPT	-.4981437E 01	-.2245775E 01		
LP52	0.1913448E 00	0.1112179E 00		
LFD:152	0.4043250E 01	0.8424290E 01		
3	0.3573566E 00	0.9327160E 00	0.9248002E 00	#IND. VAR, SEF, RSQ, RBAR
	0.1965603E 00	0.1984899E 01	0.3158607E 00	RHO, AAPE, LASTERROR
INTERCEPT	-.7148445E 01	-.2309541E 01		
LP53	-.1233108E 01	-.1280135E 01		
LFD:153	0.4754122E 01	0.6816461E 01		
3	0.2974454E 00	0.9725277E 00	0.9692957E 00	#IND. VAR, SEF, RSQ, RBAR
	0.5099473E 00	0.1796477E 01	-.1003571E 00	RHO, AAPE, LASTERROR
INTERCEPT	-.5451381E 01	-.6033707E 01		
LP54	-.1162421E 01	-.1833724E 01		
LFD:154	0.4791333E 01	0.2183599E 02		
3	0.4171033E 00	0.9231739E 00	0.9141356E 00	#IND. VAR, SEF, RSQ, RBAR
	0.1389592E 00	0.2744963E 01	0.5711784E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.1320474E 01	0.3321463E 00		
LP55	0.6252696E 00	0.7542970E 00		
LFD:155	0.2904230E 01	0.3328139E 01		
3	0.1112906E 01	0.8614659E 00	0.8451679E 00	#IND. VAR, SEE, RSQ, RBAR
	0.6501420E 00	0.6919535E 01	-.9976997E 00	RHO, AAPE, LASTERROR
INTERCEPT	-.1108392E 02	-.3142788E 01		
LP56	-.2805723E 01	-.2881623E 01		
LFD:156	0.6326783E 01	0.8002106E 01		
3	0.3317604E 00	0.9507990E 00	0.9450107E 00	#IND. VAR, SEF, RSQ, RBAR
	0.2908783E 00	0.2349783E 01	-.1714134E 00	RHO, AAPE, LASTERROR
INTERCEPT	0.2956661E-01	0.3912318E-01		
LP57	0.2582052E 01	0.2923253E 01		
LFD:157	0.3490300E 01	0.1799061E 02		

Appendix D.2 (Cont'd)

3	0.8140337E	00	0.9170741E	00	0.9052275E	00	#IND. VAR, SEE, RSQ, RBAR
	0.2123698E	00	0.5399714E	01	- .7898827E	00	RHO, AAPE, LASTERROR
INTERCEPT			- .1753276E	02	- .5715334E	01	
LP58			- .4242566E	00	- .1114786E	01	
LFD:158			0.7058788E	01	0.1009450E	02	

3	0.6446788E	00	0.9187527E	00	0.9079196E	00	#IND. VAR, SEE, RSQ, RBAR
	- .1019335E	00	0.3921741E	01	- .2617645E	-01	RHO, AAPE, LASTERROR
INTERCEPT			- .1076165E	02	- .2665964E	01	
LP54			0.8177637E	00	0.2655957E	00	
LFD:159			0.5635110E	01	0.6474862E	01	

3	0.1055197E	01	0.8143423E	00	0.7925001E	00	#IND. VAR, SEE, RSQ, RBAR
	- .3711686E	00	0.6941435E	01	- .2801800E	00	RHO, AAPE, LASTERROR
INTERCEPT			- .8254395E	01	- .1649234E	01	
LP60			0.7907794E	01	0.1288567E	01	
LFD:160			0.5131719E	01	0.4805649E	01	

3	0.5806199E	00	0.9359978E	00	0.9284681E	00	#IND. VAR, SEE, RSQ, RBAR
	0.1450200E	00	0.3396068E	01	0.1806908E	00	RHO, AAPE, LASTERROR
INTERCEPT			- .1923338E	02	- .7665483E	01	
LP61			0.1795154E	01	0.2540584E	01	
LFD:161			0.7974771E	01	0.1348846E	02	

D.5 The Almon Function with Arbitrary A Priori Price Elasticities

T COEFFICIENTS ARE IN PARENTHESES

SECTOR	PRICE ELASTICITIES ESTIMATE	A PRIORI	CONSTANT(A)	DEMAND(D)	DEMAND ELASTICITY	RBAR5Q	1980 EXPORTS
1PADDY RICE	0.00	-1.00	(-210.6 -2.46)	(2.522 2.74)	4.017	0.527	123.
2OTHER COMMON CROPS	-0.50	-0.50	(-2063.5 -4.37)	(26.788 4.91)	4.656	0.589	447.
6HOGS	-0.95	-0.50	(-140.1 -0.74)	(2.601 1.21)	2.197	0.470	272.
7OTHER LIVESTOCK	-1.00	-1.00	(-537.5 -4.21)	(69.029 4.71)	5.249	0.686	1788.
8FORESTRY	-0.22	-0.22	(-460.8 -0.89)	(23.355 3.79)	1.234	0.694	1346.
9FISHERIES	-0.75	-0.75	(-1507.9 -6.64)	(312.994 9.72)	2.176	0.879	14133.
17CANNED FOODS	-0.50	-0.50	(-3053.4 -1.16)	(137.346 4.51)	1.283	0.677	12269.
18SLAUGHTERING MEAT	-0.20	-1.00	(-5903.6 -3.96)	(79.987 4.69)	3.627	0.606	2134.
19TOBACCO & ALCOHOLIC BEVERAGES	-1.00	-1.00	(-1143.0 -3.59)	(14.638 4.21)	4.278	0.660	339.
20MONOSODIUM GLUTAMATE	0.00	-1.00	(-262.9 -1.58)	(7.334 3.47)	1.549	0.496	832.
22EDIBLE VEGETABLE OIL & BY-PRODUCT	-3.00	-2.00	(-7.5 -0.19)	(0.422 0.81)	1.193	0.169	87.
23NON-ALCOHOLIC BEVERAGES	-3.00	-3.00	(-3026.9 -5.37)	(36.303 5.90)	5.526	0.801	735.
24TEA	-0.60	-2.00	(1124.7 5.44)	(-1.755 -0.75)	-0.195	0.858	1063.
25MISC. FOOD PRODUCTS	-2.20	-2.00	(-18069.9 -3.30)	(297.178 4.75)	2.428	0.885	16582.
26ARTIFICIAL FIBRES	0.00	-1.50	(-7929.1 -1.86)	(121.783 2.40)	3.157	0.254	8194
27ARTIFICIAL FABRICS	-2.90	-1.50	(-25003.3 -1.90)	(512.306 3.32)	1.944	0.792	28661
28COTTON FABRICS	0.00	-1.50	(691.1 0.17)	(103.549 2.06)	0.933	0.399	12415.
29WOOLEN & WORSTED FABRICS	-0.20	-1.00	(-3850.8 -2.77)	(58.289 3.83)	3.030	0.501	3029
30MISC. FABRICS & APPAREL, ACCESSD	-3.80	-2.00	(-156744.3 -5.57)	(2360.917 7.34)	3.011	0.871	120774.
31LUMBER	0.00	-1.00	(3132.0 2.53)	(-11.883 -0.79)	-0.591	0.196	1045.

Appendix D.3 (Cont'd)

32PLYWOOD	-----	0.00	-1.50	-6926.5	213.337	1.466	0.835	13508
			(	( -3.39)	(8.32)			
33PRODUCTS OF WOOD BAMBOO & RATTAN		-1.50	-1.50	-11344.6	305.124	1.589	0.957	20767
			(	( -11.47)	(21.18)			
34PULP, PAPER & PAPER PRODUCTS		-2.80	-2.00	-262.9	33.040	1.085	0.941	4708
			(	( -0.37)	(3.80)			
35PRINTING, PUBLISHING & BOOKBINDING		-1.00	-1.50	-260.6	7.365	1.497	0.840	760
			(	( -1.23)	(2.71)			
36LEATHER & PRODUCTS	-----	0.00	-2.00	-33286.4	460.430	3.834	0.896	15418
			(	( -9.34)	(11.03)			
37RUBBER & PRODUCTS	-----	-0.40	-1.00	-6865.2	153.113	1.790	0.764	11993
			(	( -4.95)	(8.75)			
39MEDICINES, NON-EDIBLE	-----	-0.30	-1.00	-562.9	15.557	1.553	0.763	1298
			(	( -2.95)	(6.17)			
40PLASTICS & PRODUCTS	-----	0.00	-1.00	-27898.2	673.164	1.728	0.742	62178
			(	( -3.53)	(6.43)			
41PETROLEUM PRODUCTS	---	0.00	-1.00	-7906.6	147.541	2.152	0.451	10261
			(	( -2.32)	(3.54)			
43INDUSTRIAL CHEMICALS	---	0.00	-1.00	-2526.2	54.772	1.848	0.890	4436
			(	( -6.26)	(10.64)			
44MISC. CHEMICAL MANUFACTURES	---	-0.50	-1.00	-2326.0	52.018	1.799	0.875	4361
			(	( -6.88)	(11.36)			
47GLASS	-----	0.00	-1.00	-2153.7	44.221	1.948	0.657	3886
			(	( -3.15)	(5.27)			
48MISC. NON-METALLIC MINERAL PRODUCTS		0.00	-1.00	-7123.8	111.326	2.688	0.549	8649
			(	( -3.30)	(4.25)			
49STEEL & IRON	-----	-2.00	-2.00	-8106.2	149.035	2.239	0.390	7687
			(	( -1.65)	(2.57)			
50STEEL & IRON PRODUCTS	-----	0.00	-2.00	-19668.8	381.953	2.034	0.536	31725
			(	( -2.67)	(4.14)			
51ALUMINUM	-----	-1.30	-1.00	66.3	3.504	0.852	0.679	639
			(	( 0.68)	(2.75)			
52ALUMINUM PRODUCTS	-----	0.00	-1.00	-1086.1	26.321	1.662	0.916	1730
			(	( -6.77)	(12.37)			
53MISC. METALS ' PRODUCTS	---	-1.00	-1.00	-8228.8	140.966	2.320	0.655	10482
			(	( -4.08)	(5.63)			
54MACHINERY	-----	-2.40	-2.00	-19473.5	371.661	2.046	0.924	26008
			(	( -6.37)	(9.55)			

Appendix D.3 (Cont'd)

55HOUSEHOLD ELECTRICAL APPLICANCES	0.00	-1.00	-5916.4 (-3.67)	112.604 (5.38)	2.107	0.667	9219
56COMMUNICATION EQUIPMENT	0.00	-1.00	-35736.4 (-6.41)	1063.729 (13.56)	1.440	0.929	94493
57OTHER ELECTRICAL APPARATUS & EQUIP.	0.00	-1.00	-11483.7 (-4.89)	244.396 (7.57)	1.792	0.801	20753
58SHIPBUILDING	-1.00	-1.00	-5581.4 (-1.68)	108.273 (2.54)	2.036	0.367	4019
59MOTOR VEHICLES	-0.50	-1.00	-6067.4 (-4.86)	113.981 (7.02)	2.219	0.754	7396
60OTHER TRANSPORT EQUIPMENTS	-0.50	-1.00	-11891.9 (-5.71)	191.296 (7.26)	2.468	0.769	12318
61MISC. MANUFACTURES	-3.00	-2.00	-75740.3 (-7.52)	1292.024 (10.29)	2.380	0.949	79066

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SECTOR	LN(EXPORTS)	A + B*TIME + C*RELATIVE PRICE CONSTANT(A)	PRICE ELASTICITIES	TIME (B)	RBARSQ	EXPORTS
4CROPS FOR PROCESSING	-1.75	10.6 (5.77)		-0.035 (-1.19)	0.341 ()	432
5HORTICULTURAL CROPS	0.00	10.7 (13.49)		-0.038 (-3.48)	0.442 ()	2830
11METALLIC MINERALS	-1.59	7.8 (2.81)		-0.173 (-1.71)	0.564 ()	31
15RICE	0.00	10.5 (0.74)		-0.070 (-0.36)	-0.066 ()	2158
16SUGAR	-0.35	13.2 (6.61)		-0.056 (-1.74)	0.465 ()	8205
38CHEMICAL FERTILIZER	0.00	21.0 (2.39)		-0.221 (-1.83)	0.144 ()	16
42VEGETABLE & ANIMAL OILS	0.00	12.1 (4.59)		-0.090 (-2.48)	0.269 ()	192
45CEMENT	-2.12	10.8 (4.03)		-0.034 (-0.80)	0.197 ()	917

AGGREGATE EXPORT PRICE ELASTICITY, WEIGHTED BY 1980 EXPORTS -1.412
 AGGREGATE DEMAND ELASTICITY, WEIGHTED BY EXPORTS IN 1980 2.112

D.4 The Almon Function with A Priori Price Elasticities Given by CES Function

T COEFFICIENTS ARE IN PARENTHESES

SECTOR	PRICE ELASTICITIES ESTIMATE	A PRIORI	CONSTANT(A)	DEMAND(B)	DEMAND ELASTICITY	RBARSO	1980 EXPORTS
1PADDY RICE	0.00	-1.00	(-210.6)	(2.522)	4.017	0.527	123
2OTHER COMMON CROPS	-0.50	-0.50	(-2.46)	(2.74)	4.656	0.589	447
6HOGS	-2.20	-2.30	(-2063.5)	(26.788)	3.791	0.599	272
7OTHER LIVESTOCK	-1.00	-3.10	(-4.37)	(4.91)	5.249	0.686	1788
8FORESTRY	-0.90	-0.90	(-330.4)	(2.44)	1.505	0.757	1346
9FISHERIES	-0.70	-0.70	(-2.01)	(2.44)	2.176	0.877	14133
10COAL & PRODUCTS	-1.60	-1.60	(-537.5)	(69.029)	1.142	0.983	64
14NON-METALLIC MINERALS	0.00	-2.10	(-4.21)	(4.71)	0.980	0.148	232
17CANNED FOODS	-0.50	-0.50	(-2.50)	(6.00)	1.283	0.677	12269
18SLAUGHTERING MEAT	-0.20	-1.00	(-15076.8)	(313.761)	3.627	0.606	2134
19TOBACCO & ALCOHOLIC BEVERAGES	-2.60	-2.60	(-6.60)	(2.67)	2.131	0.694	339
23NON-ALCOHOLIC BEVERAGES	-3.00	-3.00	(-0.05)	(0.37)	5.526	0.801	735
24TEA	-0.10	-0.10	(0.04)	(1.57)	0.182	0.852	1063
25MISC. FOOD PRODUCTS	-2.10	-1.60	(-3053.4)	(137.346)	2.456	0.682	16582
26ARTIFICIAL FIBRES	0.00	-1.50	(-1.16)	(4.51)	3.157	0.254	8194
27ARTIFICIAL FABRICS	-4.40	-5.50	(-3.96)	(4.69)	1.582	0.834	28661
28COTTON FABRICS	0.00	-1.50	(-5903.6)	(79.987)	0.933	0.399	12415
29WOOLEN & WORSTED FABRICS	-0.20	-1.00	(-0.43)	(1.58)	3.030	0.501	3029
30MISC. FABRICS & APPAREL, ACCESSO	-3.80	-2.00	(-3026.9)	(36.303)	3.011	0.871	120774
31LUMBER	0.00	-1.00	(-5.37)	(5.90)	-0.591	0.196	1045
			(746.1)	(1.589)			
			(3.78)	(0.71)			
			(-18229.8)	(297.416)			
			(-3.43)	(4.90)			
			(-7929.1)	(121.783)			
			(-1.86)	(2.40)			
			(-18260.3)	(493.707)			
			(-1.28)	(2.96)			
			(691.1)	(103.549)			
			(0.17)	(2.06)			
			(-3850.8)	(58.289)			
			(-2.77)	(3.83)			
			(-156744.3)	(2360.917)			
			(-5.57)	(7.34)			
			(3132.0)	(-11.885)			
			(2.53)	(-0.79)			

Appendix D.4 (Cont'd)

32PLYWOOD	0.00	-1.50	-6926.5	213,337	1.466	0.835	13508
		(	(-3.39)	(8.32)			
33PRODUCTS OF WOOD BAMBOO & RATTAN	-1.50	-1.50	-11544.6	305,124	1.589	0.957	20767
		(	(-11.47)	(21.18)			
34PULP, PAPER & PAPER PRODUCTS	-3.00	-2.70	117.6	29,367	0.962	0.946	4708
		(	(0.16)	(3.31)			
35PRINTING, PUBLISHING & BOOKBINDING	-1.00	-1.50	-260.6	7,365	1.497	0.840	760
		(	(-1.23)	(2.71)			
36LEATHER & PRODUCTS	0.00	-7.00	-33286.4	460,430	3.834	0.896	15418
		(	(-9.34)	(11.03)			
37RUBBER & PRODUCTS	-0.40	-1.40	-6865.2	153,113	1.790	0.764	11993
		(	(-4.95)	(8.75)			
39MEDICINES, NON-EDIBLE	-0.45	-0.70	-533.6	15,311	1.522	0.754	1298
		(	(-2.65)	(5.75)			
40PLASTICS & PRODUCTS	0.00	-1.00	-27898.2	673,164	1.728	0.742	62178
		(	(-3.53)	(6.43)			
41PETROLEUM PRODUCTS	0.00	-1.00	-7906.6	147,541	2.152	0.451	10261
		(	(-2.32)	(3.54)			
43INDUSTRIAL CHEMICALS	0.00	-1.00	-2526.2	54,772	1.848	0.890	4436
		(	(-6.26)	(10.64)			
44MISC CHEMICAL MANUFACTURES	-0.50	-1.00	-2326.0	52,018	1.799	0.875	4361
		(	(-6.88)	(11.36)			
46CEMENT PRODUCTS	-0.70	-1.00	-84.6	1,136	4.893	0.098	23
		(	(-1.30)	(1.60)			
47GLASS	0.00	-1.00	-2153.7	44,221	1.948	0.657	3886
		(	(-3.15)	(5.27)			
48MISC NON-METALLIC MINERAL PRODUCTS	0.00	-1.00	-7123.8	111,326	2.688	0.549	8649
		(	(-3.30)	(4.25)			
49STEEL & IRON	-3.10	-3.10	-6944.8	137,776	2.052	0.400	7687
		(	(-1.42)	(2.38)			
50STEEL & IRON PRODUCTS	0.00	-2.00	-19668.8	381,953	2.034	0.536	31725
		(	(-2.67)	(4.14)			
51ALUMINUM	-1.50	-1.50	47.8	3,626	0.892	0.687	639
		(	(0.51)	(7.92)			
52ALUMINUM PRODUCTS	0.00	-1.00	-1086.1	26,321	1.662	0.916	1730
		(	(-6.77)	(12.37)			
53MISC METALS / PRODUCTS	-1.20	-1.20	-8255.9	141,180	2.325	0.649	10482
		(	(-4.07)	(5.64)			
54MACHINERY	-1.80	-1.20	-20179.9	378,555	2.084	0.904	26008

Appendix D.4 (Cont'd)

55HOUSEHOLD ELECTRICAL APPLICANCES	0.00	-1.00	(-5.77)	(4.81)	2.107	0.667	9219							
			-5916.4	112.604										
			(-3.67)	(5.38)										
56COMMUNICATION EQUIPMENT	0.00	-2.80	-35736.4	1063.729	1.440	0.929	94493							
			(-6.41)	(13.56)										
57OTHER ELECTRICAL APPARATUS & EQUIP.	0.00	-1.00	-11483.7	244.396	1.792	0.801	20753							
			(-4.89)	(7.57)										
58SHIPBUILDING	-0.40	-0.40	-5971.1	111.255	2.127	0.357	4019							
			(-1.83)	(2.66)										
59MOTOR VEHICLES	-0.50	-1.00	-6067.4	113.981	2.219	0.754	7396							
			(-4.86)	(7.02)										
60OTHER TRANSPORT EQUIPMENT	-0.50	-1.00	-11891.9	191.296	2.468	0.769	12318							
			(-5.71)	(7.26)										
61MISC. MANUFACTURES	-3.00	-2.00	-75740.3	1292.024	2.380	0.949	79066							
			(-7.52)	(10.29)										

SECTOR	LN(EXPORTS) = A + B*TIME + C*RELATIVE PRICE		CONSTANT(A)	TIME(B)	RBARSQ	EXPORTS
	PRICE ELASTICITIES					
4ACROPS FOR PROCESSING	-1.75	0.00	10.6	(-0.035)	0.341	432
			(5.77)	(-1.19)		
5HORTICULTURAL CROPS	0.00	0.00	10.7	(-0.038)	0.442	2830
			(13.49)	(-3.48)		
11METALLIC MINERALS	-1.59	0.00	17.8	(-0.173)	0.564	31
			(2.81)	(-1.71)		
15RICE	0.00	0.00	10.5	(-0.070)	(-0.066)	2158
			(0.74)	(-0.36)		
16SUGAR	-0.35	0.00	13.2	(-0.056)	0.465	8205
			(6.61)	(-1.74)		
38CHEMICAL FERTILIZER	0.00	0.00	21.0	(-0.221)	0.144	16
			(2.39)	(-1.83)		
42VEGETABLE & ANIMAL OILS	0.00	0.00	12.1	(-0.090)	0.269	192
			(4.57)	(-2.48)		
45CEMENT	-2.12	0.00	10.8	(-0.034)	0.197	917
			(4.03)	(-0.80)		

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AGGREGATE EXPORT PRICE ELASTICITY, WEIGHTED BY 1980 EXPORTS -1.461
 AGGREGATE DEMAND ELASTICITY, WEIGHTED BY EXPORTS IN 1980 2.098