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Article

Econometric Models of Selected Countries in Asia

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I Introduction

Currently UNCTAD has econometric models for 47 individual developing countries together with 3 regional models for developing economies and a sub-regional model for a group of 13 least developed countries. The individual models vary somewhat in complexity, but each contains on average from 20 to 30 stochastic relationships. The individual models take as exogenous the volume and value of world trade, commodity price, and the availability of financial flows. Commodity prices are determined by means of simple global commodity models. In projection exercises, the values of the exogenous variables; e.g. the volume and value of world trade, are taken from Project LINK. The country and regional models contain simple supply functions for agriculture, usually trend related, and standard fixed-coefficient production functions for the non-agricultural sector containing arguments which include capital stock and the volume of imports. Exports and import functions are in most cases distinguished for 4 broad commodity groups. Gross external financial requirements are generated by means of submodels explaining debt service payments.

With this system of models, UNCTAD produces capital requirements estimates based on different assumptions regarding the pace of world growth and the pattern of global development. Given the structure of the models, they are best used for medium term projections.

These models are not designed to deal with long-term structural changes and interdependencies. For example, since each model is linked directly to variables measuring world growth and trade, it is difficult to take into account satisfactorily the shifting pattern of trade and particularly the growth of trade among developing countries. The modelling of production relations in most of the models precludes the possibility of measuring inter-relationships between domestic production structures on the one hand and the pattern of international trade on the other.

In order to deal with these issues a work program has been initiated in the Division of Money, Finance and Development to

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The views expressed in this paper are those of the author and do not necessarily reflect the opinions of the UNCTAD secretariat.

build a global analytical framework designed to embrace long-term structural change in the world economy.

II Basic Characteristics of Individual Country Models in Asia

Econometric models of varying degrees of disaggregation were constructed and tested for predictive accuracy for 15 countries in Asia.[1)]

An aggregate production function was estimated for Bangladesh, Hong Kong and the three Middle East countries relating YD to capital stock and in some cases to imports. For the rest, the supply of output is divided into two sectors: agriculture and non-agriculture. In general, a simple trend equation is used to estimate agricultural production. In the models of India, Korea and Thailand, a dummy variable for weather is introduced as another explanatory variable. Non-agricultural output is related to capital stock and imports. Imports enter directly into the production or capacity utilization function of seven countries-Bangladesh, India, Indonesia, Korea, Lebanon, Singapore and Thailand. The concept of capacity output proved to be statistically significant only for India and Thailand and here the supply constraints of capital goods and raw materials, both imported and domestic, and cumulative investment explain adequately the variations in capacity utilization.

The incremental capital output ratio ranges from a low of 1.6 for Singapore to 4.1 for India. It appears that, with the exception of Pakistan, the MSA countries have higher ICORs, although Hong Kong, Jordan, Lebanon and the Philippines were also in the 3.4 and above range. This could be partly attributed to the fact that the sample period in the MSA countries includes years in which there was a lot of unutilized capacity.

On the expenditure side, private consumption is distinguished from government consumption. In general, the variables in the private consumption function, except for the variable acting as a proxy for income distribution, are on a per capita basis. The income variable—gross national product—was adjusted for terms of trade effect and, for seven countries, taxes were deducted to come closer to a disposable income measure. With the exception of Hong Kong, for the higher income group in South East Asia, past patterns of consumer behaviour as represented by lagged private consumption were highly significant. The short-run marginal propensity to consume in these countries ranged from 0.28 for Singapore to 0.46 for the Philippines. Income distribution between agricultural and non agricultural sector measured by the ratio of either income or prices (in the case of Thailand) between the two sectors proved to be an important determinant of the level of private consumption in India, Korea, Pakistan, the Philippines and Thailand. As expected, the coefficient appears with a positive sign, since the propensity to consume is likely to be higher in the agricultural sector of

1) South and East Asia: Bangladesh, Hong Kong, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan Province, Thailand; Middle East: Jordan, Lebanon and Syria.

Table 1 Asia: Main Parameters Derived from Model Simulations over the sample Period

Country	Model sample period	Incremental capital output ratio	Export elasticity	Import elasticity	Impact of imports on *YD*		
					Total	Direct	Indirect
Bangladesh	1961-72	3.45	0.14	1.77	0.57	0.46	0.11
Hong Kong	1961-72	3.42	1.52	1.34	—	—	—
India	1955-73	4.11	0.34	0.35	0.48	0.38	0.10
Indonesia	1961-73	2.20	0.83	1.77	0.92	0.83	0.09
Jordan	1955-72	3.40	1.29	0.71	0.04	—	0.04
Korea, Rep. of	1955-73	2.10	3.76	2.26	0.87	0.75	0.12
Lebanon	1961-73	3.80	2.19	1.16	1.50	1.48	0.02
Malaysia	1962-73	2.61	0.79	0.47	0.08	—	0.08
Pakistan	1960-72	2.80	0.82	0.15	0.19	—	0.19
Philippines	1955-73	3.60	0.77	0.61	0.15	—	0.15
Singapore	1961-72	1.60	0.57	0.85	0.42	0.32	0.10
Sri Lanka	1955-73	4.07	0.22	0.13	—	—	—
Syria	1963-73	2.56	0.51	1.15	0.16	—	0.16
Taiwan	1955-73	1.96	2.43	1.52	0.16	—	0.16
Thailand	1958-73	2.86	0.81	1.38	0.65	0.38	0.27

Source: UNCTAD secretariat.

countries where small and medium-size farms generate the bulk of rural income. In Korea and Thailand, a breakdown into food and non-food private consumption is given.

Government consumption is related to tax revenues in seven countries and to gross domestic product in other countries where tax data were not readily available.

The main determinants of fixed investment are the level of income, imports, terms of trade between agriculture and non-agriculture and fixed investment lagged one year. In the case of Korea and Malaysia, all these variables appear in the investment equation. For the other countries, however, some of these variables are not statistically significant. The level of income, whether present or preceding year or both, which serves as a proxy for demand expectations, is significant in all of the countries. With the exception of Hong Kong and Sri Lanka, either imports of SITC 5–9 or total imports of goods, which serve as a proxy for the availability of investment goods, are important in determining fixed investment.

In the trade sector, exports were disaggregated into four main commodity groups in the models of India, Korea, Malaysia, the Philippines, Singapore and Thailand. For imports, in addition to the countries just mentioned, Hong Kong and Taiwan had import disaggregation. For the rest of the Asian countries, aggregate export and import equations were estimated.

In whatever form they appear, the export functions are basically similar in that exports depend primarily on world demand; the only distinction being in the use of world exports of specific commodity groups in cases where exports are disaggregated.

In India, however, manufactured goods exports are supply-determined. A comparison of the elasticity with respect to world exports among the countries in Asia shows that, as expected, the semi-industrialized export-oriented countries, with the exception of Singapore, registered the highest elasticity—Korea (3.8), Taiwan (2.4) and Hong Kong (1.5). Lebanon and Jordan also had elasticities higher than unity, indicating an increasing share in world exports. Also as expected, the lowest elasticities recorded are in the MSA countries—Bangladesh (0.1), Sri Lanka (0.2) and India (0.3).

Imports (other than $M_{0+1}\$$) are related to an activity variable measured either by *GDP* or non-agricultural production. $M_{0+1}\$$ are determined by private consumption and in India and Malaysia by agricultural output lagged one year. In six countries—Bangladesh, India, Indonesia, Korea, Sri Lanka, and Taiwan—the level of international reserves deflated by import price proved to be a major constraint on import demand.

Whether the model is able to capture adequately the impact of imports on *GDP* depends not only on the size of the import coefficient in the production function but also on the size of the import coefficient in the fixed investment equation, which in turn enters in the capital stock variable of the production function. As mentioned previously, imports enter directly in the production functions of only seven countries. The total impact of imports on *GDP* measured by the change in *GDP* brought about by a unit change in imports is derived by adding the indirect effect via fixed investment. The results for the seven countries are :Lebanon (1.50), Indonesia (0.92), Korea (0.87) Thailand (0.65), Bangladesh (0.57), India (0.48) and Singapore (0.42). In general the size of this parameter appears to be related directly to the size of the import elasticity observed in the sample period. Among these countries, only India and Singapore have elasticities less than unity. For the other countries, the level of imports affect production only indirectly, through investment, and the size of the parameter is quite small, ranging from 0.04 to 0.19. In the models of Hong Kong and Sri Lanka, imports do not appear either in the production or investment function.

III Projections

For the projections, the unit value index of exports and imports were related to the weighted average spot prices of the commodities traded. The weights, as shown in Tables 2 and 3 were based on the share of these commodities to total exports or imports in 1970–1972.

To test their predictive accuracy, the models were simulated for the observation period—usually the last 10 to 14 years of the model sample period. The mean absolute percentage errors of key variables are presented in Table 4. As far as *GDP* is concerned, the models' performance was highly satisfactory. The exception is Jordan, which registered the largest error of 9.4 per cent. For the others, the percentage errors ranged from a low of 1.35 for Malaysia to 4.89 for Pakistan, with

Table 2 Asia: Share of Individual Commodities or Commodity Groupings in total Country Exports, Average 1970–72

Commodities	Bangla-desh	Hong Kong	India	Indo-nesia	Jordan	Korea	Lebanon	Malay-sia	Pakistan	Philip-pines	Singa-pore	Sri Lanka	Syria	Taiwan	Thai-land
PXW0+1									.0132	.0808				.1324	
PXW2+4									.0279	.0030				.0009	
PMW3				.3945				.0526			.0004		.2025	.0011	
PW332		.0025	.0088	.0392		.0077		.0257	.0175	.0174	.2449		.0016	.0043	.0079
PXD5-9	.5850	.7365	.5380		.3953	.8186	.6475	.1120	.5621	.1040	.3761	.0110	.1120	.7071	.0540
PXWNFM															
PXG0+1	.0030														
PXG2+4															
PXGNFM															
Aluminum							.0231								
Animal Fat															
Banana			.0002		.0079		.0037	.0004		.0121					.0002
Bauxite			.0006	.0049				.0034							
Beef													.0009		
Cereal		.0036							.0021		.0099			.0022	
Cocoa				.0002	.0003			.0011				.0031			
Coffee		.0042	.0186	.0520				.0003			.0214		.0009		
Coconut Oil				.0023				.0060		.1142	.0058	.0630			
Copper															
Copper Ore										.1623					
Copra				.0125				.0021		.0903		.0174			
Cotton		.0514	.0076				.0004		.2376				.3839		.0001
Fats															
Fertilizer					.1974				.0031		.0054		.0009	.0014	
Flax															
Fruit					.2884		.1469								.1001
Groundnuts			.0038	.0030			.0019						.0088		.0013

Groundnut Oil								.0001						.0009
Hides			.0010	.0086	.0026		.0243	.0011	.0047	.0002		.0003	.0041		.0029
Iron Ore		.0031	.0713	.0007		.0026		.0084		.0139			.0009	.0282	.0001
Jute	.3780		.0030												.0495
Lead															
Lumber			.0043	.1250			.0004	.1595		.2056	.0208		.0028	.0847	.0154
Maize				.0056			.0004								.1101
Manganese Ore			.0071												
Nonferrous Ore														.0069	
Nickel Ore															
Olive Oil					.0110										
Palm Kernel															
Palm Oil				.0322				.0636			.0203				
Pulp															
Rice			.0019					.0003	.0715						.1881
Rubber				.1762				.2821		.0003	.1817	.1850			.1093
Sisal			.0001	.0001											
Soybean Oil					.0006						.0030				
Soybean Meal															
Sugar			.0176		.0005	.0005	.0007	.0013	.0030	.1827				.0308	.0192
Tea	.0200		.0948	.0214		.0006	.0004	.0007				.5945	.0083		.0001
Tin			.0001	.0271				.1787							.0884
Tin Ore				.0233											
Tobacoc		.0035	.0271	.0103	.0026	.0116	.0097	.0002	.0104	.0132	.0077	.0150	.0189		.0144
Wheat					.0026		.0007	.0001					.0217		
Wool			.0025				.0157		.0083				.0194		
Zinc															
Zinc Ore															
Others	.0140	.1952	.1916	.0609	.0908	.1584	.1242	.1003	.0404		.1116	.1107	.2124		.2380

Sources: IBRD *Commodity Trade and Price Trends* (1974 edition); UN *Yearbook of International Trade Statistics*, 1972–1973; National publications.

Table 3 Asia: Share of Individual Commodities or Commodity Groupings in Total Imports, Average 1970–72

Commodities	Bangla-desh	Hong Kong	India	Indo-nesia	Jordan	Korea	Lebanon	Malay-sia	Pakistan	Philip-pines	Singa-pore	Sri Lanka	Syria	Taiwan	Thai-land
PXW0+1	.1133	.0793	.0127	.0483	.0766	.0159	.0866	.0607	.0109	.0475	.0530	.0494	.0507	.1403	.0294
PXW2+4	.1130	.0349	.0270	.0035	.0195	.0434	.0465	.0220	.0349	.0392	.0163	.0135	.0237	.0095	.0371
PMW3	.0224	.0307	.1018	.0262	.0479	.0868	.0551	.1190	.0773	.1310	.1452	.0766	.0447	.0619	.1024
PW332															
PXD5-9	.5997	.7081	.5997	.8350	.6103	.5756	.6637	.5819	.5417	.6607	.6248	.4377	.6448	.6397	.7485
PXWNFM															
PXG0+1															
PXG2+4															
PXGNFM															
Aluminum															
Animal Fat			.0091			.0068	.0037		.0108						
Banana															
Bauxite															
Beef		.0063			.0054		.0041								
Cereal		.0069	.0040	.0152	.0522	.0114	.0111	.0186	.0028	.0099	.0034	.1016	.0170	.0014	.0047
Cocoa										.0023					
Coffee		.0012			.0076		.0059	.0020					.0035		
Coconut Oil															
Copper															
Copper Ore															
Copra	.0244							.0005	.0023						
Cotton	.0006	.0246	.0620	.0134		.0339	.0043	.0022		.0166	.0036	.0071			.0236
Fats															
Fertilizer	.0135		.0609	.0292	0.043	.0147	.0078	.0147	.0233	.0187	.0094	.0325	.0167	.0024	.0262
Flax															
Fruit					.0407		.0029								.0019
Groundnuts															

Groundnut Oil								.0004							
Hides						.0040	.0169						.0027		
Iron Ore						.0110								.0751	
Jute									.0081						
Lead															
Lumber		.0038			.0088	.0559	.0178	.0009	.0120		.0138		.0203	.0456	.0030
Maize		.0023		.0020	.0108	.0091	.0098	.0054							
Manganese Ore															
Nonferrous Ore						.0051		.0035						.0238	
Nickel Ore															
Olive Oil					.0001										
Palm Kernel															
Palm Oil											.0126				
Pulp															
Rice	.0224	.0168	.0132	.0083	.0135	.0408	.0043	.0297	.0028	.0233	.0132	.0923	.0140		
Rubber	.0007		.0020			.0089		.0100	.0049	.0032	.0504				
Sisal															
Soybean Oil			.0116		.0105				.0246						
Soybean Meal											.0028				
Sugar		.0058		.0171	.0528	.0169	.0115	.0254	.0734		.0050	.1157	.0563	.0001	
Tea					.0098		.0047		.0479				.0101		
Tin								.0335							
Tin Ore															
Tobacco		.0106		.0019	.0111		.0169	.0215		.0041	.0078		.0116	.0002	.0191
Wheat	.0900	.0024	.0647		.0143	.0508	.0170	.0139	.1052	.0238	.0038	.0110	.0322		.0041
Wool		.0071	.0077			.0090	.0050		.0050				.0069		
Zinc															
Zinc Ore															
Other		.0592	.0236		.0038		.0044	.0342	.0121	.0197	.0349	.0626	.0448		

Sources: IBRD *Commodity Trade and Price Trends* (1974 edition); UN *Yearbook of International Trade Statestics*, 1972–1973; National publications.

Table 4 Asia: Mean Absolute Percentage Errors of Selected Variables for the Sample Period

Country	Sample period	*YD*	*XG*	*MG*	*IF*	*P*
SOUTH & EAST ASIA						
Bangladesh	1961-72	2.06	4.14[a]	3.66[a]	7.60	3.47
Hong Kong	1961-72	2.28	2.39	5.74	6.34	3.62
India	1960-73	1.99	3.21	6.76	5.72	4.58
Indonesia	1961-73	2.23	13.35	10.00	10.02	—
Korea	1961-73	3.09	18.19	12.00	20.94	4.92
Malaysia	1962-73	1.35	4.16	5.11	5.37	1.21
Pakistan	1960-72	4.89	5.31[a]	7.39[a]	10.63	3.40
Philippines	1960-73	1.39	6.54	6.95	4.94	2.64
Singapore	1962-72	3.29	14.35	3.93	12.98	2.37
Sri Lanka	1961-73	2.69	5.59	16.65	9.75	3.21
Taiwan Province	1960-73	2.59	8.37	8.93	7.21	2.17
Thailand	1960-73	2.01	8.09	6.47	8.61	2.40
MIDDLE EAST						
Jordan	1960-72	9.36	9.71	7.30	10.40	3.94
Lebanon	1961-73	4.74	6.13	6.23	4.55	1.94
Syria	1964-73	3.93	6.45	8.06	9.46	2.14

[a] Errors based on total goods and services.

Note: Mean absolute percentage error $= \frac{1}{n}\sum_{t=1}^{n}\left|\frac{\text{Predicted}_t - \text{Actual}_t}{\text{Actual}_t}\right| \cdot 100$

most of the countries within the 2 to 3 range. This is not surprising, given the supply equations in most of the country models which have a very good fit explaining 90 per cent or more of the variations in output. Again, the only exception is Jordan, where the coefficient of determination of the production function is only 0.74. The *GDP* price deflator equation also predicted very well with the highest error of less than 5 per cent.

The performance of the trade sector was quite satisfactory with errors generally less than 10 per cent, except in four countries —Korea and Indonesia for both exports and imports, Singapore for exports alone, and Sri Lanka for imports. The 17 per cent error recorded for Sri Lanka could be attributed to the rather poor fit of the import equation which was chosen because the coefficients, though not highly significant, pointed in the right direction. Also, other equations were tested to improve the estimates but no significant difference was noted.

The weakest function in terms of predictive ability among the key variables presented is fixed investment. In five countries—Indonesia, Jordan, Korea, Pakistan and Singapore—the equations selected yielded poor simulation results or errors higher than 10 per cent. A look at the coefficient of determination, however, reveals that variations in fixed investment are well explained by the equations and among the five countries mentioned only

Pakistan registered R^2 of less than 90 per cent. The poor results may be explained by the relatively small value of the variable (at most 25 per cent of *YD*) which makes it quite sensitive to errors in the independent variables such as imports and *YD*.

Thus, on the basis of these selected variables, in general, the Malaysian model performed consistently well with errors only ranging from 1.2 per cent to 5.4 per cent. The other models, which showed a fairly satisfactory performance are those of Hong Kong, India, Lebanon and the Philippines.

IV Econometric Models of Selected Countries in Asia

Explanation of Symbols

Unless otherwise specified, value variables are measured in millions of domestic currency at constant 1970 prices. Those bearing the symbol ($) are in million U.S. dollars. An asterisk (*) denotes that the variables are in current prices. All price variables are in index form. Index variables, except price variables, are preceded by (I.). All index numbers are in base 1970=1. Variables preceded by (C.) are cumulative, by (DU) are dummy variables, by (R.) are in annual percentage rates of growth and by (L.) are measured in logarithms. Lags are indicated by the subscript (—i), where i is the number of years lagged.

Figures in parentheses below the coefficients are t values. R^2 is the coefficient of determination adjusted for degrees of freedom and S.E. is the adjusted standard error of the estimate. Y is the value of the dependent variable for the year specified and d is the Durbin-Watson statistic.

Sources of Data

The primary sources of data on expenditure and industrial origin of gross domestic product are estimates prepared by the Center for Development Planning, Projections and Policies (CDPPP) and the National Accounts Questionnaires of the United Nations. National sources were used for the following countries: Korea—*Economic Statistics Yearbook* and *Monthly Economic Statistics*, Bank of Korea; Malaysia—*Economic Report* of the Treasury, *Quarterly Economic Bulletin*, Bank Negara Malaysia; Taiwan—*Statistical Data Book*, Economic Planning Council; and Thailand—*National Income of Thailand*, National Economic and Social Development Board.

The sources of trade and other data are: UN *Monthly Bulletin of Statistics*, UN *Yearbook of International Trade Statistics*, IMF *International Financial Statistics*, IMF *Balance of Payments Yearbook* (IMFBOP) and national publications.

List of Variables

C	=Consumption expenditure
CG	=Goverment consumption
CP	=Private consumption
CPF	=Private consumption of food
CPNF	=Private consumption of non-food items
E	=Index of exchange rate
ER	=Exchange rate in units of domestic currency per U.S. dollar
F	=Net foreign capital inflow
I	=Investment expenditure
IF	=Investment in fixed assets

IS =Investment in inventories
L =Index of money supply
M =Imports of goods and non-factor services
$M\$*B$ =Imports of goods and non-factor services (from IMFBOP)
MG =Imports of goods, c.i.f.
$MG\$*FB$ =Imports of goods, f.o.b. (from IMFBOP)
MS =Imports of non-factor services
$MS\$*B$ =Imports of non-factor services (from IMFBOP)
M_{0+1} =Imports of food, beverage and tobacco (SITC 0+1)
M_{0-9} =Imports of SITC 0 to 9
M_{2+4} =Imports of raw materials, excluding fuels (SITC 2+4)
M_{2-9} =Imports of SITC 2 to 9
M_3 =Imports of fuels (SITC 3)
M_{5-9} =Imports of manufactured goods (SITC 5 to 9)
N =Population in millions
P =Implicit price deflator of gross domestic product
PA =Implicit price deflator, agricultural sector
PM =Implicit price deflator of imports
$PM_{0+1}\$S$[2)] =Weighted index of spot prices of imports of SITC 0+1
$PM_{0-9}\$S$ =Weighted index of spot prices of imports of SITC 0 to 9
$PM_{2+4}\$S$[2)] =Weighted index of spot prices of imports of SITC 2+4
$PM_3\$S$[2)] =Weighted index of spot prices of imports of SITC 3
$PM_{5-9}\$O$ =Weighted index of export prices of SITC 5—9 of principal sources of imports
PNA =Implicit price deflator, non-agricultural sector
PW =Unit value index of world exports
PW_{0+1} =Unit value index of world exports of SITC 0+1
PW_{2+4} =Unit value index of world exports of SITC 2+4
PW_3 =Unit value index of world exports of SITC 3
PX =Implicit price deflator of exports
$PX_{0+1}\$S$[2)] =Weighted index of spot prices of exports of SITC 0+1
$PX_{0-9}\$S$ =Weighted index of spot prices of exports of SITC 0 to 9
$PX_{2+4}\$S$[2)] =Weighted index of spot prices of exports of SITC 2+4
$PX_3\$S$[1)] =Weighted index of spot prices of exports of SITC 3
$PX_{5-9}\$S$[2)] =Weighted index of spot prices of exports of SITC 5 to 9
$PXD\$_{5-9}$ =Unit value index of exports of SITC 5 to 9 of developed countries
R =International reserves
$TFP\$*B$ =Private transfers, net (from IMFBOP)
$TIME$ =Time trend
TX =Tax revenue
TG =Trade gap
UC =Capacity utilization
X =Exports of good and non-factor services

2) If the letter S is omitted, variable refers to unit value index of specific commodity group of either imports (M) or exports (X).

$X\$*B$ =Exports of goods and non-factor services (from IMFBOP)
XG =Exports of goods, f.o.b.
$XG\$*B$ =Exports of goods, f.o.b. (from IMFBOP)
XS =Exports of non-factor services
$XS\$*B$ =Exports of non-factor services (from IMFBOP)
X_{0+1} =Exports of food, beverage and tobacco (SITC 0+1)
X_{0-9} =Exports of SITC 0 to 9
X_{2+4} =Exports of raw materials, excluding fuels (SITC 2+4)
X_3 =Exports of fuels (SITC 3)
X_{5-9} =Exports of manufactured goods (SITC 5 to 9)
XW =World exports
XW_{0+1} =World exports of food, beverage and tobacco (SITC 0+1)
XW_{2+4} =World exports of raw materials, excluding fuels (SITC 2+4)
XW_3 =World exports of fuels (SITC 3)
XW_{5-9} =World exports of manufactured goods (SITC 5 to 9)
Y =Value added in all sectors of the economy
YA =Value added in the agricul tural sector
YD =Gross domestic product
YDT =Gross domestic product adjusted for terms of trade effect
YF =Net factor income payments abroad
$YF\$*B$ =Net factor income payments abroad (from IMFBOP)
YMF =Value added in the manufacturing sector
YN =Gross national product
YNA =Value added in the non-agricultural sector
$YNAC$ =Capacity output in the non-agricultural sector
YNT =Gross national product adjusted for terms of trade effect

In the following the countries models are given in the alphabetical order:

1. Bangladesh
2. Hong Kong
3. India
4. Indonesia
5. Jordan
6. Korea, Republic of
7. Lebanon
8. Malaysia
9. Pakistan
10. Philippines
11. Singapore
12. Sri Lanka
13. Syria
14. Taiwan Province
15. Thailand

Model of Bangladesh

Base Period: 1961–1972

I. *Production*

Eq. No.

1a. $YD = 0.2600\ C.IF_{-1/2} + 0.4553\ M$
(6.9466) (1.2232)
$-4860.5214\ DUW$
(4.6607)
$+21783.4812$
(21.9893)

R^2 S.E. Y72 d
[0.90; 802.4; 27654.3; 2.69]

Eq. No.

1b. $YD=0.2896\ \mathrm{C}.IF_{-1/2}$
(9.8789)
$-5670.5087\ DUW$
(6.8522)
$+22823.3480$
(43.6859)
[0.90; 824.2; 27654.3; 2.36]

II. *Consumption*

2. $CP=0.6155\ YNT+5228.3240$
(11.0105) (3.4044)
[0.92; 500.3; 23209.0; 1.89]

3. $CG=0.3464\ YD+1046.7717\ DUW$
(11.2327) (5.1370)
-6483.9890
(7.6657)
[0.93; 262.4; 3995.2; 2.07]

III. *Investment*

4. $IF=0.1063\ YDT+0.4361\ M$
(2.5109) (3.3687)
$-1012.8544\ DUW$
(4.7639)
-1293.1718
(1.4219)
[0.90; 258.8; 2563.8; 1.96]

IV. *Exports*

5a. $X\$=0.3292\ XW\$$
(1.4082)
$-170.1951\left(\frac{PX\$}{PW\$}\right)$
(1.5829)
$-158.1373\ DUW+603.2099$
(3.7855) (5.3585)
[0.60; 37.6; 438.1; 2.56]

5b. $X\$=0.2818\ XW\$-149.7473\ DUW$
(1.1250) (3.3448)
$+445.2967$
(7.9024)
[0.53; 40.6; 438.1; 2.43]

6a. $XG\$=1.2619\ X\$-158.8196$
(1961–69)(5.0418) (1.2379)
[0.75; 26.4; 572.7; 0.72]
(1969)

6b. $XG\$=0.9513\ X\$$
(1961–769)

V. *Imports*

7a. $M\$=0.1629\ YD\$$
(4.5484)
$-495.5331\left(\frac{PM\$\cdot E}{P}\right)$
(2.9887)
$+0.3347\left(\frac{R\$^*}{PM\$}\right)$
(1.2012)
$-451.3895\ DUM+187.3368$
(6.4776) (0.5307)
[0.92; 51.0; 882.0; 1.35]

7b. $M\$=0.2200\ YD\$+0.3645\left(\frac{R\$^*}{PM\$}\right)$
(5.1481) (0.9274)
$-363.9907\ DUM-656.7092$
(4.0777) (2.1971)
[0.85; 72.0; 882.0; 1.35]

7c. $M\$=0.2078\ YD\$-407.2882\ DUM$
(5.1512) (5.3954)
-484.6772
(2.0842)
[0.85; 71.5; 882.0; 1.59]

8. $MG\$=0.8888\ M\$-1.5922$
(1961–69) (15.3186) (0.0400)
[0.96; 20.7; 767.3; 3.04]
(1969)

VI. *Price*

9. $P=0.5019\ \mathrm{I}.YD+0.3335\left(\frac{L}{\mathrm{I}.YD}\right)$
(2.4054) (4.4166)
$+0.1670\ DUW+0.1851$
(1.8353) (1.1497)
[0.96; 0.05; 1.55; 2.01]

VII. *Other equations and identities*

10. $YDT=YD+X^*\left(\frac{1}{PM\$\cdot E}-\frac{1}{PX\$\cdot E}\right)$

Eq. No.

11. $YNT = YDT - YF$

12. $IS = YD - CP - CG - IF - X\$ \cdot ER70 + M\$ \cdot ER70$

13. $R\$^* = 0.25\alpha(M\$ \cdot PM\$)_{-1} + (1-\alpha)R\$^*_{-1}$

Exogenous variables:

$PW\$$, $XW\$$, $PX\$$, $PM\$$, DUW, DUM, YF, E, $ER70$, L, α.

Model of Hong Kong

Base Period: 1961–1972

I. *Production*

Eq. No.

1. $YD = 0.2920\ \text{C}.IF_{-1/2} + 8015.3343$
(25.5195) (29.0148)

R^2 S.E. Y72 d
[0.98; 462.1; 20018.8; 1.60]

II. *Consumption*

2. $\left(\frac{CP}{N}\right) = \underset{(20.0749)}{0.7899}\left(\frac{YNT}{N}\right) + \underset{(1.1570)}{230.5391}$
[0.97; 98.2; 17159.4; 2.95]

3. $CG = 0.0716\,YD - 8.5608$
(19.6952) (0.1614)
[0.97; 43.2; 1405.5; 1.72]

III. *Investment*

4. $IF = 0.1120\,YDT_{-1} + 0.4703\,IF_{-1}$
(2.1868) (1.6295)
$+458.4336$
(1.0155)
[0.87; 258.1; 4755.2; 1.43]

IV. *Exports*

5a. $XG\$ = 11.0109\,XW\$$
(33.2901)
$-\underset{(2.3994)}{1684.7347}\left(\frac{PX\$}{PW\$}\right)$
$+737.5547$
(1.1631)
[0.99; 56.2; 2876.3; 1.38]

5b. $\text{L}.XG\$ = 1.5225\ \text{L}.XW\$ - 0.9133$
(28.4169) (3.1273)
[0.99; 0.05; 8.0; 0.68]

6. $XS\$^* = 0.0904\,XG\$^* + 125.6621$
(7.1672) (5.2930)
[0.82; 37.5; 440.8; 1.21]

V. *Imports*

7. $M_{0+1}\$ = 0.1753\,CP\$$
(10.2176)
$-\underset{(1.4477)}{182.9155}\left(\frac{PM_{0+1}\$S \cdot E}{P}\right)$
$+300.3826$
(1.8013)
[0.98; 14.2; 625.1; 1.37]

8. $M_{2+4}\$ = 0.0588\,YD\$ + 52.1540$
(7.7062) (2.8364)
[0.84; 15.0; 219.3; 2.47]

9. $M_3\$ = 0.0328\,YD\$ - 13.2910$
(20.7550) (3.4906)
[0.98; 3.1; 88.6; 2.24]

10. $M_{5-9}\$ = 0.9097\,YD\$$
(12.8170)
$-\underset{(1.1964)}{864.0126}\left(\frac{PM_{5-9}\$O \cdot E}{P}\right)$
$+145.0204$
(0.1686)
[0.97; 94.7; 2385.5; 1.51]

11a. $MG\$ = 1.0072\,M_{0-9}\$ + 23.5062$
(62.3414) (0.6550)
[0.99; 39.6; 3393.7; 1.64]

11b. $\text{L}.MG = 1.3371\ \text{L}.YD - 3.3261$
(18.0434) (4.7077)
[0.97; 0.1; 9.9; 1.92]

12. $MS\$^* = 0.1419\,MG\$^* - 35.4469$
(98.0009) (0.8908)
[0.85; 53.3; 450.4; 0.91]

VI. *Prices*

13. $P = 0.1501\ \text{I}.YD + M + 0.9357\,P_{-1}$
(1.4462) (4.2442)

Eq.
No.

$$-0.0192$$
$$(0.1615)$$

[0.96; 0.03; 1.18; 1.64]

14. $PM\$=0.9175\ PM_{0-9}\$S+0.0665$
(19.3504) (1.4664)

[0.97; 0.01; 1.14; 2.43]

15. $PX\$=0.6949\ PX_{0-9}\$S$
(1965–72) (2.0413)

$$+1.3611 PX\$_{-1}-0.9529$$
(7.0642) (3.6786)

[0.94; 0.03; 1.20; 2.65]

VII. *Other equations and identities*

16. L.$-YF\$^*=0.0926\ TIME+0.8693$
(4.0822) (2.1489)

[0.59; 0.27; 2.49; 1.71]

17. $YDT=YD$
$$+X^*\left(\frac{1}{PM\$\cdot E}-\frac{1}{PX\$\cdot E}\right)$$

18. $YNT=YDT-\frac{YF\$^*\cdot ER}{PM\$\cdot E}$

19. $M_{0-9}\$=M_{0+1}\$+M_{2+4}\$+M_3\$$
$$+M_{5-9}\$$

Exogenous variables:
$XW\$$, $PW\$$, E, ER, $PM_{5-9}\$O$,
$PM_{0-9}\$S$, $PX_{0-9}\$S$, $TIME$.

Model of India

Base Period: 1955–1973

I. *Production*

Eq.
No.

1. L.$YA=0.0213\ TIME-0.0737\ DUA$
(12.2027) (3.8117)
$$+11.5876$$
(409.7617)

R^2 S.E. Y73 d
[0.90; 0.04; 12.1; 0.91]

2a. $YNAC=0.1684$ C.$IF_{-1/2}$
(2615.8086)

Eq.
No.

$$+96736.1195$$
(3308.4758)

[; ; 241565.9;]

2b. $YNA=0.1490$ C.$IF_{-1/2}$
(36.4374)
$$+1.8133\ MG+62856.5740$$
(5.5191) (12.2883)

[0.99; 4028.8; 213270.0; 1.32]

3. $UC=-0.00001188$ C.$IF_{-1/2}$
(4.1232)
$$+0.000111\ YA_{-1}$$
(2.8463)
$$+0.00036\ MG+0.8185\ UC_{-1}$$
(2.0772) (6.2482)
$$-0.4682$$
(0.0428)

[0.91; 1.3; 88.3; 1.68]

4a. $YD=1.0883(YA+YNA)$
(122.9186)
$$-1939.1945$$
(0.7300)

[0.99; 2228.2; 421809.1; 1.53]

4b. $YD=0.2436$ C.$IF_{-1/2}$
(22.6333)
$$+226752.0695$$
(46.3940)

[0.97; 11912.0; 421809.1; 0.91]

5. L.$YMF=0.9290$ L.$YNA-0.4234$
(54.4594) (2.0893)

[0.99; 0.02; 10.59; 0.55]

II. *Consumption*

6. $\frac{CP}{N}=0.8129\left(\frac{YNT-TX}{N}\right)$
(15.5414)
1955–72
$$+59.2205\left(\frac{YA}{YNA}\right)-28.2734$$
(5.3846) (0.7036)

[0.95; 5.7; 522.5; 1.21]

7. $CG=0.8013\ TX-444.3575$
(30.0142) (0.4279)

[0.98; 1541.2; 49932.4; 0.85]

III. *Investment*

Eq. No.

8. $IF=0.2587\,YDT_{-1}+0.5625\,M_{5-9}$
(1957–73)(17.0251) (2.1100)
-41905.8904
(5.3445)
[0.96; 3009.5; 74382.1; 1.42]

IV. *Exports*

9. $X_{0+1}\$=7.3644\,XW_{0+1}\$$
(1957–73) (4.1341)
$-336.3323\left(\frac{PX_{0+1}\$}{PW_{0+1}\$}\right)$
(2.8098)
$+670.2931$
(4.3305)
[0.71; 49.4; 792.2; 0.60]

10. $X_{2+4}\$=5.2376\,XW_{2+4}\$$
(1957–73) (3.8110)
$-217.2227\left(\frac{PX_{2+4}\$}{PW_{2+4}\$}\right)$
(3.1673)
$+380.5067$
(3.6830)
[0.89; 18.2; 395.7; 2.44]

11. $X_3\$=0.0145\,X_{0-9}\$$
(1957–73)
[; ; 8.8;]

12. $X_{5-9}\$=0.0928\,YMF\$$
(1957–73) (7.8367)
$-733.4074\left(\frac{PXD_{5-9}\$}{PX_{5-9}\$}\right)$
(4.5636)
$+1075.0737$
(6.8219)
[0.80; 60.3; 994.4; 1.63]

13a. $XG\$=1.0556\,X_{0-9}\$-79.9505$
(1957–73) (13.8651) (0.5971)
[0.92; 74.8; 2225.4; 1.84]

13b. $XG\$=1.1463\,XW\$$
(1.7068)
$-936.9223\left(\frac{PX\$}{PW\$}\right)$
(2.7621)
$+0.0969\,YMF\$+1899.5054$
(2.4444) (6.0006)
Eq. No.
[0.94; 63.4; 2225.4; 2.33]

13c. $\text{L}.XG\$=0.3432\,\text{L}.XW\$+5.6348$
(12.0222) (37.3170)
[0.89; 0.05; 7.7; 1.55]

14. $XG\$^*B=0.8969\,XG\$^*+151.3241$
(1955–72) (15.1849) (1.5508)
[0.93; 78.9; 2391.0; 2.24]
(1972)

15. $X\$=0.7933\,XG\$+701.6851$
(11.6329) (5.8812)
[0.88; 77.7; 2319.0; 1.50]

16. $X\$^*B=1.0907\,XG\$^*B+157.8469$
(1955–72) (27.3623) (2.4262)
[0.98; 49.4; 2731.0; 0.47]
(1972)

V. *Imports*

17a. $M_{0+1}\$=-0.2413\,YA\$_{-1/2}$
(1957–73) (4.7862)
$+0.1112\,CP\$$
(4.6720)
$-459.8649\left(\frac{PM_{0+1}\$\cdot E}{P}\right)$
(2.7819)
$+1946.6673$
(5.3983)
[0.63; 144.4; 301.9; 1.14]

17b. $M_{0+1}\$=-0.2390\,YA\$_{-1/2}$
(1957–73) (3.8954)
$+0.1035\,CP\$+1667.8858$
(3.5966) (3.9559)
[0.45; 175.8; 301.9; 0.81]

18. $M_{2+4}\$=0.1084\,M_{0-9}\$$
(1957–73)
[; ; 123.1;]

19. $M_3\$=0.0023\,YD\$$
(1957–73) (1.2327)
$+0.1853\left(\frac{R\$^*\cdot E}{PM}\right)_{-1}-66.2023$
(3.2625) (0.7766)
[0.45; 58.2; 427.5; 1.92]

20a. $M_{5-9}\$=0.0167\,YD\$$
(1957–73) (1.6467)

Eq. No.

$$-1454.4286\left(\frac{PM_{5-9}\$O\cdot E}{P}\right)$$
(1.9806)

$$+0.5647\left(\frac{RS^{*}\cdot E}{PM}\right)_{-1/2}$$
(1.3874)

$$-734.9097\,DUM$$
(3.0436)

$$+2036.9168$$
(2.9166)

[0.66; 159.8; 1141.0; 1.99]

20b. $M_{5-9}\$=0.0125\,YD\$$ (1957–73) (1.3561)

$$-626.9788\,DUM$$
(4.0430)

$$+1278.3634$$
(3.4616)

[0.61; 170.7; 1141.0; 1.80]

21a. $MG\$=0.5631\,M_{0-9}\$+1043.7228$ (1965–73) (4.7595) (3.4217)

[0.73; 168.3; 2124.5; 1.71]

21b. $\mathrm{L}.MG=0.3544\,\mathrm{L}.YD+5.2660$ (1957–73) (1.8447) (2.1601)

[0.13; 0.1; 9.7; 0.64]

22a. $MG\$^{*}FB=0.6722\,MG\$^{*}+570.6291$ (1955–72) (7.3419) (2.6307)

[0.76; 161.4; 2306.0; 1.18]
(1972)

22b. $MG\$^{*}FB=0.8999\,MG\$^{*}$ (1965–72)

23a. $M\$=0.6546\,MG\$+1111.9287$ (7.0187) (5.2101)

[0.73; 171.3; 2660.5; 1.43]

23b. $M\$=1.1128\,MG\$$ (1965–73)

24. $M\$^{*}B=1.2156\,MG\$^{*}FB-8.7707$ (1955–72) (27.1918) (0.0907)

[0.98; 60.3; 2860.0; 0.31]
(1972)

VI. *Prices*

25. $$PA=-0.4913\left(\frac{YA_{-1}}{YNA}\right)$$
(4.8731)

Eq. No.

$$+0.9135\left(\frac{L}{\mathrm{I}.YD}\right)+0.5314$$
(12.1701) (3.4752)

[0.98; 0.05; 1.54; 1.29]

26. $PNA=0.1177\,\mathrm{I}.YD+M$ (0.8638)

$$+0.4138\left(\frac{L}{\mathrm{I}.YD}\right)$$
(2.9591)

$$+0.2768\,PM$$
(2.5200)

$$+0.1447$$
(2.1548)

[0.96; 0.03; 1.22; 0.89]

27. $P=0.5199\,PA+0.4081\,PNA$ (12.7667) (5.7685)

$$+0.0453$$
(1.6032)

[0.99; 0.02; 1.30; 1.34]

VII. *Other equations and identities*

28. $YF\$B=0.0204\,\mathrm{C}.TG\$^{*}_{-1}$ (1955–72) (9.5003)

$$+186.1136\left(\frac{PX}{E}\right)-145.1465$$
(1.1350) (0.9961)

[0.92; 33.8; 309.0; 0.43]
(1972)

29. $YF\$^{*}=1.1521\,YF\$^{*}B+35.2025$ (1955–72) (11.7645) (1.7110)

[0.89; 47.7; 476.4; 2.20]

30a. $R\$^{*}=0.5584\,F\$^{*}-0.5409\,TG\$^{*}$ (1957–72) (3.3388) (4.5318)

$$+0.8587\,R\$^{*}_{-1}+122.1371$$
(5.7415) (0.5937)

[0.79; 103.3; 1142.0; 2.54]

30b. $R\$^{*}=0.25\,\alpha\cdot M\$^{*}B_{-1}+(1-\alpha)R\$^{*}_{-1}$

31. $TX=0.2064\,YD-29165.0419$ (20.2449) (3309.8831)

[0.96; 2794.3; 57702.5; 1.46]

32. $$YDT=YD+X^{*}\left(\frac{1}{PM}-\frac{1}{PX}\right)+\frac{TFP\$^{*}B\cdot ER}{PM}$$

Eq. No.

33. $YNT = YDT - \left(\frac{YF\$^* \cdot ER}{PM}\right)$

34. $X_{0-9}\$ = X_{0+1}\$ + X_{2+4}\$ + X_3\$ + X_{5-9}\$$

35. $M_{0-9}\$ = M_{0+1}\$ + M_{2+4}\$ + M_3\$ + M_{5-9}\$$

36. $TG\$^* = M\$^*B + YF\$^*B - X\$^*B$

37. $YNA = \left(\frac{YNAC \cdot UC}{100}\right)$

Exogenous variables:

$TIME$, $XW_{0+1}\$$, $XW_{2+4}\$$, $XW_{5-9}\$$, $PW_{0+1}\$$, $PW_{2+4}\$$, $PXD_{5-9}\$$, E, ER, $TFP\$^*B$, DUA, DUM, $F\$$, PX, PM, $PX_{0+1}\$$, $PX_{2+4}\$$, $PX_{5-9}\$$, $PM_{0+1}\$$, $PM_{5-9}\$O$, L, α.

Model of Indonesia

Base Period: 1961–1973

I. *Production*

Eq. No.

1. $\mathrm{L}.YA = \underset{(13.8256)}{0.0260}\,TIME + \underset{(397.2688)}{13.7253}$

   R^2 S.E. Y73 d

   [0.94; 0.03; 14.4; 1.47]

2. $YNA = \underset{(8.3868)}{0.2257}\,\mathrm{C}.IF_{-1/2} + \underset{(3.9996)}{0.7914}\,M\mathcal{D} + \underset{(16.4000)}{790794.9028}$

   [0.97; 72615.1; 2374539.0; 0.91]

3a. $YD = \underset{(81.7247)}{1.0500}\,(YA + YNA) - \underset{(4.4165)}{172690.2678}$

   [0.99; 24729.9; 4213579.0; 2.13]

3b. $YD = \underset{(15.1506)}{0.4537}\,\mathrm{C}.IF_{-1/2} + \underset{(29.1231)}{2055236.4003}$

   [0.95; 130418.6; 4213579.0; 0.47]

II. *Consumption*

Eq. No.

4. $CP = \underset{N\ (11.3428)}{0.5443}\left(\frac{YNT}{N}\right) + \underset{(6.1598)}{7950.2382}$

   [0.91; 470.9; 25944.0; 1.35]

5. $CG = \underset{(6.9976)}{0.0770}\,YD + \underset{(0.7550)}{25130.7404}$

   [0.80; 22252.0; 345433.0; 2.58]

III. *Investment*

6. $IF = \underset{(5.1109)}{0.2281}\,YDT_{-1} + \underset{(3.1483)}{0.3898}\,MG - \underset{(4.6728)}{423861.9577}$

   [0.95; 36758.7; 733644.0; 1.78]

IV. *Exports*

7a. $XG\$ = \underset{(1961\text{–}72)\ (3.9821)}{3.1016}\,XW\$ - \underset{(2.3720)}{730.2137}\left(\frac{PX\$}{PW\$}\right) + \underset{(2.5239)}{958.6344}$

   [0.70; 173.6; 18800.0; 0.97] (1972)

7b. $XGS = \underset{(1961\text{–}72)\ (3.9348)}{3.5800}\,XW\$ + \underset{(0.7887)}{178.8759}$

   [0.57; 209.9; 1800.0; 1.67] (1972)

8a. $XG\$^*B = \underset{(15.6794)}{0.7544}\,XG\$^* + \underset{(3.8713)}{236.5444}$

   [0.95; 120.1; 2532.0; 0.79]

8b. $XG\$B = \underset{(13.1604)}{0.9936}\,XG\$^* + \underset{(0.4952)}{35.2308}$

   [0.94; 83.9; 1757.0; 0.68] (1972)

9. $X\$ = \underset{(10.8231)}{0.7397}\,XG\$ + \underset{(2.1787)}{205.7158}$

   [0.91; 163.8; 2582.7; 1.30]

10. $X\$^*B = \underset{(124.6338)}{1.0141}\,XG\$^*B + \underset{(1.5483)}{14.6816}$

    [0.99; 15.7; 2592.0; 0.66]

V. *Imports*

Eq.
No.

11a. $MG\$=0.919\,YD\$$
(3.2091)
$+1.7962\left(\frac{RS\$^*}{PM\$}\right)_{-1/2}$
(7.3529)
-70.0110
(0.3371)
[0.95; 103.1; 2278.7; 2.82]

11b. $\text{L}.MG=1.7661\,\text{L}.YD-13.5895$
(4.9872) (2.5772)
[0.67; 0.2; 13.6; 0.99]

12. $MG\$^*FB=1.1018\,MG\$^*+6.3225$
(14.2163) (0.0779)
[0.94; 137.2; 2725.0; 1.81]

13. $M\$=1.2178\,MG\$+117.0218$
(16.3872) (1.4432)
[0.96; 121.9; 2854.4; 0.71]

14. $M\$^*B=1.0373\,MG\$^*FB+207.7561$
(25.5910) (4.3946)
[0.98; 81.2; 2941.0; 1.08]

VI. *Price*

15. $P=0.1295\left(\frac{L}{\text{I}.YD}\right)$
(3.1863)
$+0.6775\,(PMS\cdot E)$
(14.1137)
$+0.2332\,P_{-1}-0.0053$
(3.0707) (0.4859)
[0.99; 0.03; 1.37; 1.984]

VII. *Miscellaneous equations and identities*

16. $YF\$^*B=0.0434\,\text{C}.TG\$^*_{-1}$
(3.0903)
$+185.7618\,PX\$-115.7142$
(1.9104) (1.3837)
[0.55; 52.3; 196.0; 2.23]

17. $YF\$^*=0.8969\,YF\$^*B+14.3072$
(26.6478) (2.9270)
[0.98; 9.1; 200.0; 2.81]

Eq.
No.

18a. $R\$^*=0.8534\,F\$^*-0.6360\,TG\$^*$
(1963–72) (5.3251) (2.0503)
$+0.9388\,R\$^*_{-1}-39.2717$
(2.0575) (0.6519)
[0.90; 52.8; 807.0; 2.14]

18b. $R\$^*=0.25\,\alpha.M\$^*B_{-1}+(1-\alpha)R\$_{-1}$

19. $YDT=YD+X^*\left(\frac{1}{PM\$\cdot E}-\frac{1}{PX\$\cdot E}\right)+\frac{TF\$^*B\cdot ER}{PM\$\cdot E}$

20. $YNT=YDT-\frac{YF\$ER}{PM\$\cdot E}$

21. $TG\$^*=M\$^*B+YF\$^*B-X\$^*B$

Exogenous variables:
TIME, *XW*\$, *PW*\$, *PX*\$, *PM*\$, *E*, *ER*, *F*\$*, *TFP*\$**B*, *L*, *α*.

Model of Jordan

Base Period: 1955–1972

I. *Prodyction*

Eq.
No.

1. $YD=0.2944\,\text{C}.IF_{-1/2}+133.6369$
(1970–72)(5.8658) (12.4285)
R^2 S.E. Y72 d
[0.74; 20.0; 221.1; 0.61]

II. *Consumption*

2. $CP=0.6640\left(\frac{YNT}{N}\right)+9.3888$
N (19.5829) (3.0280)
[0.96; 3.2; 66.7; 1.34]

3. $CG=0.1805\,YD+14.4139\,DUW$
(7.3240) (4.8237)
$+8.9697$
(2.6722)
[0.95; 3.9; 64.4; 2.18]

III. *Investment*

4. $IF=0.1211\,YDT+0.1454\,MG$
(4.2262) (1.3802)

Eq. No.

$$-3.3543 \quad (1.3253)$$

[0.91; 3.0; 35.0; 2.21]

IV. *Exports*

5a. $XG\$ = 0.1035\ XW\$ + 0.4611\ XG\$_{-1} \quad (3.1492) \quad (1.8709)$

$$-3.8503\ DUW - 6.0973 \quad (1.1569) \quad (1.8955)$$

[0.92; 3.3; 48.8; 1.69]

5b. $L.XG\$ = 1.2866\ L.XW\$ - 3.7153 \quad (12.4437) \quad (7.8491)$

[0.90; 0.2; 3.0; 0.93]

6. $XS\$^* = 4.6135\ TIME \quad (4.6552)$

$$-19.9813\ DUW - 22.2563 \quad (1.8139) \quad (1.8610)$$

[0.65; 12.6; 97.1; 2.47]

7. $XG\$^*B = 0.9922\ XH\$^* + 0.2232 \quad (83.1742) \quad (0.7055)$

[0.99; 0.6; 47.7; 1.13]

8. $XS^*B = 3.3118\ XG\$^*B \quad (7.3701)$

$$-21.2741\ DUW + 0.6113 \quad (1.8930) \quad (0.0736)$$

[0.87; 12.2; 133.2; 1.10]

V. *Imports*

9a. $MG\$ = 0.2495\ YD\$ \quad (6.9957)$

$$-155.2115\left(\frac{PM\$\cdot E}{P}\right) \quad (2.6098)$$

$$-12.9837\ DUW + 212.5606 \quad (1.0551) \quad (3.0519)$$

[0.88; 15.7; 234.9; 1.69]

9b. $MG\$ = 0.2519\ YD\$ + 37.7717 \quad (9.5101) \quad (3.0187)$

[0.84; 18.0; 234.9; 1.42]

10. $M\$ = 1.2022\ MG\$ + 43.7681\ DUW \quad (8.0557) \quad (3.1612)$

$$-13.5639 \quad (0.6734)$$

Eq. No.

[0.92; 20.5; 295.4; 1.67]

11. $MG\$^*FB = 0.9090\ MG\$^* - 4.5484 \quad (53.8038) \quad (1.7488)$

[0.99; 3.5; 237.2; 2.98]

12. $M\$^*B = 1.2983\ MG\$^*FB \quad (10.3579)$

$$+40.1189\ DUW - 3.9121 \quad (3.3474) \quad (0.2778)$$

[0.95; 16.9; 330.2; 1.80]

VI. *Prices*

13. $P = 0.1774\left(\frac{L}{I.YD}\right) + 0.7272\ P_{-1} \quad (4.0242) \quad (5.2640)$

$$+0.1470 \quad (1.4473)$$

[0.90; 0.03; 1.13; 2.16]

14. $PM\$ = 0.5524\ PM_{0-9}\$S \quad (1962\text{–}72) \quad (7.0569)$

$$+0.4748\ PM\$_{-1} - 0.0113 \quad (2.9912) \quad (0.1337)$$

[0.99; 0.01; 1.14; 1.76]

VII. *Other equations and identities*

15. $YF\$^*B = -0.5249\ TIME \quad (2.8928)$

$$-5.9257\ DUW + 3.2699 \quad (2.9672) \quad (1.4933)$$

[0.84; 2.3; −9.3; 1.27]

16. $YF\$^* = 1.6116\ YF\$^*B - 15.4189 \quad (4.3155) \quad (4.8669)$

[0.51; 9.0; −38.9; 0.67]

17. $YDT = YD + X^*\left(\frac{1}{PM\$\cdot E} - \frac{1}{PX\$\cdot E}\right) + \frac{TF\$^*B\cdot ER}{PM\$\cdot E}$

18. $YNT = YDT - \frac{YF\$^*\cdot ER}{PM\$\cdot E}$

Exogenous variables:

$TIME$, N, $XW\$$, E, L, $TF\$^*B$, $PM_{0-9}\$S$, $PX\$$, DUW.

Model of the Republic of Koren

Base Period: 1955–1973

I. *Production*

Eq. No.

1. $\text{L.}YA = 0.0373\,TIME - 0.0513\,DUA$
(24.0215) (2.9051)
$+12.7246$
(499.5364)
FR^2 S.E. Y73 d
[0.97; 0.04; 13.6; 1.45]

2. $YNA = 0.3090\,\text{C.}IF_{-1/2}$
(1960–73) (17.4932)
$+0.7532M_{2-9} + 522578.7870$
(5.8422) (34.8356)
[0.99; 25402.5; 2746479.0; 1.59]

3. $\text{L.}YMF = 1.8798\,\text{L.}YD - 14.5124$
(79.4612) (42.9707)
[0.99; 0.04; 13.8; 2.08]

4. $YD = 0.4759\,\text{C.}IF_{-1/2} + 093666.7863$
(51.5483) (41.3575)
[0.99; 65191.8; 3549429.0; 0.90]

II. *Consumption*

5. $\frac{CPF}{N} = 0.1481 \left(\frac{YNT\text{-}TX}{N}\right)$ (3.7050)
$+0.4561 \left(\frac{CPF}{N}\right)_{-1} + 5732.98$
(2.5108) (2.4761)
[0.98; 577.6; 33355.0; 2.05]

6. $\frac{CPNF}{N} = 0.2378 \left(\frac{YNT\text{-}TX}{N}\right)$ (2.5239)
$+0.5572 \left(\frac{CNFP}{N}\right)_{-1}$
(2.4914)
-2647.52
(2.7246)
[0.98; 983.9; 37877.0; 1.95]

7. $CG = 0.4422\,TX + 120389.63$
(24.8698) (27.5952)
[90.7; 10605.6; 336600.0; 0.86]

III. *Investment*

8a. $IF = 0.5698\,YDT - 0.5811\,YDT_{-1}$
(1960–73)(5.7105) (5.7380)

Eq. No.

$+0.3808M_{5-9}$
(2.2025)
$-157448.95\left(\frac{PA}{PNA}\right)$
(3.3362)
$+0.6844\,IF_{-1} + 149628.38$
(7.9521) (4.1551)
[0.99; 13889.2; 851890.0; 1.77]

8b. $IF = 0.1911\,YDT_{-1} + 1.0486\,M_{5-9}$
(1960–73)(2.3215) (3.7616)
$+4009.4600\,R{\cdot}P$
(1.6330)
$-317682.9700\left(\frac{PA}{PNA}\right)$
(1.8266)
$+52793.9700$
(0.6099)
[0.98; 35891.6; 851890.0; 1.44]

IV. *Exports*

9. $X_{0+1}\$ = 7.7098\,XW_{0+1}\$$
(1960–73) (3.9929)
$-163.3670\left(\frac{PX_{0+1}\$S}{PW_{0+1}\$}\right)$
(1.2478)
-68.8226
(1.1223)
[0.81; 16.7; 156.5; 1.6]

10. $X_{2+4}\$ = 6.2865\,XW_{2+4}\$$
(1960–73) (12.0054)
$-158.1263\left(\frac{PX_{2+4}\$S}{PW_{2+4}\$}\right)$
(5.2800)
$+49.4163$
(1.2118)
[0.97; 7.0; 164.5; 1.32]

11. $X_3\$ = 0.6600\,XW_3\$ - 9.0588$
(1960–73) (6.6567) (3.9807)
[0.77; 2.6; 19.5; 0.43]

12. $\text{L.}X_{5-9}\$ = 2.0415\,\text{L.}XW_{5-9}\$$
(1965–73) (2.3361)
$-0.6694\,\text{L.}\left(\frac{PX_{5-9}\$S}{PXD_{5-9}\$}\right)$
(1.5636)
$+0.3756\,\text{L.}X_{5-9}\$_{-1} - 6.7151$
(1.5604) (2.1030)

Eq. No.

[0.99; 0.1; 7.8; 1.58]

13a. $XG\$ = 1.0107\ X_{0-9}\$ - 19.9429$
(173.8805) (4.2048)

[0.99; 17.1; 2703.5; 1.17]

13b. $XG\$ = 11.1765\ XW\$ - 2351.8333$
(1965–73) (7.7573) (5.4833)

[0.88; 282.7; 2703.5; 0 74]

13c $\mathrm{L}.XG\$ = 3.7596\ \mathrm{L}.XW\$ - 14.7832$
(1965–73) (35.4392) (24.6616)

[0.99; 0.1; 7.9; 1.04]

16. $XG\$^{*}B = 1.0224\ XG\$^{*} + 4.7109$
(233.2571) (1.1834)

[0.99; 14.8; 3271.0; 0.70]

15. $XS\$^{*} = 0.1121\ XG\$^{*}$
(5.7181)
$+0.7424\ XS\$^{*}_{-1} + 26.8364$
(6.9676) (2.0116)

[0.97; 35.1; 741.3; 1.13]

16. $X\$B = 1.2487\ XG\$^{*}B + 112.5792$
(50.0420) (4.8454)

[0.99; 86.2; 4080.0; 0.32]

V. *Imports*

17a. $M_{0+1}\$ = 0.0285\ CP\$$
(1961–73) (1.2772)
$-169.5557\left(\frac{PM_{0+1}\$\cdot S\cdot E}{P}\right)$
(4.5949)
$+0.2964\left(\frac{R\$}{PM\$}\right)_{-1}$
(1.9031)
$+162.4973$
(2.0944)

[0.94; 31.1; 279.0; 2.51]

17b. $M_{0+1}\$ = 0.0744\ CP\$ - 193.4970$
(1961–73) (6.8622) (3.4948)

[0.79; 56.9; 279.0; 0.97]

18a. $M_{2+4}\$ = 0.0353\ YD\$$
(1961–73) (2.9924)
$-76.4416\left(\frac{PM_{2+4}\$\cdot S\cdot E}{P}\right)$
(2.2544)
$+0.3015\left(\frac{R\$^{*}}{PM\$}\right)_{-1}$
(2.2224)
-19.3730
(0.3776)

[0.97; 25.4; 523.1; 1.73]

18b. $M_{2+4}\$ = 0.0275\ YDS$
(1961–73) (2.0527)
$+0.4078\left(\frac{R\$^{*}}{PM\$}\right)_{-1}$
(2.7025)
-63.3897
(1.4906)

[0.96; 30.2; 523.1; 0.81]

19a. $M_{3}\$ = 0.0114\ YD\$$
(1961–73) (2.6671)
$-18.4434\left(\frac{PM_{3}\$\cdot S\cdot E}{P}\right)$
(1.4418)
$+0.1306\left(\frac{R\$^{*}}{PM\$}\right)_{-1} - 11.8667$
(2.6672) (0.6015)

[0.97; 09.3; 171.8; 1.83]

19b. $M_{3}\$ = 0.0099\ YDS$
(1961–73) (3.0776)
$+0.1515\left(\frac{R\$^{*}}{PM\$}\right)_{-1} - 33.0319$
(2.2600) (2.3807)

[0.97; 9.8; 171.8; 1.88]

20. $M_{5-9}\$ = 0.1458\ YDS$
(1961–73) (2.7899)
$+0.6718\left(\frac{R\$^{*}}{PM\$}\right)_{-1}$
(1.1396)
-404.7608
(2.4365)

[0.95; 117.8; 1767.2; 0.99]

21a. $MG\$ = 1.1835\ M_{0-9}\$ - 188.5917$
(23.5629) (2.5616)

[0.98; 152.5; 3375.2; 0.51]

21b. $\mathrm{L}.MG = 2.2552\ \mathrm{L}.YD - 14.2246$
(1960–73) (16.4985) (10.5834)

[0.95; 0.2; 9.3; 1.33]

22. $MG\$FB = 0.9061\ MG\$^{*} + 1.2582$
(267.2708) (0.2479)

[0.99; 15.3; 3837.0; 2.17]

23. $MS\$^{*} = 0.0316\ MG\$^{*} + 7.9983$
(1965–73) (5.8907) (0.6980)

Eq.
No.

[0.81; 17.4; 150.1; 2.61]

24. $M\$^*B = 1.1499\ MG\$^*FB + 7.2657$
(297.9065) (1.3869)

[0.99; 15.8; 4407.0; 1.21]

VI. *Prices*

25. $PA = -0.4544\left(\frac{YA_{-1}}{YNA}\right)$
(1960–73) (1.8722)
$+0.9605\ PA_{-1} + 0.3680$
(9.6197) (1.9558)

[0.99; 0.05; 1.59; 1.39]

26. $PNA = 0.0528\ PA + 0.0989\ (PM\$\cdot E)$
(1.0136) (2.6853)
$+0.9126\ PNA_{-1} + 0.0143$
(12.2787) (1.7074)

[0.99; 0.02; 1.34; 2.24]

27. $P = 0.2914 PA + 0.7031 PNA - 0.0001$
(18.0488) (37.4488) (0.0409)

[0.99; 0.005; 1.40; 1.03]

VII. *Other equations and identitiesi*

28. $YF\$^*B = 0.0327\ \text{C}.TG\$_{-1}$
(1965–73) (6.6883)
$+186.1366\ PX\$ - 212.3808$
(1.3697) (1.5961)

[0.91; 19.6; 172.0; 0.97]

29. $YF\$^* = 0.8569\ YF\$^*B - 68.2488$
(1965–73) (7.2694) (7.1682)

[0.87; 22.5; 93.0; 0.82]

30a. $R\$^* = 1.1321\ F\$^* - 1.0976\ TG\$^*$
(1960–73) (8.2984) (10.2335)
$+1.1129\ R\$^*_{-1} + 37.1524$
(14.0668) (2.2227)

[0.99; 28.8; 1094.4; 1.36]

30b. $R\$^* = 0.25\ (\alpha\cdot M\$^*B_{-1})$
$+(1-\alpha)R\$^*_{-1}$

31. $TX = 0.1731\ YD - 94865.35$
(19.4563) (5.6420)

[0.95; 29987.7; 464710.0; 0.63]

32. $YD = YA + YNA$

Eq.
No.

33. $YDT = YD + X^*\left(\frac{1}{PM\$\cdot E} - \frac{1}{PX\$\cdot E}\right) + \frac{TF\$^*B\cdot ER}{PM\$\cdot E}$

34. $YNT = YDT - \frac{YF\$^*\cdot ER}{PM\$\cdot E}$

35. $X_{0-9}\$ = X_{0+1}\$ + X_{2+4}\$ + X_3\$ + X_{5-9}\$$

36. $M_{0-9}\$ = M_{0+1}\$ + M_{2+4}\$ + M_3\$ + M_{5-9}\$$

37. $M_{2-9} = (M_{2+4}\$ + M_3\$ + M_{5-9}\$)\cdot ER70$

38. $IS = YD - CPF - CPNF - CG - IF - XG\$\cdot ER70 - \frac{XS\$^*\cdot ER}{PX\$\cdot E} + MG\$\cdot ER70 + \frac{MS\$^*\cdot ER}{PM\$\cdot E}$

39. $TG\$^* = M\$^*B + YF\$^*B - X\$B$

Exogenous variables:
$XW_{0+1}\$$, $XW_{2+4}\$$, $XW_3\$$, $XW_{5-9}\$$, $PW_{0+1}\$$, $PW_{2+4}\$$, $PXD_{5-9}\$$, $PX_{0+1}\$S$, $PX_{2+4}\$S$, $PX_{5-9}\$S$, $PM_{0+1}\$S$, $PM_{2+4}\$S$, $PM_3\$S$, $PX\$$, $PM\$$, N, E, $TF\$^*B$, $F\$^*$, α.

Model of Lebanon

Base Period: 1961–1973

I. *Production*

Eq.
No.

1a. $YD = 0.1016\ \text{C}.IF_{-2/1} + 1.4768\ MG$
(2.3592) (3.9038)
$+1226.6206$
(2.9590)

R^2 S.E. Y73 d
[0.98; 139.7; 6209.3; 1.13]

1b. $YD = 0.2633\ \text{C}.IF_{-2/1} + 2813.2547$
(14.8156) (22.8603)

[0.95; 211.6; 6209.3; 1.17)]

II. *Consumption*

2. $\left(\frac{CP}{N}\right) = \underset{(19.6569)}{0.9935}\left(\frac{YDT}{N}\right) - \underset{(3.9894)}{347.6847}$

Eq. No.

[0.97; 26.5; 1685.9; 1.78]

3. $CG = 0.1141\,YD - 75.9577$
(8.3216) (1.2301)
[0.85; 44.0; 566.7; 0.69]

III. *Investment*

4. $IF = 0.1444\,YDT + 0.1760\,MG$
(3.4632) (2.5024)
$-133.9687\,DUW + 48.6044$
(4.0737) (0.5919)
[0.94; 34.0; 1178.5; 2.10]

IV. *Exports*

5a. $XG\$ = 0.7759\,XW\$ + 0.3656\,XG\$_{-1}$
(2.0396) (1.0175)
-96.3052
(1.8369)
[0.97; 16.6; 307.8; 1.20]

5b. $\text{L}.XG\$ = 2.1890\,\text{L}.XW\$ - 7.2429$
(24.8291) (14.9483)
[0.98; 0.1; 5.7; 1.52]

6. $XS\$^* = 13.3786\,TIME + 17.5616$
(7.0941) (0.5605)
[0.80; 25.4; 373.2; 1.37]

V. *Imports*

7a. $MG\$ = 0.4354\,YD\$$
(16.5776)
$-168.0120\left(\frac{PM\$\cdot E}{P}\right)$
(1.2917)
$+114.5585$
(0.9999)
[0.97; 20.9; 727.6; 1.06]

7b. $\text{L}.MG = 1.1556\,\text{L}.YD - 3.3658$
(13.9238) (4.8420)
[0.94; 0.1; 6.8; 0.88]

3. $M\$ = 1.2321\,MG\$ - 133.8284$
(46.1574) (9.2012)
[0.99; 11.1; 748.6; 2.01]

VI. *Prices*

9. $P = 0.2635\,\text{I}.YD + 0.1994\,(PMS\cdot E)$
(2.2005) (1.0371)
$+0.5193$
(5.4001)
[0.84; 0.03; 1.10; 1.39]

10. $PX\$ = 1.0043\,PX_{0-9}\$S$
(4.3910)
$+1.8727\,PX\$_{-1} - 1.8108$
(3.5541) (3.6814)
[0.81; 0.08; 1.63; 1.06]

11. $PM\$ = 1.0945\,PM_{0-9}\$S - 0.0652$
(16.1613) (0.9517)
[0.96; 0.04; 1.63; 1.63]

VII. *Identities*

12. $YDT = YD + X^* \left(\frac{1}{PM\$\cdot E} - \frac{1}{PX\$\cdot E}\right)$

13. $IX = YD - CP - CG - IF - XG\$\cdot ER70 - \left(\frac{XS\$^*}{PX\$}\right)ER70 + M\$\cdot ER70$

Exogeneous avriables:
$TIME$, $XW\$$, $PX_{0-9}\$S$, $PM_{0-9}\$S$, N, E, ER, DUW

Model of Malayaia

Base Period: 1962–1973

I. *Production*

Eq. No.

1. $\text{L}.YA = 0.0559\,TIME + 6.8891$
(16.8569) (110.3123)
R^2 S.E. Y73 d
[0.96; 0.04; 8.3; 1.14]

2. $YNA = 0.2152\,\text{C}.IF_{-1/2} + 4005.0367$
(24.8941) (38.1561)
[0.98; 179.4; 8733.8; 1.40]

3a. $YD = 1.2421\,Y - 539.9085$
(94.1723) (4.4094)
[0.99; 85.0; 15299.0; 1.29]

Eq. No.

3b. $YD=0.3838\ \mathrm{C}.IF_{-1/2}+6703.8371$
(32.3661) (46.5556)
[0.99; 246.2; 15299.0; 1.67]

II. *Consumption*

4. $\frac{CP}{N}=0.3508\left(\frac{YNT\text{-}TX}{N}\right)$ (3.7654)
$+270.0777\left(\frac{YA}{YNA}\right)$ (2.2467)
$+0.6383\left(\frac{CP}{N}\right)_{-1}-174.3491$ (3.1127) (1.4960)
[0.91; 9.4; 6718.5; 1.63]

5. $CG=0.8415\ TX+433.7156$
(17.3723) (5.1589)
[0.96; 91.6; 2607.;0 1.12]

III. *Investment*

6. $IF=0.2410\ \mathrm{F}.YNA+0.2979\ M_{5-9}$
(3.0398) (3.4716)
$-632.7021\left(\frac{PA}{PNA}\right)$ (3.5269)
$+0.3118\ IF_{-1}+1200.7129$ (3.1278) (3.8336)
[0.98; 44.2; 2387.0; 2.23]

IV. *Exports*

7. $X_{0+1}\$=1.8622\ XW_{0+1}\$$ (4.0174)
$-141.1597\left(\frac{PX_{0+1}\$}{PW_{0+1}\$}\right)$ (5.4479)
$+165.2899$ (3.8201)
[0.96; 4.5; 131.0; 1.76]

8. $X_{2+4}\$=51.2678\ XW_{2+4}\$-585.6619$
(16.4522) (6.6498)
[0.96; 48.4; 1312.9; 1.51]

9. $X_3\$=1.2496\ XW_3\$$ (1.1676)
$-68.2700\left(\frac{PX_3\$}{PW_3\$}\right)+136.9546$ (2.0545) (2.5281)
[0.51; 19.7; 97.7; 1.18]

Eq. No.

10. $X_{5-9}\$=1.0046\ XW_{5-9}\$$ (11.1824)
$-176.8382\left(\frac{PX_{5-9}\$}{PXD_{5-9}\$}\right)$ (3.1349)
$+409.5465$ (6.8128)
[0.93; 18.3; 550.8; 1.81]

11a. $XG\$=0.9954\ X_{0-9}\$+19.8598$
(52.1513) (0.7071)
[0.99; 22.2; 2117.2; 1.82]

11b. $XG\$=4.3786\ XW\$+300.3054$
(20.6010) (5.1874)
[0.97; 58.8; 2117.2; 1.78]

12. $XG\$^*B=1.0157\ XG\$^*-34.7420$
(197.2019) (4.2783)
[0.99; 8.9; 2974.0; 0.86]

13. $X\$=1.0399\ XG\$+34.9491$
(41.6986) (0.9442)
[0.99; 29.0; 2238.8; 1.53]

14. $X\$^*B=1.0476\ XG\$B+43.0758$
(100.5751) (2.6367)
[0.99; 18.2; 3167.0; 0.63]

V. *Imports*

15a. $\frac{M_{0+1}\$^*}{CP\$^*}.100=-0.0083\ YA\$_{-1}$ (1965–73) (3.6112)
$+20.49870$ (9.5846)
[0.60; 1.0; 12.4; 1.25]

15b. $\frac{M_{0+1}\$^*}{CP\$^*}.100=-0.0272\ YA\$_{-1/2}$ (1965–73) (1.4098)
$+0.0124\ CP\$+10.8493$ (1.0328) (1.2012)
[0.58; 1.0; 12.4; 1.24]

16. $M_{2+4}\$=0.0295\ YD\$-15.2650$
(1965–73) (3.3860) (0.4536)
[0.57; 16.1; 124.0; 1.74]

17a. $M_3\$=0.1043\ M_{0-09}\$$
[; ; 89.3;]

Eq. No.

17b. $M_3\$ = 0.8596\, M_3\$_{-1}$

18. $M_{5-9}\$ = 0.1765\, YD\$ + 100.1308$
(9.7480) (1.5385)
[0.90; 47.4; 1029.3; 1.78]

19a. $MG\$ = 0.9276\, M_{0-9}\$ + 96.6406$
(19.2403) (1.6386)
[0.97; 23.8; 1498.5; 1.12]

19b. $\text{L}.MG = 0.4690\ \text{L}.YD + 3.8751$
(7.3939) (6.5955)
[0.83; 0.05; 8.4; 1.87]

20. $MG\$ \cdot FB = 0.9508 MG\$ + 12.8454$
(98.6546) (0.9838)
[0.99; 12.7; 2287.0; 0.80]

21. $MS\$^* = 0.1606\, MG\$^* - 61.5721$
(4.8579) (1.3745)
[0.67; 43.6; 305.4; 1.42]

22. $M\$^*B = 1.2445\, MG\$^*FB - 96.3413$
(87.2139) (5.1914)
[0.99; 17.9; 2742.0; 0.40]

VI. *Prices*

23. $PA = -0.5585\left(\frac{YA-1}{YNA}\right) + 1.0548\,(PX\$ \cdot E) + 0.3739\, PA-1 - 0.1517$
(1.0796) (5.2743) (1.9258) (0.5122)
[0.70; 0.05; 1.18; 1.57]

24. $PNA = 0.2790\ \text{I}.YD + M + 0.2392\,(PM\$ \cdot E) + 0.4549$
(3.1308) (1.5818) (4.8757)
[0.89; 0.03; 1.11; 2.77]

25. $P = 0.3129\, PA + 0.6860\, PNA + 0.0010$
(30.1003) (58.0366) (0.0555)
[0.99; 0.99; 0.003; 1.13; 0.51]

26. $PCP = 0.959\,7P + 0.0418$
(4.6830) (0.2074)
[0.66; 0.03; 1.13; 1.13]

Eq. No.

27. $PX\$ = 0.9792\, PX_{0-9}\$S + 0.0109$
(22.4498) (0.2399)
[0.98; 0.02; 1.39; 1.64]

28. $PX_{0+1}\$ = 0.5349\, PX_{0+1}\$S + 0.5370$
(1965–73) (5.0937) (4.8389)
[0.76; 0.07; 1.42; 0.79]

29. $PX_3\$ = 0.7176\, PX_3\$S + 0.2626$
(1965–73) (10.9282) (3.3906)
[0.94; 0.05; 1.53; 1.28]

30. $PX_{5-9}\$ = 1.1039\, PX_{5-9}\$S - 0.0712$
(24.3720) (1.6712)
[0.98; 0+.02; 1.30; 1.03]

31. $PN\$ = 1.1258\, PM_{0-9}\$S - 0.0981$
(24.2292) (2.0499)
[0.98; 0.03; 1.60; 2.09]

VII. *Other equations and identities*

32. $YF\$^*B = 0.0152\ \text{C}.TG\$_* - 1 + 0.0800\, X\$^*B - 27.3544$
(1.7121) (6.2653) (1.5824)
[0.81; 18.0; 202.0; 1.65[

33. $YF\$^* = 1.3341\, YF\$^*B - 16.0090$
(8.9863) (1.1303)
[0.88; 20.2; 261.4; 1.17]

34. $TX = 0.2355\, YD - 885.6782$
(38.9141) (13.3024)
[0.99; 48.4; 2692.9; 2.75]

35. $YNT = YD - \left(\frac{YF\$^* \cdot ER}{PM\$ \cdot E}\right) + X^*\left(\frac{1}{PM \cdot E} - \frac{1}{PX\$ \cdot E}\right) + \frac{TF\$B \cdot ER}{PM\$ \cdot E}$

36. $X_{0-9}\$ = X_{0+1}\$ + X_{2+4}\$ + X_3\$ + X_{5-9}\$$

37. $M_{0-9} = M_{90+1}\$ + M_{2+4}S + M_3S + M_{5-9}\$$

38. $TG\$^* = M\$_*B + YF\$^*B - X\$^*B$

Exogenous variables:

$TIME$, $TF\$^*B$, E, ER, $XW_{0+1}\$$,

$XW_{2+4}\$$, $XW_3\$$, $XW_{5-9}\$$, $PW_{0+1}\$$, $PW_3\$$, $PXD_{5-9}\$$, $PX_{0-9}\$S$, $PX_{0+1}\$S$, $PX_3\$S$, $PX_{5-9}\$S$, $PM_{0-9}\$S$.

Model of Pakistan

Base Period: 1960–72

I. *Production*

Eq. No.

1. $\text{L.}YA = \underset{(18.0334)}{0.0455}\,TIME + \underset{(198.9171)}{8.7412}$

R^2 S.E. Y72 d
[0.96; 0.03; 9.75; 1.22]

2. $YNA = \underset{(29.1962)}{0.2175}\,\text{C.}IF_{-1/2} + \underset{(33.7638)}{13159.1915}$

[0.99; 687.3; 3226.6; 2.02]

3a. $YD = \underset{(16.9162)}{1.1542}\,Y - \underset{(0.6722)}{1728.6890}$

[0.96; 1949.8; 53147.6; 0.59]

3b. $YD = \underset{(15.9171)}{0.3567}\,\text{C.}IF_{--1/2} + \underset{(20.9230)}{24528.5770}$

[0.95; 2067.3; 53147.6; 0.51]

II. *Consumption*

4. $\dfrac{CP}{N} = \underset{(13.6332)}{1.0296}\left(\dfrac{YNT}{N}\right) + \underset{(2.7482)}{339.4276}\left(\dfrac{YA}{YNA}\right) - \underset{(3.1639)}{410.4064}$

[0.98; 12.2; 630.5; 2.31]

5. $CG = \underset{(7.1445)}{0.0904}\,YD + \underset{(1.4788)}{783.1168}$

[0.81; 425.2; 5450.0; 2.21]

III. *Investment*

6. $IF = \underset{(2.5470)}{0.0066}\,YDT_{-1} + \underset{(4.6306)}{0.7524}\,M - \underset{(0.1744)}{113.8685}$
(1952–72)

[0.79; 899.3; 6793.6; 1.28]

IV. *Exports*

7a. $X\$ = \underset{(12.6727)}{2.4237}\,XW\$ - \underset{(5.4269)}{1429.5673}\left(\dfrac{PX\$}{PW\$}\right) + \underset{(6.0839)}{1530.2427}$

[0.93; 43.3; 860.5; 1.88]

7b. $XS = \underset{(4.7268)}{1.2658}\,XW\$ - \underset{(3.2814)}{140.9494}\,DUW + \underset{(5.8838)}{429.4370}$
(1965–72)

[0.76; 36.9; 860.5; 1.88)]

7c. $\text{L.}X\$ = \underset{(6.8000)}{0.8196}\,\text{L.}XW\$ + \underset{(3.0837)}{2.0129}$

[0.79; 0.1; 6.8; 0.82]

8. $XG\$ = \underset{(4.8484)}{0.7604}\,X\$ + \underset{(1.0388)}{124.4633}$
(1964–72)

[0.76; 31.5; 761.0; 2.28]

V. *Imports*

9a. $M\$ = \underset{(1.4707)}{0.0338}\,YD\$ - \underset{(1.8717)}{361.7298}\left(\dfrac{PM\$\cdot E}{P}\right) + \underset{(2.8351)}{322.0400}\,DUM - \underset{(1.9394)}{287.2251}\,DUW + \underset{(6.1643)}{1219.5481}$

[0.64; 131.4; 982.4; 0.94;]

9b. $M\$ = \underset{(10.8731)}{1.2885}\,MG\$ - \underset{(0.6967)}{84.2595}$
(1965–72)

[0.94; 57.6; 982.4; 3.16]

9c, $\text{L.}M. = \underset{(0.7022)}{0.1487}\,\text{L.}YD + \underset{(3.1371)}{7.0378}$

10a. $MG\$ = \underset{(10.8729)}{0.7386}\,M\$ + \underset{(1.3230)}{110.8222}$
(1965–72)

[0.94; 43.6; 952.0; 3.29]

Eq. No.

10b. $MG\$=0.0736\,YDS$

VI. *Prices*

11. $PA=-0.4646\left(\frac{YA_{-1}}{YNA}\right)$ (1.4819)
$+0.1556\,(PX\$\cdot E)$ (4.0608)
$+0.6923\,PA_{-1}+0.4211$ (3.1950) (1.2667)

[0.92; 0.04; 1.28; 2.23]

12. $PNA=0.1363\,\text{I}.YD+M$ (2.9777)
$+0.1423\left(\frac{L}{\text{I}.YD}\right)+0.1230\,PA$ (3.0575) (1.7734)
$+0.0353\,(PM\$\cdot E)$ (2.6645)
$+0.6450\,PNA_{-1}-0.0522$ (8.7725) (1.9856)

[0.99; 0.01; 1.20; 3.21]

13. $P=0.0602\,PA+0.8335\,PNA$ (0.2024) (2.9524)
$+0.0860$ (1.2475)

[0.94; 0.04; 1.17; 0.92]

14. $PX\$=0.6053\,PX_{0-9}\$S$ (1.9955)
$+0.8626\,PX\$_{-1}-0.4236$ (2.7029) (3.5027)

[0.91; 0.04; 1.27; 1.79]

15. $PM\$=1.9411\,PM_{0-9}\$S-1.0874$ (4.8817) (2.7817)

[0.66; 0.09; 1.10; 1.15]

VII. *Identities*

16. $YDT=YD+Y^*\left(\frac{1}{PM\$\cdot E}-\frac{1}{PX\$\cdot E}\right)$

17. $YNT=YDT-YF$

Exogenous variables:

$XW\$$, $PW\$$, L, $TIME$, YF, YN, E, ER, DUW, DUM, $PX_{0-9}\$$, $PM_{0-9}\$S$.

Modol of the Philippines

Base Period: 1955–1973

I. *Production*

Eq. No.

1. $\text{L}.YA=0.0365\,TIME+8.5952$ (39.2927) (579.9238)

R^2 S.E. Y73 d
[0.99; 0.02; 9.46; 1.71]

2. $YNA=0.1435\,\text{C}.IF_{-1/2}+9993.0605$ (56.5110) (66.6636)

[0.99; 361.0; 26690.9; 0.82]

3a. $YD=1.3793\,(YA+YNA)$ (67.4132)
-5008.6870 (8.9386)

[0.99; 586.4; 50425.3; 0.47]

3b. $YD=0.2781\,\text{C}.IF_{--1/2}$ (63.5114)
$+17979.3713$ (69.5710)

[0.99; 622.3; 50425.3; 1.03]

II. *Consumption*

4. $\frac{CP}{N}=0.4616\left(\frac{YNT\text{-}TX}{N}\right)$ (2.6648)
$+453.6896\left(\frac{YA}{YNA}\right)$ (1.7914)
$+0.6948\left(\frac{CP}{W}\right)_{-1}-444.8642$ (4.1346) (1.7408)

[0.88; 21.5; 836.5; 2.25]

5. $CG=0.5336\,TX+1253.6677$ (12.0931) (7.9745)

[0.89; 250.8; 4479.0; 1.11]

III. *Investment*

6. $IF=0.1517\,YDT+0.7376\,M_{5-9}$ (4.8018) (5.6022)
$-3013.3389\left(\frac{PA}{PNA}\right)+702.591$ (1.7522) (0.8306)

[0.97; 314.5; 9001.8; 1.92]

IV. *Exports*

Eq. No.

7. $X_{0+1}\$ = 5.4523\ XW_{0+1}\$ - 152.0565\left(\frac{PX_{0+1}\$S}{PW_{0+1}\$}\right) + 203.5382$
(9.1490) (4.9244) (5.3510)
[0.86; 21.0; 264.7; 1.22]

8. $X_{2+4}\$ = 20.1905\ XW_{2+4}\$ - 214.9527\left(\frac{PX_{2+4}\$S}{PW_{2+4}\$}\right) + 242.1947$
(7.0021) (1.5722) (3.0927)
[0.79; 54.8; 715.2; 1.41]

9. $X_3\$ = 1.2391\ XW_3\$ - 23.0595\ PX_3\$S + 7.1163$
(1960–73) (12.7623) (7.4280) (2.9414)
[0.93; 1.8; 8.8; 2.07]

10. $X_{5-9}\$ = 1.0538\ XW_{5-9}\$ - 48.8953$
(16.0841) (4.8888)
[0.93; 19.2; 264.6; 1.68]

11a. $XG\$ = 1.2182\ X_{0-9}\$ - 202.5554$
(18.4415) (3.3358)
[0.95; 65.5; 1516.1; 0.70]

11b. $XG\$ = 1.4673\ XW\$ - 162.6746\left(\frac{PX\$}{PW\$}\right) + 0.5880\ XG\$_{-1} + 234.5801$
(2.6107) (1.2109) (2.9695) (1.5993)
[0.97; 47.1; 1516.1; 1.88]

11c. $\mathrm{L}.XG\$ = 0.7676\ \mathrm{L}.XW\$ + 2.6832$
(19.4266) (12.8378)
[0.95; 0.1; 7.3; 1.07]

12. $XG\$^*B = 0.9986\ XG\$^* - 7.8933$
(39.5291) (0.3603)
[0.99; 37.5; 1876.0; 0.74]

13. $XS\$^* = 0.2679\ XW\$^* + 0.6622\ XS\$^*_{-1}$
(1.6670) (3.5302)
$+ 159.9225\ DUX + 12.4599$
(2.1037) (0.3845)
[0.79; 53.1; 522.7; 1.57]

14. $X\$^*B = 1.3043\ XG\$^*B - 33.2831$
(29.9953) (0.8905)
[0.98; 64.8; 2393.0; 0.72]

V. *Imports*

15. $M_{0+1}\$ = 0.1348\ M_{0-9}\$$
(1960–73)
[; ; 123.1;]

16. $M_{2+4}\$ = 0.0332\ YNA\$ - 54.9571\left(\frac{PM_{2+4}\$S \cdot E}{P}\right) + 3.4402$
(9.1025) (3.2131) (0.3145)
[0.85; 8.9; 60.7; 1.62]

17a. $M_3\$ = 0.0257\ YD\$ - 64.0214\left(\frac{PM_3\$S \cdot E}{P}\right) + 9.8970$
(10.5370) (3.4712) (0.9798)
[0.91; 9.3; 114.5; 1.50]

17b. $M_3S = 0.0190\ YDS - 11.6359$
(10.3250) (1.1551)
[0.85; 11.8; 9.0; 0.91]

18. $M_{5-9}\$ = 0.1975\ YD\$ - 786.0282\left(\frac{PM_{5-9}\$O \cdot E}{P}\right) + 250.8064$
(7.4681) (3.0732) (2.5259)
[0.86; 79.9; 932.9; 1.07]

19a. $MG\$ = 0.9400\ M_{0-9}\$ + 47.7533$
(1970–63) (10.2431) (0.4726)
[0.89; 82.7; 1382.0; 0.80]

19b. $\mathrm{L}.MG = 0.6057\ \mathrm{L}.YD + 2.4222$
(4.7088) (1.8237)

Eq. No.

[0.54; 0.2; 9.0; 0.71]

20. $MG\$^{*}FB = 0.8622\ MG\$^{*} + 24.5755$
(53.3216) (1.4917)

[0.99; 25.2; 1600.0; 1.32]

21. $M\$ = 1.0071\ MG + 110.7268$
(15.0829) (1.6123)

[0.93; 66.9; 1588.2; 1.25]

22. $M\$^{*}B = 1.2754\ MG\$^{*}FB - 39.5997$
(62.3867) (2.1478)

[0.99; 27.6; 2035.0; 1.52]

VI. *Prices*

23. $PA = 0.1776\ (PX\$\cdot E) + 1.0086\ PA_{-1}$
(2.4699) (13.2604)
-0.0443
(2.6927)

[0.99; 0.03; 1.53; 1.56]

24. $PNA = 0.2670\ \mathrm{I}.YD + M + 0.2672\ PA$
(2.4081) (2.9732)
$+0.1271\ (PMS\$\cdot E)$
(2.9527)
$+0.2668\ PNA_{-1} + 0.0984$
(1.1991) (2.5179)

[0.99; 0.01; 1.37; 1.84]

25. $P = 0.3611\ PA + 0.5942\ PNA$
(9.2596) (11.0786)
$+0.0316$
(2.2262)

[0.99; 0.01; 1.39; 2.63]

26. $PX\$ = 0.4929\ PX_{0-9}\$S$
(6.7485)
$+0.2829\ PX\$_{-1} + 0.2032$
(1.7117) (1.4688)

[0.76; 0.05; 1.19; 1.33]

27. $PM\$ = 0.2058\ PM_{0-9}\$S$
(1.8023)
$+0.8907\ PM\$_{-1} - 0.0691$
(8.1713) (0.8576)

[0.91; 0.05; 1.28; 1.75]

VII. *Other equations and identities*

28. $YF\$^{*}B = 0.0574\ \mathrm{C}.TG\$^{*}_{-1} + 29.0107$
(1960–73) (4.0602) (2.3811)

Eq. No.

[0.54; 27.8; 113.0; 1.11]

29. $YF\$^{*} = 0.9018\ YF\$B + 5.6597$
(10.8923) (0.9107)

[0.87; 12.4; 66.8; 1.6]

30. $TX = 0.1399\ YD - 1113.6221$
(18.0795) (4.3694)

[0.95; 306.5; 6844.9; 1.1]

31. $YDT = YD + X^{*}\left(\frac{1}{PM\$\cdot E} - \frac{1}{PX\$\cdot E}\right) + \frac{TF\$^{*}B\cdot ER}{PM\$\cdot E}$

32. $YNT = YDT - \frac{YF\$^{*}\cdot ER}{PMS\cdot E}$

33. $X_{0-9}\$ = X_{0+1}\$ + X_{2+4}\$ + X_{3}\$ + X_{5-9}\$$

34. $M_{0-9}\$ = M_{0+1}\$ + M_{2+4}\$ + M_{3}\$ + M_{5-9}\$$

35. $IS = YD - CP - CG - IF - XG\$\cdot ER\,70 - \frac{XS\$^{*}\cdot ER}{PX\$\cdot E} + M\$\cdot ER\,70$

36. $TG\$^{*} = M\$^{*}B + YF\$^{*}B - X\$^{*}B$

Exogenous variables:

$XW_{0+1}\$$, $XW_{2+4}\$$, $XW_{3}\$$, $XW_{5-9}\$$, $PW_{0+1}\$$, $PW_{2+4}\$$, $PX_{0+1}\$S$, $PX_{2+4}\$S$, $PX_{3}\$S$, $PX_{0-9}\$S$, $PM_{0-9}\$S$, $PM_{2+4}\$S$, $PM_{3}\$S$, $PM_{5-9}\$O$, N, E, ER, $TF\$^{*}B$, $TIME$, DUX.

Model of Singapose

Base Period: 1961–1972

I. *Production*

Eq. No.

1. $\mathrm{L}.YA = 0.0473\ TIME + 3.9090$
(10.7403) (49.7239)

R^2 S.E. Y72 d
[0.91; 0.05; 5.04; 0.99]

Eq.
No.

2. $YNA = 0.3995\ \mathrm{C}.IF_{-1/2}$
(8.4740)
$+0.3228\ M_{2-9} + 1296.2606$
(4.7230) (7.4126)
[0.99; 106.2; 7062.1; 0.78]

3a. $YD = 1.0054\ Y + 211.5996$
(58.2093) (2.7828)
[0.99; 90.6; 7347.1; 2.16]

3b. $YD = 0.6249\ \mathrm{C}.IF_{-1/2} + 2402.6544$
(23.3610) (22.6453)
[0.98; 224.0; 7347.1; 1.10]

II. *Consumption*

4. $\left(\frac{CP}{N}\right) = 0.2807 \left(\frac{YNT}{N}\right)$
(4.9891)
$+0.2946 \left(\frac{CP}{N}\right)_{-1} + 486.4826$
(1.5285) (3.1635)
[0.99; 28.1; 2032.7; 1.81]

5. $CG = 0.1316\ YD - 115.0040$
(29.2238) (5.5210)
[0.99; 23.8; 870.5; 0.98]

III. *Investment*

6a. $IF = 0.1693\ YDT_{-1} + 0.2413\ M_{5-9}$
(1.5662) (2.3336)
$-1696.5646 \left(\frac{PA}{PNA}\right)$
(2.5690)
$+1003.6763$
(1.6572)
[0.98; 679.; 1978.8; 2.39]

6b. $IF = 0.3780\ YD_{-1} - 717.7627$
(13.9238) (6.3642)
[0.95; 127.4; 1978.8; 10.6]

IV. *Exports*

7. $X_{0+1}\$ = 3.1194\ XW_{0+1}\$$
(3.3634)
$+42.3548\ DUX + 63.8399$
(3.6767) (1.8026)
[0.54; 12.2; 193.4; 1.09]

8. $X_{2+4}\$ = 32.3034\ XW_{2+4}\$$
(12.7637)

Eq.
Eq.

$+141.8074\ DUX - 517.8614$
(5.6811) (7.1394)
[0.94; 26.7; 525.6; 1.78]

9. $X_3\$ = 16.9986\ XW_3\$ - 120.4915$
(8.1905) (2.5965)
[0.86; 44.3; 397.2; 0.99]

10. $X_{5-9}\$ = 1.8055\ XW_{5-9}\$$
(3.9374)
$-805.9339 \left(\frac{PX_{5-9}\$.S}{PXD_{5-9}\$}\right)$
(1.4307)
$+90.8260\ DUX$
(1.2585)
$+1.0089\ X_{5-9}\$_{-1} + 509.5721$
(2.4019) (0.6632)
[0.92; 48.1; 1016.5; 1.76]

11a. $XG\$ = 0.7950\ X_{0-9}\$ + 399.4470$
(7.7209) (3.1587)
[0.84; 114.1; 1914.9; 0.81]

11b. $XG\$ = 5.3180\ XW\$$
(14.3135)
$+406.3090\ DUX - 37.0012$
(7.1103) (0.3660)
[0.95; 63.4; 1914.9; 1.93]

11c. $\mathrm{L}.XG\$ = 0.5682\ \mathrm{L}.XW\$ + 4.0888$
(3.9948) (5.2744)
[0.58; 0.1; 7.6; 0.76]

12. $XG\$^*B = 0.9578\ XG\$^* - 30.9650$
(1965–73) (157.7964) (2.7586)
[0.99; 14.0; 2035.0; 2.97]

13. $XS\$ = 153.8357\ TIME - 2078.2135$
(9.1248) (6.9108)
[0.88; 201.6; 1523.1; 0.38]

14. $X\$^*B = 1.2005\ XG\$^*B + 148.7048$
(1965–73) (74.7191) (5.3098)
[0.99; 35.4; 2624.0; 1.15]

V. *Imports*

15. $M_{0+1}\$ = 0.1513\ CP\$ + 24.4912\ DUM$
(5.8463) (1.8776)
$+147.4664$
(5.2922)

Eq. No.

[0.76; 15.9; 346.1; 1.09]

16. $M_{2+4}\$ = 0.1094\, YNA\$ + 106.8608\, DUM + 112.7320$
(1965–72) (8.6269) (7.4722) (5.7652)

[0.88; 17.9; 354.6; 1.84]

17. $M_3\$ = 0.1499\, YD\$ + 20.9808\, DUM + 29.6053$
(9.1143) (1.1092) (1.0855)

[0.91; 23.4; 364.0; 0.69]

18. $M_{5-9}\$ = 0.9499\, YD\$ + 120.4596\, DUM - 431.7435$
(27.6105) (3.0422) (7.5667)

[0.99; 49.0; 1872.0; 0.98]

19a. $MG\$ = 0.9728\, M_{0-9}S + 78.6842$
(43.9211) (1.8905)

[0.99; 44.3; 2970.2; 1.13]

19b. $\text{L}.MG = 0.8527\, \text{L}.YD + 0.3704$
(8.9175) (0.4649)

[0.88; 0.1; 8.1; 0.58]

20. $MG\$FB = 0.9564\, MS\$^* - 35.1422$
(1965–73) (140.7370) (1.9468)

[0.99; 23.9; 3158.0; 1.73]

21. $MS\$^* = 0.2128\, MG\$ - 205.6586$
(1966–72) (4.9781) (2.1141)

[0.80; 80.0; 582.2; 1.44]

22. $M\$^*B = 1.1235\, MG\$^*FB - 41.1003$
(1965–73) (325.7341) (4.7491)

[0.99; 11.6; 3531.0; 2.08]

VI. *Prices*

23. $PA = -12.9892 \left(\frac{YA_{-1}}{YNA}\right) + 1.3023$
(1962–72) (10.0728) (34.4589)

[0.91; 0.02; 1.0; 2.03]

24. $PNA = 0.1508\, \text{I}.YD + M + 0.3255\, (PMS \cdot E) + 0.5446$
(3.8249) (1.5123) (3.0113)

[0.94; 0.01; 1.1; 1.46]

Eq. No.

25. $P = 0.1623\, PA + 0.6382\, PNA + 0.1987$
(0.7258) (2.1125) (1.3052)

[0.73; 0.03; 1.05; 0.69]

26. $PX\$ = 0.8283\, PX_{0-9}\$S$
(1962–72) (2.4412)
$+ 0.9373 PX\$_{-1} - 0.7348$
(4.3884) (2.8421)

[0.86; 0.03; 1.14; 1.15]

27. $PM\$ = 0.9163\, PM_{0-9}\$S + 0.0789$
(22.7345) (2.0117)

[0.98; 0.01; 1.14; 1.93]

VII. *Other equations and identities*

28. $\text{L}.-YF\$^*B = 0.1935\, TIME + 0.2672$
(1965–73) (8.7646) (0.6104)

[0.89; 0.2; 4.7; 1.18]

29. $YF\$ = 0.9877\, YF\$^*B + 0.3222$
(1965–73) (61.2278) (0.3970)

[0.99; 1.3; −65.9; 1.91]

30. $YDT = YD + X^* \left(\frac{1}{PM\$ \cdot E} - \frac{1}{PX\$ \cdot E}\right)$

31. $YNT = YDT - \frac{YF\$^* \cdot ER}{PM\$ \cdot E}$

32. $X_{0-9}\$ = X_{0+1}\$ + X_{2+4}\$ + X_3\$ + X_{5-9}\$$

33. $M_{0-9}\$ = M_{0+1}\$ + M_{2+4}\$ + M_3\$ + M_{5-9}\$$

Exogenous variables:

$TIME$, N, $XW_{2+4}\$$, $XW_3\$$, $XW_{5-9}\$$, $PXD_{5-9}\$$, $PX_{5-9}\$S$, $PX_{0-9}\$S$, $PM_{0-9}\$S$, ER, E, DUX, DUM.

Model of Sri Lanka

Base Period: 1955–1973

I. *Production*

Eq. No.

1. $\mathrm{L}.YA = 0.0281\ TIME + 7.6597$
(16.9577) (289.4600)
R^2 S.E. Y73 d
[0.94; 0.04; 8.3; 1.03]

2. $YNA = 0.1661\ \mathrm{C}.IF_{-1/2} + 3525.7438$
(26.2193) (33.7444)
[0.97; 240.9; 8560.6; 0.64]

3a. $YD = 1.1021\ Y - 399.8710$
(45.0276) (1.7507)
[0.99; 209.3; 13104.6; 1.09]

3b. $YD = 0.2457\ \mathrm{C}.IF_{-1/2} + 6217.2857$
(25.2950) (38.8192)
[0.97; 369.2; 13104.6; 0.73]

II. *Consumption*

4. $CP = 0.9290\ (YNT\text{-}TX) - 363.5939$
(26.0132) (1.2494)
[0.97; 204.9; 8573.6; 1.28]

5. $CG = 0.4716\ TX + 533.4019$
(9.4617) (5.5790)
[0.83; 119.3; 1801.0; 0.78]

III. *Investment*

6. $IF = 0.2421\ YDT_{-1} - 712.9096$
(11.6852) (3.4992)
[0.88; 166.9; 2305.4; 1.83]

IV. *Exports*

7a. $XG\$ = 0.2377\ XW\$ + 0.3593\ XG\$_{-1}$
(2.8954) (1.3485)
$+155.8148$
(2.2172)
[0.78; 20.0; 414.1; 1.69]

7b. $\mathrm{L}.XG\$ = 0.2245\ \mathrm{L}.XW\$ + 4.5723$
(6.5998) (25.4151)
[0.70; 0.1; 6.0; 1.42]

8. $XG\$^*B = 0.8569\ XG\$^* + 45.4386$
(13.8070) (2.0154)
[0.91; 7.1; 368.1; 2.18]

Eq. No.

9. $X\$ = 1.0918\ XG\$ + 4.0365$
(15.1557) (0.1752)
[0.93; 10.9; 460.1; 1.39]

10. $X\$^*B = 0.9540\ XG\$^*B + 60.1581$
(16.3069) (2.8829)
[0.94; 6.0; 426.3; 0.60]

V. *Imports*

11a. $MG\$ = 0.1634\ YD\$$
(1965–73) (1.8453)
$-1058.6866\left(\frac{PM\$\cdot E}{P}\right)$
(1.5215)
$+3.6751\left(\frac{R\$^*}{PM\$}\right)_{-1}$
(2.3552)
$+904.0745$
(1.5064)
[0.39; 39.4; 380.6; 1.64]

11b. $MG\$ = 0.2129\ YD\$$
(1960–73)

11c. $\mathrm{L}.MG = 0.1312\ \mathrm{L}.YD + 6.4712$
(1965–73) (0.3028) (1.5962)

12a. $MG\$^*FB = 0.4939\ MG\$^*$
(3.8190)
$+172.0823$
(3.5775)
[0.43; 22.6; 338.7; 0.94]

12b. $MG\$^*FB = 0.9592\ MG\$^*$

13a. $M\$ = 0.6915\ MG\$ + 173.7694$
(5.1202) (3.3819)
[0.58; 25.3; 386.9; 1.53]

13b. $M\$ = 1.1676\ MG\$$

14. $M\$^*B = 1.0424\ MG\$^*FB + 55.6148$
(20.7788) (3.1149)
[0.96; 6.4; 405.1; 0.62]

VI. *Prices*

15. $PA = -0.7897\left(\frac{YA_{-1}}{YNA}\right)$
(4.7593)
$+0.4514\ (PX\$\cdot E)$
(4.4667)
$+0.2436\ (PM_{0+1}\$S\cdot E)$
(9.5809)

Eq. No.

$$+0.1806\,PA_{-1}+0.5035$$
$$(1.5222)\qquad(4.0234)$$

[0.97; 0.02; 1.28; 2.14]

16. $PNA=0.2930\,PA+0.8711\,PNA_{-1}$
$(11.0772)\qquad(28.6591)$
$$-0.1225$$
$$(6.0523)$$

[0.99; 0.01; 1.20; 2.09]

17. $P=0.4946\,PA+0.4631\,PNA$
(1955–72)$(6.9951)\qquad(7.5209)$
$$+0.0517$$
$$(1.1005)$$

[0.95; 0.02; 1.17; 1.18]

18. $PX\$=0.3984\,PX_{0-9}\$S$
(3.7429)
$$+0.6433PX\$_{-1}-0.0732$$
$$(6.2693)\qquad(0.9701)$$

[0.94; 0.04; 0.94; 1.32]

19. $PN\$=0.2277\,PM_{0-9}\$+0.7525$
$(4.0120)\qquad(13.0740)$

[0.46; 0.04; 1.11; 1.60]

VII. *Other equations and identities*

20. $YF\$^*B=0.0224\,\mathrm{C}.TG\$^*_{-1}+5.2859$
(1960–73) $(4.9366)\qquad(2.9023)$

[0.64; 3.8; 17.3; 1.30]

21. $YF\$=1.0417\,YF\$^*B-0.3579$
$(37.3866)\qquad(0.9701)$

[0.99; 0.6; 17.p0; 2.59]

22a. $R\$^*=0.3609\,F\$^*-0.4976\,TG\$^*$
(1956–73) $(2.2963)\qquad(4.0145)$
$$0.7963\,R\$^*_{-1}+20.4546$$
$$(11.5525)\qquad(1.6105)$$

[0.93; 14.6; 87.0; 2.05]

22b. $R\$^*=0.25\,(a\cdot M\$B_{-1})$
$$+(1-a)R\$^*_{-1}$$

23. $TX=0.2470\,YD-546.8185$
$(18.7422)\qquad(4.1925)$

[0.95; 124.7; 3033.8; 1.32]

24. $YDT=YD+X^*\left(\frac{1}{PM\$\cdot E}\right.$

Eq. No.

$$\left.-\frac{1}{PX\$\cdot E}\right)+\frac{TFP\$^*B\cdot ER}{PM\$\cdot E}$$

25. $YNT=YDT-\frac{YF\$^*\cdot ER}{PM\$\cdot E}$

26. $TG\$^*=M\$^*B+YF\$^*B-X\$^*B$

Exogenous variables:

$TIME$, $XW\$$, E, ER, $PM_{0+1}\$S$, $PX_{0-9}\$S$, $PM_{0-9}\$S$, $TFP\$^*B$, $F\$$, a.

Model of Syria

Base Period: 1963–1973

I. *Production*

Eq. No.

1. $YD=0.3904\,\mathrm{C}.I_{-2/1}+4293.0359$
$(15.3746)\qquad(32.5925)$
R^2 S.E. Y73 d
[0.96; 244.5; 7863.3; 1.78]

II. *Consumption*

2. $CP=0.5115\,YNT+1084.2404$
$(12.7463)\qquad(4.4152)$

[0.94; 158.3; 4979.8; 1.47]

3. $CG=0.2884\,YD-658.0943$
$(13.9272)\qquad(5.2260)$

[0.95; 79.3; 1715.1; 2.20]

III. *Investment*

4. $I=0.2720\,YDT-0.1684\,YDT_{-1}$
(1964–73)$(4.6247)\qquad(2.4900)$
$$+0.4062MG-276.2838$$
$$(3.0748)\qquad(2.3592)$$

[0.96; 59.5; 1437.5; 1.23]

IV. *Exports*

5a. $XG\$=0.2198\,XW\$$
(2.1916)
$$-244.0170\left(\frac{PX\$}{PW\$}\right)+386.0981$$
$$(2.3251)\qquad(3.3165)$$

[0.62; 21.7; 304.3; 1.14]

Eq.
No.

5b. $XG\$=0.3807\ XW\$+102.6827$
(1964–73) (3.1974) (2.9866)
[0.51; 25.9; 304.3; 1.14]

6. $XS\$^*=17.6907\ TIME-217.8525$
(7.2469) (4.6332)
[0.84; 25.6; 250.5; 1.36]

7. $XG\$^*B=1.0634\ XG\$^*-10.3554$
(11.6337) (0.5402)
[0.93; 15.2; 338.0; 2.77]

3. $X\$^*B=1.7696\ XG\$^*B-36.3996$
(11.0889) (1.0687)
[0.92; 29.2; 572.0; 1.44]

V. *Imports*

9a. $MG\$=0.3416\ YD\$$
(6.7289)
$-497.8397\left(\frac{PM\$\cdot E}{P}\right)$
(2.6011)
$+309.7870$
(2.0529)
[0.84; 37.0; 558.9; 2.20]

9b. $MG\$=0.2508\ YD\$-51.7837$
(5.3109) (0.6886)
[0.73; 47.3; 558.9; 2.16]

10. $MS\$=0.0915\ MG\$+2.9283$
(3.5385) (0.3135)
[0.54; 9.8; 43.5; 0.98]

11. $MG\$^*FB=0.8990\ MG\$+7.7275$
(41.9732) (0.9985)
[0.99; 8.1; 546.0; 2.75]

12. $M\$^*B=1.1863\ MG\$^*FB-3.2285$
(78.8614) (0.6460)
[0.99; 5.1; 641.0; 1.66]

VI. *Prices*

13. $P=0.2141\left(\frac{L}{\text{I.}\ YD}\right)+0.2106(PM\$\cdot E)$
(3.4507) (2.2658)
$+0.5923$
(8.8834)
[0.85; 0.03; 1.11; 1.76]

14. $PX\$=0.7287\ PX_{0-9}\$S+0.2106$
(1963–72) (3.3587) (0.9535)

Eq.
No.

[0.53; 0.06; 1.11; 1.15]

15. $PM\$=1.2071\ PM_{0-9}\$S$
(1963–72) (7.2425)
$+0.0554\ PM\$_{-1}-0.2540$
(1.2982) (1.6539)
[0.89; 0.04; 1.06; 2.14]

VII. *Other equations and identities*

16. L.-$YF=0.0571\ TIME+3.5132$
(1964–73) (3.5817) (11.1710)
[0.57; 0.14; 2.10; 1.90]

17. $YDT=YD+X^*\left(\frac{1}{PM\$\cdot E}-\frac{1}{PX\$\cdot E}\right)+\frac{TEP\$^*B\cdot ER}{PM\$\cdot E}$

18. $YNT=YDT-YF$

Exogenous variables:
$XW\$$, $PW\$$, $TIME$, $TFP\$^*B$, E, ER, $PX_{0-9}\$S$, $PM_{0-9}\$S$, L

Model of Taiwan Provinco

Base Period: 1955–1973

I. *Production*

No.
No.

1. $YA=0.3446\ \text{C}.IFA_{-1/2}+16903.052$
(18.6257) (30.3805)
R^2 S.E. Y73 d
[0.95; 1435.2; 35298.0; 0.45]

2. $YNA=0.3990\ \text{C}.IFNA_{-1/2}$
(37.3985)
$+39955.249$
(21.2552)
[0.99; 5608.0; 201656.0; 0.23]

3. L.$YMF=1.7939$ L.$YD-11.4347$
(85.6089) (46.3053)
[0.99; 0.04; 11.3; 0.47]

4a. $YD=1.2987\ (YA+YNA)$
(120.1123)
-5674.934
(4.0822)

Eq. No.

[0.99; 2566.5; 304726.0; 0.49]

4b. $YD = \underset{(46.9791)}{0.5103}\ \text{C}.IF_{-1/2} + \underset{(30.2536)}{67665.8747}$

[0.99; 6540.5; 304726.0; 0.20]

II. *Consumption*

5. $\frac{CP}{N} = \underset{(4.5535)}{0.3149}\left(\frac{YNT\text{-}TX}{N}\right) + \underset{(3.3700)}{0.4631}\left(\frac{CP}{N}\right)_{-1} + \underset{(2.9451)}{768.355}$

[0.99; 113.3; 9861.5; 1.50]

6. $CG = \underset{(22.1058)}{0.5855}\,YX + \underset{(20.9731)}{15397.843}$

[0.96; 1607.6; 46117.0; 0.45]

III. *Investment*

7. $IFA = \underset{(4.3544)}{0.1838}\,YA_{-1} + \underset{(1.6398)}{0.2947}\,IFA_{-1} - \underset{(4.1030)}{2068.814}$

[0.98; 231.3; 6222.0; 2.39]

8. $IFNA = \underset{(7.1243)}{0.2787}\,YNAT_{-1} + \underset{(4.9647)}{0.3093}\,MOT - \underset{(1.7944)}{10242.362}\left(\frac{PA}{PNA}\right) + \underset{(0.3512)}{2270.705}$

[0.99;1845.0; 71555.0; 1i60]

IV. *Exports*

9a. $XG\$ = \underset{(2.2515)}{0.5176}\,YMF\$ - \underset{(1.6363)}{248.2534}\left(\frac{PX\$}{PW\$}\right) + \underset{(5.4282)}{0.9454}\,XG\$_{-1} + \underset{(1.0816)}{137.2683}$

[0.99; 57.1; 3415.4; 1.38]

9b. $XG\$ = \underset{(11.0988)}{9.4941}\,XW\$ - \underset{(6.0312)}{1187.2309}$

[0.87; 331.0; 3415.4; 0.26]

Eq. No.

10. $XG\$^*B = \underset{(793.5922)}{1.0246}\,XG\$ - \underset{(0.7608)}{1.3677}$

[0.99; 6.2; 4485.6; 1.06]

11. $XS\$ = \underset{(1.8056)}{0.3220}\,XW\$ + \underset{(4.5585)}{0.8248}\,XS\$_{-1} - \underset{(1.2544)}{28.2132}$

[0.97; 25.9; 435.7; 2.01]

12. $X\$^*B = \underset{(165.8702)}{1.1244}\,XG\$^*B + \underset{(2.2352)}{21.6042}$

[;0.99 33.3; 5043.6; 0.48]

V. *Imports*

13. $M_3\$ = \underset{(7.3170)}{0.0159}\,YD\$ - \underset{(2.4315)}{21.4397}$

[0.74; 16.8; 72.5; 2.50]

14a. $MOT\$ = \underset{(1.7401)}{0.1245}\,YD\$ + \underset{(2.9258)}{1.3394}\left(\frac{R\$^*}{PM\$}\right)_{-1} + \underset{(3.4735)}{542.1743}\,DUM - \underset{(1.3881)}{174.8321}$

[0.96; 137.7; 2714.9; 1.11]

14b. $MOT\$ = \underset{(3.2065)}{0.2579}\,YD\$ + \underset{(1.5676)}{1.0906}\left(\frac{R\$^*}{PM\$}\right)_{-1/2} - \underset{(4.2201)}{466.2630}$

[0.94; 173.6; 2714.9; 0.39]

15. $\text{L}.MG = \underset{(16.3685)}{1.5177}\,\text{L}.YD - \underset{(7.4385)}{6.5416}$

[0.94; 0.2; 9.3; 0.42]

16. $MG\$^*FB = \underset{(104.6247)}{0.9412}\,MG\$^* + \underset{(0.4574)}{5.2544}$

[0.99; 36.6; 3646.2; 1.88]

17. $MS\$^* = \underset{(1960\text{–}73)\ (4.1704)}{0.0732}\,MG\$^* + \underset{(1.3307)}{34.6243}$

[0.56; 64.7; 219.3; 1.92]

Eq. No.

18. $M\$^*B = 1.2042\ MG\$^*FB - 1.7900$
(207.8077) (0.2561)
[0.99; 22.2; 4361.6; 1.29]

VI. *Prices*

19. $PA = -1.0124\left(\frac{YA_{-1}}{YNA}\right)$
(2.4114)
$+0.5835\ PA_{-1} + 0.6907$
(3.6535) (2.7135)
[0.94; 0.05; 1.21; 1.58]

20. $PNA = 0.1036\ \mathrm{I}.YD + M$
(2.7307)
$+0.1129\ (PM\$\cdot E)$
(1.8068)
$+0.7395\ PNA_{-1} + 0.0664$
(7.2755) (2.2062)
[0.99; 0.02; 1.16; 01.51]

21. $P = 0.2785\ PA + 0.7164\ PNA$
(26.5627) (68.4575)
$+0.0042$
(1.4080)
[0.99; 0.003; 1.17; 1.94]

VII. *Other equations and identities*

22. $YF\$^*B = 0.0673\ \mathrm{C}.TG\$^*_{-1}$
(1965–73) (7.6146)
$+0.0079\ X\$^*B - 6.0674$
(6.5023) (1.7657)
[0.90; 4.7; 11.9; 2.39]

23a. $R\$^* = 0.7513\ F\$^* - 0.9398\ TG\$^*$
(6.3459) (9.5681)
$+0.7787\ R\$_{-1} + 72.9282$
(8.2574) (2.3603)
[0.98; 45.3; 1123.0; 2.8]

23b. $R\$^* = 0.25\ (\alpha\cdot M\$^*B_{-1})$
$+(1-\alpha)R\$^*_{-1}$

24. $TX = 0.1949\ YD - 4404.018$
(29.4996) (4.1185)
[0.98; 2037.6; 57605.3; 0.48]

25. $YNT = YD$
$+X^*\left(\frac{1}{PM\$\cdot E} - \frac{1}{PX\$\cdot E}\right)$
$+\frac{(TFP\$^*B - YF\$B)ER}{PM\$\cdot E}$

26. $YNAT = YNA$
$+X^*\left(\frac{1}{PM\$\cdot E} - \frac{1}{PX\$\cdot E}\right)$
$+\frac{TFP\$^*B\cdot ER}{PM\$\cdot E}$

27. $IF = IFA + IFNA$

28. $MG\$ = M_3\$ + MOT\$$

29. $TG\$ = M\$^*B + YF\$^*B - X\$^*B$

Exogenous variables:
N, $XW\$$, $PW\$$, $F\$^*$, $TFP\$^*B$, E, ER, $PX\$$, $PM\$$, DUM, α.

Model of Thailand

Base Period: 1958–1973

I. *Production*

Eq. No.

1. $\mathrm{L}.YA = 0.0524\ TIME - 0.0380\ DUA$
(29.4946) (2.1514)
$+9.4623$
(311.1987)
R^2 S.E. Y73 d
[0.98; 0.03; 10.7; 0.93]

2a. $YNAC = 0.2773\ \mathrm{C}.IF_{-1/2}$
(3979.4839)
$+41245.03$
(3685.6560)
[; ; 1299990.0;]

2b. $YNA = 0.2135\ \mathrm{C}.IF_{-1/2}$
(18.0667)
$+0.9814\ M_{2-9} + 24968.5600$
(5.9146) (14.3521)
[0.99; 1756.9; 118350.0; 1.85]

3. $UC = -0.000132\ \mathrm{C}.IF_{-1/2}$
(5.5082)
$+0.001625\ YA_{-1}$
(3.7771)
$+0.000909\ M_{2-9} + 42.1251$
(3.1249) (5.7262)

Eq. No.

[0.89; 2.3; 91.1; 1.45]

4. $YD = \underset{(29.0032)}{0.3499}\ \text{C}.IF_{-1/2} + \underset{(29.0816)}{563.4362}$

[0.98; 47.5; 161330.0; 0.23]

II. *Consumption*

5. $\frac{CPF}{N} = \underset{(2.5372)}{0.0500}\left(\frac{YMT\text{-}TX}{N}\right) + \underset{(5.9825)}{0.6785}\left(\frac{CPF}{N}\right)_{-1} + \underset{(3.3488)}{227.50}$

[0.99; 5.1; 1077.2; 1.50]

6. $\frac{CPNF}{N} = \underset{(3.0342)}{0.2097}\left(\frac{YNT\text{-}TX}{N}\right) + \underset{(1.4669)}{187.90}\left(\frac{PA}{PNA}\right) + \underset{(4.2166)}{0.6124}\left(\frac{CPNF}{N}\right)_{-1} - \underset{(2.0253)}{310.10}$

[0.98; 37.8; 1082.9; 2.21]

7. $CG = \underset{(24.0870)}{0.8928}\ TX - \underset{(0.9224)}{451.17}$

[0.97; 690.0; 16990.0; 1.33]

III. *Investment*

8. $IF = \underset{(6.1433)}{0.1285}\ YDT_{-1} + \underset{(8.3327)}{0.9740}\ M_{5-9} - \underset{(2.2110)}{7268.04}\left(\frac{PA}{PNA}\right) + \underset{(0.4259)}{1561.53}$

[0.99; 955.7; 33140.0; 1.33]

IV. *Exports*

9. $X_{0+1}\$ = \underset{(6.3873)}{9.6441}\ XW_{0+1}\$ - \underset{(1.8848)}{233.8866}\left(\frac{PX_{0+1}\$S}{PW_{0+1}\$}\right) + \underset{(1.3715)}{231.8233}$

[0.83; 36.2; 396.4; 1.48]

Eq. No.

10. $X_{2+4}\$ = \underset{(3.6523)}{6.2711}\ XW_{2+4}\$ - \underset{(1.2649)}{59.4356}\left(\frac{PX_{2+4}\$S}{PW_{2+4}\$}\right) + \underset{(0.9867)}{91.1392}$

[0.81; 21.9; 289.3; 1.02]

11. $X_3\$ = \underset{(6.6058)}{0.3894}\ XW_3\$ - \underset{(4.2468)}{5.4635}$

[0.74; 1.8; 71.3; 0.79]

12. $X_{5-9}\$ = \underset{(18.2140)}{1.4697}\ XW_{5-9}\$ - \underset{(1.8060)}{91.1428}\left(\frac{PX_{5-9}\$S}{PXD_{5-9}\$}\right) - \underset{(0.5449)}{24.2635}$

[0.96; 20.1; 333.2; 1.09]

13a. $XG\$ = \underset{(28.3504)}{0.9287}\ X_{0-9}\$ + \underset{(4.3001)}{90.8343}$

[0.98; 29.0; 1097.1; 0.96]

13b. $XG\$ = \underset{(1.8425)}{0.8814}\ XW\$ - \underset{(2.1863)}{507.2356}\left(\frac{PW\$}{PX\$}\right) + \underset{(2.9657)}{0.6487}\ XG\$_{-1} + \underset{(2.2680)}{573.9412}$

[0.94; 54.2; 1097.1; 1.68]

13c. $\text{L}.XG\$ = \underset{(11.9408)}{0.8101}\ \text{L}.XW\$ + \underset{(5.6901)}{2.0798}$

[0.90; 0.1; 7.0; 0.87]

14. $XG\$^*B = \underset{(102.0817)}{0.9907}\ XG\$^* - \underset{(0.9932)}{6.9675}$

[0.99; 11.3; 1535.0; 1.19]

15. $XS\$^* = \underset{(1.9782)}{0.1013}\ XG\$^* + \underset{(9.0629)}{0.8947}\ XS\$^*_{-1} - \underset{(0.8214)}{20.1098}$

[0.95; 37.8; 487.6; 0.91]

16. $X\$^*B = \underset{(16.6900)}{1.5233}\ XG\$^*B - \underset{(1.5800)}{102.3077}$

[0.95; 105.6; 2088.0; 0.45]

V. *Imports*

Eq. No.

17a. $M_{0+1}\$ = 0.0106\ CPS$
(6.5821)
$-91.2548\left(\frac{PM_{0+1}\$S\cdot E}{P}\right)$
(4.8282)
$+120.4358$
(6.5090)
[0.76; 6.5; 54.3; 1.79]

17b. $M_{0+1}\$ = 0.0077\ CP\$ + 34.8825$
(3.2005) (4.0656)
[0.38; 10.4; 54.3; 1.16]

18. $M_{2+4}\$ = 0.0219\ YNA\$ - 38.3373$
(13.5969) (6.6024)
[0.92; 8.6; 97.8; 0.61]

19a. $M_3\$ = 0.0159\ YDS$
(17.5131)
$-8.5979\left(\frac{PM_3\$S\cdot E}{P}\right)$
(0.8079)
$+10.8315$
(0.8748)
[0.95; 5.9; 121.8; 3.56]

19b. $M_3\$ = 0.0158\ YDS + 1.15317$
(17.8015) (0.3399)
[0.95; 5.8; 121.8; 3.45]

20a. $M_{5-9}\$ = 0.1748\ YD\$$
(18.5108)
$-1157.8154\left(\frac{PM_{5-9}\$O\cdot E}{P}\right)$
(5.3661)
$+1062.9172$
(5.0291)
[0.96; 60.7; 1140.2; 1.60]

20b. $M_{5-9}\$ = 0.1645\ YDS - 42.7976$
(10.2966) (0.5267)
[0.88; 105.0; 1140.2; 0.48]

21a. $MG\$ = 1.1267\ M_{0-9}\$ - 167.2791$
(32.3474) (4.8717)
[0.99; 48.4; 1505.7; 0.24]

21b. $\mathrm{L}.MG = 1.3768\ \mathrm{L}.YD + 0.2549$
(22.8294) (0.6159)
[0.97; 0.1; 190.4; 0.56]

Eq. No.

22. $MG\$^*B = 0.9081\ MG\$^* - 6.5022$
(96.9710) (0.6715)
[0.99; 17.1; 1880.0; 1.69]

23. $M\$ = 1.0665\ MG\$ + 5.4387$
(60.4797) (0.3223)
[0.99; 27.8; 1551.0; 1.80]

24. $M\$^*B = 1.229\ MG\$^*FB - 19.9967$
(191.3767) (3.3533)
[0.99; 10.6;2 264.0; 1.09]

VI. *Prices*

25. $PA = -1.0907\left(\frac{YA_{-1}}{YNA}\right)$
(3.1197)
$+0.2449\ (PX\$\cdot E)$
(1.0245)
$+0.5044\left(\frac{L}{I\cdot YD}\right) + 0.7324$
(2.2672) (2.7287)
[0.82; 0.05; 1.34; 1.79]

26. $PNA = 0.2348\ PA + 0.7713\ PNA_{-1}$
(2.9101) (5.6883)
-0.0152
(0.1645)
[0.88; 0.03; 1.10; 2.2]

27. $P = 0.2930\ PA + 0.6541\ PNA$
(24.6112) (37.1180)
$+0.0510$
(5.1691)
[0.99; 0.003; 1.16; 1.90]

28. $PX\$ = 0.7293\ PXO_{-9}\$S$
(16.1474)
$+0.6368\ PX\$_{-1} - 0.3915$
(6.1644) (4.1350)
[0.96; 0.02; 1.40; 2.10]

29. $PM\$ = 0.4599\ PMO_{-9}\$S$
(10.0659)
$+1.0652\ PM\$_{-1} - 0.5037$
(9.5233) (3.9295)
[0.92; 0.03; 1.36; 1.70]

VII. *Other equati§ns and identities*

30. $YF\$^* = 0.9954\ YF\$^*B + 0.1368$
(98.0698) (1.3831)

Eq. No.

[0.99; 0.4; 19.6; 1.80]

31. $TX = \underset{(34.1233)}{0.1331}\, YD - \underset{(2.5427)}{1056.64}$

[0.99; 542.2; 20980.0; 1.40]

32. $YD = YA + YNA$

33. $YNA = \frac{YNAC \cdot UC}{100}$

34. $YDT = YD + X^* \left(\frac{1}{PM\$ \cdot E} - \frac{1}{PX\$ \cdot E} \right) + \frac{TF\$^* B \cdot ER}{PM\$ \cdot E}$

35. $YNT = YDT - \frac{YE\$ \cdot ER}{PM\$ \cdot E}$

36. $XO_{-9}\$ = XO_{+1}\$S + X_{2+4}\$ + X_3\$ + X_{5-9}\$$

Eq. No.

37. $M_{0-9}\$ = M_{0+1}\$ + M_{2+4}\$ + M_3\$ + M_{5-9}\$$

38. $M_{2-9} = (M_{2+4}\$ + M_3\$ + M_{5-9}\$)\, ER70$

Exogenous variables:

$XW_{0+1}\$$, $XW_{2+4}\$$, $XW_3\$$, $XW_{5-9}\$$, $PW_{0+1}\$$, $PW_{2+4}\$$, $PXD_{5-9}\$$, $PX_{0+1}\$S$, $PX_{2+4}\$S$, $PX_{5-9}\$S$, $PX_{0-9}\$S$, $PM_{0+1}\$S$, $PM_3\$S$, $PM_{5-9}\$S$, $PM_{0-9}\$S$, E, ER, N, $TIME$, DUA, $TFP\$^* B$, L, $YF\$^* B$.