Policy, Planning, and Research

WORKING PAPERS

Trade Policy

Country Economics Department
The World Bank
May 1989
WPS 197

Differentiating Cyclical and Long-Term Income Elasticities of Import Demand

Fernando Clavijo
and
Riccardo Faini

An import demand model that distinguishes between cyclical and long-term responses supports the claim that import demand in developing countries is more responsive to short-term than to long-term fluctuations in income.

Policy, Planning, and Research

WORKING PAPERS

Trade Policy

How do imports react to cyclical and secular (long-term) factors? the evidence suggests that cyclical income elasticities of import demand are generally higher than long-term elasticities — particularly for basic materials and semi-manufactured goods.

Traditional models for import demand generally underestimate the cyclical response in imports, and overestimate the long-term response. This has important implications for forecasting short-term import flows in developing countries. For example, estimates of income elasticity using a traditional import model developed by Pritchett and Bahmani-Oskooee average 1.4 and 1.2 respectively.

Clavijo and Faini's model suggests a cyclical elasticity averaging 2.6. Khan and Ross found for a sample of 14 industrial countries that cyclical income elasticity averaged about 40 percent higher than trend income elasticity. The authors' results suggest that the two elasticities may differ by an even larger factor for developing countries.

Relative prices generally are more important in determining import demand in Latin America and Asian-Pacific countries in Clavijo and Faini's sample, but seem to have little effect in the African and (perhaps surprisingly) Mediterranean countries. In countries for which both cyclical and long-term income elasticities are significantly different from zero, relative price coefficients are also significantly different than in countries for which income parameters are not significantly different from zero. Including the cyclical component in the model seems to improve not only the fit but also the performance of the equation.

This paper is a product of the Trade Policy Division, Country Economics Department. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Karla Cabana, room N8-065, extension 61539.

Produced at the PPR Dissemination Center

CYCLICAL AND SECULAR INCOME ELASTICITIES OF IMPORT DEMAND FOR DEVELOPING COUNTRIES

Fernando Clavijo
(The World Bank)

and

Riccardo Faini
(Johns Hopkins University)

The authors are very grateful to John Holsen for pointing out the importance of differentiating cyclical and secular income elasticities of import demand and for recommending the analysis of this issue for the case of developing countries. We would also like to thank Jaime de Melo and Bela Balassa for their penetrating comments.

CYCLICAL AND SECULAR INCOME ELASTICITIES
OF IMPORT DEMAND FOR DEVELOPING COUNTRIES

I. Introduction

Determining how imports react to cyclical (short-run) and secular (long-run) factors has been a recurrent theme in the empirical trade literature. The aggregate evidence for several countries shows that cyclical income elasticities of import demand are generally higher than secular elasticities (see Khan and Ross, 1975). This difference is particularly pronounced for basic materials and semimanufactured goods (see Marston 1971, and Deepler and Ripley 1978). More recently, using spectral analysis, Haynes and Stone (1983) provided further evidence that business cycle income demand elasticities generally exceed secular ones. These findings imply that the income elasticity of import demand will not be constant but will vary over the business cycle. As Magee (1975) argues, traditional specifications of import equations by assuming income elasticity of import demand to be constant will generally produce biased estimates of both cyclical and secular elasticities.

Much of the previous evidence applies only to developed countries. Little evidence is available for developing countries on the response of import flows to cyclical and secular factors. Yet, the characteristics of the production structure in these countries make it likely that cyclical income elasticities will be relatively higher than in developed countries. These characteristics include, in general, a less integrated industrial structure, a lower supply responsiveness even under conditions of idle capacity due to the rigidities and distortions prevailing on those countries, as well as the presence of constraining bottlenecks in key sectors or steps in the production process. Other factors that also make it likely that imports will react swiftly in the short run to increases in demand include the composition of imports, which is heavily weighted toward capital and intermediate goods, and the possibility that prices do not fully adjust to market disequilibria.

This paper draws on Khan and Ross (1975) to estimate an import demand equation in which secular and cyclical income elasticities of import demand are not constrained to be the same. Estimates were conducted for a sample of 43 developing countries. Section II presents the model and discusses the estimation technique. The econometric results are presented in section III followed by some conclusions that draw on the empirical evidence presented here.

II. Model and Estimation Technique

Following Khan and Ross (1975) it is assumed that secular import demand is a function of trend income and relative prices, while cyclical demand for foreign goods also depends on actual income. If we also postulate a partial adjustment mechanism for short-run import demand, we are left with a system of two equations:

$$M(t) = a_0+a_1\ Y^c(t) + a_2[Y(t)-Y^c(t)] + a_3[P^M(t)-P^D(t)] + a_4M(t-1) +\epsilon(t) \qquad [1]$$

$$Y(t) = Y^c(t) + \eta(t) = X(t)\beta + \eta(t), \qquad [2]$$

where all variables are in log, M denotes imports, Y and Y^c denote respectively actual and trend output, and P^M and P^D represent respectively the prices of import and domestic substitutes. Equation 1 determines imports, while equation 2 describes output as a deviation from its trend, with the trend in turn depending on a set of explanatory variables (still to be detailed), $X(t)$.[1]

An estimation problem arises because Y^c is unobserved. A procedure commonly used to deal with this problem (Barro 1977, 1978) and that adopted by Khan and Ross (1975) is to estimate equation 2 first, using the fitted values and the residuals from the regression of Y on X as a proxy for Y^c and $Y-Y^c$ respectively. A problem with this two-step procedure is that it will not lead to a consistent estimate of the coefficients' variance-covariance matrix (Pagan 1984, ch. 3).[2] Only for the coefficient of the estimated residual, a_2, does the two-step procedure allow for the recovery of a correct estimate of its standard error (Pagan 1984, ch. 7).

For the other coefficients, a different approach is needed. Substituting $Y^c(t) = Y(t) - \eta(t)$ in equation 1 yields:

$$\begin{aligned} M(t) &= a_0+a_1[Y(t)-\eta(t)] + a_2\,\eta(t) + a_3[P^M(t)-P^D(t)] + a_4M(t-1)+\epsilon(t) \\ &= a_0+a_1\,Y(t) + a_3[P^M(t)-P^D(t)] + a_4M(t-1)+\epsilon(t) + (a_2-a_1)\eta(t) \qquad [3] \end{aligned}$$

Equation [3] resembles a fairly standard import demand equation. However, unless $a_1 = a_2$, plim $\frac{1}{T}\,Y(t)\,\eta(t) \neq 0$ and equation 3 cannot be estimated by ordinary least-squares methods. A two-stage least-squares procedure with $X(t)$, $M(t-1)$, and $P^M(t) - P^D(t)$ as instruments must be used instead. This procedure obviously leads to a consistent estimate of the coefficients' variance-covariance matrix. It should be pointed out, however, that the

---

1/ This is the approach taken by Artus (1973) and later by Khan and Ross (1975).

2/ Also the two-step procedure is not always fully efficient in that it does not impose the restrictions that would arise from the joint estimation of equations 1 and 2.

cyclical income elasticity of import demand (a_2) does not appear in the nonstochastic part of equation 3 and cannot therefore be estimated there. However, as already mentioned, the coefficient a_2 can be estimated, together with a consistent estimate of its standard error, from the two-step procedure previously outlined. Applying separate estimation procedures for a_1 and a_2 does not prejudge the possibility of testing whether cyclical and secular income elasticities are equal. A closer look at equation 3 reveals that a test of $a_1 = a_2$, under the maintained assumption that COV $[\eta(t), \epsilon(t)] = 0$, is equivalent to a test of independence between Y(t) and the error term. A standard Hausman-Wu procedure can be used for this purpose, which is the approach taken here.[3]

The determinants X of Y^c still need to be specified. Secular or trend GDP has been assumed to follow a segmented trend, with structural breaks occurring in 1974 and 1981.[4] Misspecification of this trend equation will result in inconsistent estimates of the coefficient a_2, but will not affect the two-stage least-squares estimation of equation 3, except for an efficiency loss stemming from the choice of instrument.

3/ Our approach while drawing on Khan and Ross (1975) allows the recovery of a consistent estimate of the coefficient variance-covariance matrix. A different set-up such as that in Haynes and Stone (1983) would rely on spectral analysis, but the relatively small size of our sample precludes the use of this technique.

4/ A simple logarithmic function was used to generate the trend income variables. However, to allow for the impact of the external shocks that hit most developing countries during the estimation period, three subperiods were distinguished, each of them corresponding tentatively to a relatively constant growth rate. The first oil shock (1974) was taken as marking the beginning of the second period and the year following the 2-1/2 fold increase in oil prices (1981) as marking the beginning of the third period. The structural breaks in 1981 and 1974 were then found to be statistically significant for 90% and 50%, respectively, of our sample countries.

Measurement errors may be another source of inconsistency in our estimates. In particular the pervasiveness of quantitative restrictions and other import barriers in developing countries implies the need for a distinction between domestic and border prices of imports. Only the domestic price represents an accurate measure of import costs to domestic agents, but national account sources usually rely on border prices information. This discrepancy in prices introduces an extra term into the error in equation 3 which, under a quota system, would be correlated with all the explanatory variables Y(t) and relative (border) prices, resulting again in inconsistent estimates.[5] To assess the importance of this factor, two misspecification tests for dynamic simultaneous equation models, the Sargan (1964) and the Godfrey (1976) tests, were used. The Sargan test provides a statistical check on whether errors and instruments are independent, while the Godfrey test is for serial correlation of the error term.

III. The Results

The model presented in the previous section was applied to a set of developing countries, using annual data for GDP, imports of goods and non-factor services, and implicit prices for the period 1967-1987. The results are presented in table 1. The cyclical elasticity of income a_2 was separately estimated using the two-step least-squares procedure. All the other coefficients come from the two-stage least-squares (TSLS) estimation of equation 3.

5/ This can be easily seen as follows. Suppose that the supply of foreign exchange is not infinitely elastic. Then an increase in Y_t will result in a higher domestic price of imports even if border prices remain unchanged.

An interesting result is that, even after a small sample correction, 27 of the 43 countries passed the misspecification tests, even though quantitative import restrictions are pervasive in developing countries. For the remaining sixteen countries the presence of serially correlated errors (coupled with a lagged dependent variable) and/or the endogeneity of some of the instruments are a source of inconsistent estimates, perhaps suggesting a significant effect of restrictive import policies. In what follows, results are reported only for the countries that passed both misspecification tests.

The results in table 1 point to some important conclusions. Secular income appears to be a major determinant of import flows. Its coefficient is statistically different from zero in 22 of the 27 countries. Excluding insignificant values, it ranges from 0.33 (for El Salvador) to 1.9 (for Uruguay). The mean of the 27 countries is 0.74, which is significantly lower than the means cited in Bahmani-Oskooee (1986) and in Pritchett (1987) who do not distinguish between secular and cyclical responses. Yet such a distinction is highly relevant. Among the countries that passed the misspecification tests, the values of the cyclical income coefficients average more than twice the values of the secular income coefficients when both elasticities are significantly different from zero. Cyclical income coefficients were higher from secular coefficients for 18 of the 27 countries. More formally the Hausman test indicates that secular income elasticities differ significantly from their cyclical counterparts for 13 countries, 11 of which show a higher value for cyclical elasticity.[6] In interpreting these results, it must be recalled that they may reflect to

6/ To allow to some extent for the low power of the Hausman test, the critical value of the significance level is taken to be 20 percent.

some extent the low power of the Hausman test (Holly 1982). Failure to take this into account may lead to underestimation of the number of countries for which secular and cyclical income elasticities differ.[7]

These results also illustrate how the traditional model may overestimate the secular response and underestimate the cyclical one, which has important implications for forecasting short-run import flows in developing countries. Thus, for example, estimates of income elasticity using a traditional import model developed by Pritchett (1987) and Bahmani-Oskooee (1986), average 1.4 and 1.2, respectively. The results presented here, however, suggest a cyclical elasticity averaging 2.6. It is not surprising therefore that imports are generally underestimated in short-term projections of cyclical upturns in developing countries.

The results presented in table 1 indicate that relative prices generally play an important role in determining import demand in the Latin American and Asian-Pacific countries in our sample, but appear to be of little consequence in the African and (perhaps surprisingly) Mediterranean countries of our sample. It is interesting to note that for all countries for which both cyclical and secular income elasticities are significantly different from zero, relative price coefficients are also significantly

---

7/ Results using spectral analysis as in Haynes and Stone (1982) and Marquez (1988) illustrate that the ambiguity of the interpretation of both cyclical and secular income elasticities cannot be fully overcome when using income trend and deviation from trend as proxies for secular and cyclical income. In addition, the well-known Monte Carlo experiments showed long ago that spectral analysis requires long time series data in order to be reliable. This sample size precludes the use of spectral analysis in the case of most developing countries because although quarterly and/or monthly trade flows are usually available, the unavailability of prices is generally a binding contraint.

different from zero, whereas when income parameters are not significant, relative price parameters are also not significant. Interestingly, a comparison of the results presented here with those of a traditional import demand equation (see Pritchett 1987) shows that price elasticities generally appear to be higher when both cyclical and secular income elasticities are significantly different from zero, suggesting perhaps that the inclusion of the cyclical component improves not only the fit but also the performance of the equation.

Finally, it is instructive to compare these results with the evidence for developed countries. Khan and Ross (1975) found for a sam of 14 industrial countries that the cyclical income elasticity was on average about 40 percent higher than the trend income elasticity. The findings presented here suggest that the two elasticities may differ by a even larger factor for developing countries. It should be noted, however, that our results, while not strictly comparable because of different methodologies, are not much different quantitatively from the results presented in Haynes and Stone (1983), whose special analysis produced estimates of cyclical income elasticities for U.S. imports that are roughly double their secular estimates.

IV. Conclusions

This examination of the response of imports in developing countries to cyclical and secular fluctuations in income found that observational errors and serially corre'^ted residuals will often lead to inconsistent and thus unreliable estimates. Both problems may be traced to the restrictive trade regime prevailing in many developing countries.[8] As a result, careful testing is essential for assessing the reliability of the estimated coefficients.

On a more substantive note, for two-thirds of our sample countries the cyclical income elasticity is higher than the secular one and that for more than one-third of the sample the difference is statistically significant. Only for two countries is the secular income elasticity of import demand significantly higher than the cyclical one. This provides encouraging evidence for the claim that import demand in developing countries is relatively more responsive to short-run fluctuations in income.

On the issue of the influence of relative prices on import demand, the results show some regional differences, with relative prices playing an important role in Latin American and Asian-Pacific countries in the sample but having little effect in the African and Mediterranean countries. Countries for which both cyclical and secular income elasticities are significantly different from zero also have relative price coefficients that are significantly different from zero, while relative price parameters are not significant in countries for which income parameters are not significantly different from zero.

8/ Khan (1974) has argued that a restrictive trade regime may lead to serially correlated errors. Also, as mentioned earlier, the presence of quantitative restrictions on imports will introduce a wedge between border and domestic prices of imports and, if only the first variable is observed, result in an error-in-variable problem.

TABLE 1: IMPORT PARAMETERS

Region/ Country	Price Elasticity	Secular Income Elasticity	Cyclical Income Elasticity	Import t-1	$\bar{R}^2$	SE	Sargan	Godfrey	Hausman
Latin America & Caribbean									
ARG	-7.54	1.403	1.638	.233	.89	.147	2.44	2.379	.30
	-(6.62)	(6.86)	(2.80)	(2.40)					
COL	-.499	1.263	2.391	-	.95	.17	2.54	1.83	1.33
	-(2.44)	(9.15)	(2.82)						
CRI	-.514	.424	1.226	.561	.97	.07	3.42	3.39	3.59
	-(6.15)	(2.78)	(3.18)	(4.78)					
ECU	.385	-.152	.717	.962	.91	.27	3.76	.07	2.13
	-(1.12)	-(.39)	(1.36)	(3.11)					
JAM	-.314	1.232	1.289	-	.86	.08	1.72	.98	.98
	-(5.68)	(7.59)	(6.37)						
MEX	-1.044	1.213	.477	-	.93	.24	3.59	3.59	.41
	-(7.60)	(16.51)	(.75)						
PER	-.646	.522	2.309	.530	.66	.323	6.56	4.27	2.71
	-(3.03)	(1.90)	(2.93)	(3.41)					
PRY	-.478	.672	.985	.549	.98	.158	2.32	.22	1.18
	-(1.80)	(1.97)	(2.13)	(2.78)					
SLV	-.286	.328	1.382	.713	.83	.19	1.95	.71	2.50
	-(1.03)	(.72)	(4.02)	(2.64)					
URY	-.368	1.864	.991	.160	.95	.083	5.04	5.00	1.70
	-(4.71)	(7.62)	(2.62)	(1.48)					

TABLE 1: IMPORT PARAMETERS (cont.)

Country	Price Elasticity	Secular Income Elasticity	Cyclical Income Elasticity	Import t-1	$\bar{R}^2$	SE	Sargan	Godfrey	Hausman
<u>Africa</u>									
BENIN	.068 (.15)	-.114 -(.32)	1.640 (1.43)	.831 (5.63)	.84	.49	4.36	.95	1.63
CAF	-.947 -(4.97)	.628 (3.20)	.048 (.08)	-	.71	.17	1.95	.056	1.23
GMB	-1.034 -(3.21)	1.283 (4.14)	.775 (1.55)	.299 (1.68)	.77	.15	.013	.013	.86
SEN	-.282 -(1.29)	1.307 (2.74)	1.381 (1.49)	.460 (2.35)	.87	.14	7.67	.49	.35
<u>Mediterranean</u>									
EGY	.518 (2.96)	.563 (4.17)	-.478 -(.99)	-	.90	.11	2.87	1.55	1.86
GRC	-.028 -(.14)	1.404 (21.79)	1.415 (4.54)	-	.98	.07	5.93	3.37	.025
ISR	-.195 -(.85)	.344 (.98)	.944 (1.79)	.686 (2.72)	.96	.14	3.20	.42	1.48
LBY	-1.194 -(19.47)	1.004 (5.26)	.485 (2.42)		.97	.15	2.13	2.13	1.48
MAR	-.267 -(.93)	.510 (1.12)	-.761 -(.74)	.638 (2.56)	.89	.25	5.89	1.03	.05
SYR	.104 (.61)	1.480 (26.21)	1.312 (3.22)	-	.98	.21	3.83	.018	.02
YUG	-.777 -(6.63)	1.044 (10.81)	1.572 (2.43)	-	.85	.12	3.76	3.75	1.16

TABLE 1: IMPORT PARAMETERS (cont.)

Country	Price Elasticity	Secular Income Elasticity	Cyclical Income Elasticity	Import t-1	$\bar{R}^2$	SE	Sargan	Godfrey	Hausman
<u>Asia Pacific</u>									
BGD	-.084	1.385	2.515	-	.69	.74	1.45	1.45	1.62
	-(.32)	(4.81)	(3.86)						
IND	-.325	1.067	.045	-	.62	.15	.48	.48	.68
	-(1.82)	(4.71)	(.03)						
KOR	-.405	.407	1.291	.644	.99	.09	1.24	1.24	1.60
	-(2.11)	(2.05)	(2.16)	(5.32)					
MYS	-.428	.623	2.288	.541	.98	.128	1.65	1.28	3.48
	-(1.35)	(2.96)	(5.67)	(3.51)					
PAK	-.556	.997	2.715	-	.73	.22	2.59	2.59	1.23
	-(5.53)	(7.33)	(2.55)						
PHL	-.250	1.012	1.824	-	.92	.14	2.43	2.08	2.90
	-(1.54)	(10.70)	(5.68)						

<u>Note</u>: t statistics are in parentheses.

References

Artus, J. 1973. "The Cyclical Adjustment of Foreign Trade Flows and the Estimation of Underlying Trade Balances." Unpublished, IMF Paper.

Bahmani-Oskooee, M. 1986. "Determinants of International Trade Flows: The Case of Developing Countries." Journal of Development Economics.

Barro, R.J. 1977. "Unanticipated Money Growth and Unemployment in the U.S." American Economic Review, Vol. 67, (March 1977):101-15.

Barro, R.J. 1978. "Unanticipated Money, Output and the Price Level in the U.S." Journal of Political Economy.

Deepler, M., and D. Ripley. 1978. "The World Trade Model: Merchandise Trade." IMF Staff Papers No. 147-206.

Godfrey, L.G. 1976. "Testing for Serial Correlation in Dynamic Simultaneous Equation Models." Econometrica 44:1077-84.

Haynes, S., and J.A. Stone. 1983. "Secular and Cyclical Responses of U.S. Trade Income: An Evaluation of Traditional Models." The Review of Economics and Statistics 65:87-95.

Holly, A. 1982. "A Remark on Hausman's Specification Test." Econometrica 50:749-59.

Khan, M. 1974. "Import and Export Demand in Developing Countries." IMF Staff Papers 21:678-92.

Khan, M., and K. Ross. 1975. "Cyclical and Secular Income Elasticities of the Demand for Imports." The Review of Economics and Statistics 57:357-61.

Magee, S. 1975. "Prices, Incomes and Foreign Trade" in Peter Kenen, ed. International Trade and Finance: Frontiers for Research. Cambridge: Cambridge University Press.

Marquez, J. 1988. "Cyclical and Secular Trade Elasticities: An Application to LDC Exports." Journal of Economic Dynamics and Control 2:71-76.

Pagan, A. 1984. "Econometric Issues in the Analysis of Regressions with Generated Regressors." International Economic Review 25:221-47.

Pritchett, L. 1987. "Import Demand Elasticities: Estimates and Determinants." The World Bank, EPDCO, Working Paper 1987-4.

Sargan, J. 1964. "Wages and Prices in the United Kingdom." in P. Harts et al., eds. Econometric Analysis for National Economic Planning. London: Bettenworth.

PPR Working Paper Series

	Title	Author	Date	Contact
WPS176	Credit Rationing, Tenancy, Productivity, and the Dynamics of Inequality	Avishay Braverman Joseph E. Stiglitz	May 1989	C. Spooner 37570
WPS177	Cash-Flow or Income? The Choice of Base for Company Taxation	Jack M. Mintz Jesus Seade	April 1989	A. Bhalla 60359
WPS178	Tax Holidays and Investment	Jack M. Mintz	April 1989	A. Bhalla 60359
WPS179	Public Sector Pricing in a Fiscal Context	Christopher Heady	April 1989	A. Bhalla 60359
WPS180	Structural Changes in Metals Consumption: Evidence from U.S. Data	Boum-Jong Choe	April 1989	S. Lipscomb 33718
WPS181	Public Finance, Trade and Development: What Have We Learned?	Johannes F. Linn Deborah L. Wetzel	April 1989	M. Colinet 33490
WPS182	The Experience of Latin America With Export Subsidies	Julio Nogues	April 1989	S. Torrivos 33709
WPS183	Private Investment in Mexico: An Empirical Analysis	Alberto R. Musalem	April 1989	L. Spear 30081
WPS184	Women and Forestry: Operational Issues	Augusta Molnar Gotz Schreiber	May 1989	M. Villar 33752
WPS185	Uniform Trade Taxes, Devaluation, and the Real Exchange Rate: A Theoretical Analysis	Stephen A. O'Connell	April 1989	A. Oropesa 61758
WPS186	The Uruguay Negotiations on Subsidies and Countervailing Measures: Past and Future Constraints	Patrick A. Messerlin	April 1989	S. Torrijos 33709

PPR Working Paper Series

	Title	Author	Date	Contact
WPS187	The Flexibility of Wages When the Output Price Changes: An Empirical Study of 13 Industrial Countries*	Menahem Prywes	April 1989	J. Israel 31285
WPS188	International Comparisons of Wage and Non-Wage Costs of Labor	Luis A. Riveros	April 1	R. Luz 61762
WPS189	The Treatment of Companies under Cash Flow Taxes: Some Administrative, Transitional, and International Issues	Emil M. Sunley		
WPS190	Macro Performance Under Adjustment Lending	Riccardo Faini Jaime de Melo Abdel Senhadji-Semlali Julie Stanton	April 1989	M. Ameal 61466
WPS191	Openness, Outward Orientation, Trade Liberalization and Economic Performance in Developing Countries	Sebastian Edwards		
WPS192	Inflation, Price Controls and Fiscal Adjustment: The Case of Zimbabwe	Ajay Chhibber Joaquin Cottani Reza Firuzabadi Michael Walton	April 1989	A. Bhalla 60359
WPS193	Bank Lending to Developing Countries in the 1980s: An Empirical Test of Major Hypotheses on Voluntary and Involuntary Lending	Peter Nunnenkamp		
WPS194	Efficient Debt Reduction	Jeffrey Sachs	May 1989	L. Chavarria 33730
WPS195	How Has the Debt Crisis Affected Commercial Banks?	Harry Huizinga	May 1989	L. Chavarria 33730
WPS196	A Review of Alternative Debt Strategies	Eugene L. Versluysen	May 1989	E. Hadjigeorgalis 33729
WPS197	Differentiating Cyclical and Long-Term Income Elasticities of Import Demand	Fernando Clavijo Riccardo Faini	May 1989	K. Cabana 61539