Date: 02 /13/97

To: Richard Goldman

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Subject: Problem set # 2

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1) Calculating for Mexico in 1982 :

BALANCE	*Millions of U$S*	*Millions of New Pesos*	*As % GNP**
MERCHANDISE TRADE	7,044	397.2816	4.37
GOODS & SERVICES	-7,152	-403.3728	4.44
CURRENT ACCOUNT	-6,193	-349.2852	3.85
BASIC	- 3,742	-211.0488	2,32

*Mexican GNP in 1982: 9.08 billion of New Mexican Pesos

2) The Government is to achieve the goal of reducing the trade deficit (good and services) from - 7,152 to - 3,576 million of dollars (50 % less) , then , the percentage of the devaluation is the following :

elasticity of export revenues (in dollars) = (X2 - X1/X1)/g = 0.8

elasticity of imports expenditures (in dollars) = (M2 - M1/M1)/g = 0.4

where g = e2 - e1/e1

Targeted Trade Balance = 3,576 = 0.8 * X1 * g - (-0.4 *M1*g)
Targeted Trade Balance = 3,576 = 0.8 * 29,682.* g + 0.4* 36,834*g
Targeted Trade Balance = 3,576 = g [0.8 * 29,682. + 0.4* 36,834]
Devaluation necessary = g = 3,576/ [0.8 * 29,682. + 0.4* 36,834]
Devaluation necessary = g = 3,576/ [38,479.2] = 0.09293 = 9.293%

Thus, by devaluating the domestic currency in 9,293 % the said target will be accomplished.

3) Using the percentage of devaluation obtained above (g=0.09293 = 9.293%) and a new conversion factor (mexican pesos per dollar) we can obtain the new trade balance .
new conversion factor = 0.0564 + 0.09293 *0.0564 = 0.06164

X2 = X1 + (0.8 * g * X1) = 31,888.7
X2 = 29,682 + (0.8 * 0.9293 * 29,682) = 31,888.7

M2 = M1 + (-0.4 * g * M1) =
M2 = M1 + (-0.4 * 0.9293 * 36,834) = 35,464.8

New Trade Balance = X2 - M2 = 31,888.7 - 35,464.8 = - 3,576.1

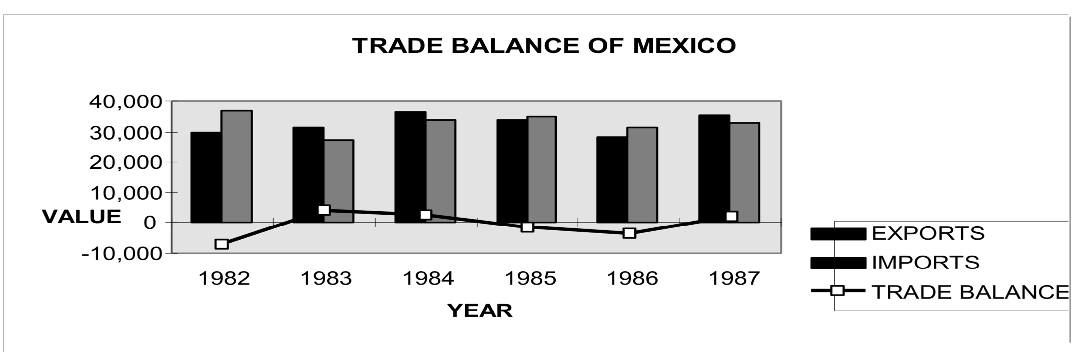
Converting it into Pesos:
- 3,576.1 * 0.06164 = 220.42 >>> that represents 2.43 % of the GNP.

When calculating in Pesos, a difference , 2.22 % in dollars and 2.43 % in pesos, is imposed by the impact of the devaluation on the value of the trade balance.

4) As a measure to get the whole picture the new elasticities for exports revenue and imports expenditure must be calculated:

elasticity of export revenues = {(31,448 - 29,682)/29,682} /(0.01614 - 0.0564)/0.564 = 0.64

elasticity of imports expenditures ={(27,037 - 36,834)/36834}/(0.01614 - 0.0564)/0.564 = -2.86
The inmense devaluation imposed in 1983 (112 %) caused a logical surplus despite the low elasticities . However, in the following years the conditions of the J curve are easily appreciated, leading Mexico to a deficit and turning it into surplus in 1987, after the progressive adjustment.



5)Let’s identify the variables :

y= Brazil's share of coffeE world supply =0.3
ew=world price elasticity of demand = -0.25
er= price elasticity of supply for the rest of the world = 0.6

price elasticity of demand for home goods = eh=(ew/y) - (1-y/y)er = (-0.25/0.3) - (0.7/0.3)0.6 = -2.23

Since -2.23 represents the change of the demanded quantity for home goods over the variation in price for home goods when it is 20% (the percentage of devaluation), the change in the demand for coffee in Brazil is 44.60 %.