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Policy and U.S. - Mexico Trade Relations (Dialogue #19)

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POLICY AND U.S. - MEXICO

TRADE RELATIONS

Dialogue #19

By: Raul Monzarz
George Samuels

PREFACE

Raul Moncarz, Professor in the Department of Economics at Florida International University, is a specialist in banking and finance in Latin America. George Samuels is Associate Professor of Economics at Sam Houston State University in Huntsville, Texas. Dr. Samuels' research focuses on the Mexican economy and on monetary and financial questions.

This paper was presented at the recent Mexico City meeting of the Latin American Studies Association.

Mark B. Rosenberg
Director

INTRODUCTION

This paper presents evidence of recent events in Mexico leading to the current crisis. Section II explains the theoretical relationship between the quantity theory of money, the exchange rate, the relative level of prices and the purchasing power parity paradigm. The role played by the relative prices of imported and domestic goods is explored, as well as the link establishing the exchange rate through relative prices and the purchasing power parity paradigm. The second part of this section discusses the exchange rate and how it relates to the terms of trade. A short overview of exchange controls follows, with emphasis on the recent Mexican experience. The policy implications of exchange control, its relationship to fiscal and monetary policies, and the balance of payments is studied. The "Decree Regarding Generalized Exchange Control" signed into law by then president José López-Portillo on September 1, 1982 is reviewed.

Section III looks at current problems for Mexico, including exports, inflation, unemployment and imports of production goods. Section IV examines the corresponding problems for the U.S. Exports, unemployment and loans to Mexico are included. Section V briefly discusses stabilization under IMF guidelines. Finally, some general observations and cursory comments are made regarding the current Mexican economic crisis.

I. RECENT MEXICAN EXPERIENCE

The current economic problems in Mexico clearly demonstrate the extent to which the international environment can restrain growth. But what precipitated this crisis? Thirty years of inward looking, import substitution based growth have slowed substantially in the early 1970's. When Lopez Portillo took office in 1976, inflation was thirty percent, and Mexico owed \$26 billion to foreign banks. Through a program of austerity, inflation slowed. Aggregate demand contracted, due to the austerity program as well as a sharp drop in investment after the 1976 devaluation.

During 1977, GNP grew at 3.3%, with private sector confidence increasing at a rapid pace. Dollarization and capital flight were reduced. In 1978, GDP grew at 7.0 percent in real terms, while inflation dropped to 16 percent from 21 percent the previous year. The turnaround has been attributed to increased investment and exports, or more specifically to the success of the new government (including both fiscal and monetary policies), and the new oil boom. By 1981, Mexico was producing 2.5 billion barrels per day--the world's fourth largest producer.

The oil wealth seemed to justify an ambitious development plan, including a national system of support for basic agriculture (deemphasized in the mid-sixties), and a plan to build twenty nuclear reactors. From 1978-1981, real government expenditures grew at an average rate of 14.9 percent per year. The money supply was increased 33 percent per year. Private fixed investment spending increased at an annual rate of 13.6 percent, and consumption 8.2 percent. GDP averaged 8.0 percent growth.

Confidence in oil revenues and a desire to pursue rapid industrial expansion led to international financial markets. External financing was abundant and relatively cheap. From 1978-1981, external public debt increased from 26.2 to 53.0 billion dollars.

Increased deficit spending by the government, as well as higher levels of private investment and consumption expenditures, generated excess demand and renewed inflationary pressures. Fortunately, real GDP grew (over 8.0 percent) as well as imports, both of which moderated inflation. Inflation gradually widened the current account deficit as the peso became more overvalued. Many exports were discouraged and imports grew rapidly.

Mexico's Global Development Plan of 1980 required high oil prices and export revenues. When these dipped in early 1981, some oil producing countries began discounting their prices in response to the weak market, but Mexico held out. Mexico continued to borrow to finance growth and debt service. As interest rates rose, increased amounts of foreign borrowing were required to cover debt service, leaving less for investment. In addition, the recession in the U.S. limited growth of non-oil exports.

Some corrective measures were introduced in late 1981, including some fiscal austerity, a mild devaluation of the peso, and reintroduction of import licensing. Even so, the year ended with a record increase in borrowing by the public sector, and a current account deficit of 11.7 billion dollars.

In February of 1982, the peso was allowed to float. It depreciated 30 percent immediately, and 18 percent more by May. The government instituted more "self-discipline," including a reduction

in the ratio of the deficit to GNP, price controls on certain basic products, and limits on public sector and private sector imports. It was hoped these policies would reduce capital flight and imports, and increase exports.

The Minister of Finance and Public Credit met with IMF officials in August, and reached an agreement to help Mexico restructure its foreign debt and attract foreign exchange. The IMF will provide Mexico 3.6 billion dollars in SDR's over the next three years, based on Mexico's exercising budgetary austerity and contracting fewer foreign loans. On September 1 Mexico established both fiscal and monetary policy directed at controlling and stabilizing the economy. Banks were nationalized and the control of foreign exchange was institutionalized. The IMF, at their annual meeting of September 6, in Toronto, backed Mexico by assuring the financial community of Mexico's commitment to duly pay off its foreign debt, after completing a process of financial adjustments.¹ The letter of intent signed by Mexico and the IMF in November 1982, described a three year program to reduce the size of the deficit from 16.5 percent of GDP to 3.5 percent by 1987. These reductions will necessitate major cuts in public spending. Monetary policy is constrained by a limit on central bank financing of the public sector deficit and encouraging increases in interest rates. Wage policy is expected to be conservative.

II. EXCHANGE RATES AND EXCHANGE CONTROLS

Exchange Rates and the Quantity Theory

An exchange rate is described as the relative price of one currency in terms of another. As a price it is subject to the effects of the market forces of supply and demand. Exchange rates are sensitive points of economic contact between countries. This is because of the impact that the level of the rate of exchange has on the prices of domestic goods in terms of imports; on the balance of payments and the current account and on aggregate demand, among others. Exchange rates equilibrate the international flow of goods, services and capital.

The most important determinant of exchange rates is the prices of goods and services in the domestic country relative to the prices of goods and services in the foreign country, a relationship established by the purchasing power parity theorem. This theorem has proven to be the most consistent economic theory related to exchange rates and foreign/domestic price determination. Even though the purchasing power parity or international competitiveness is only one of many determinants affecting the rate of exchange, the link between domestic prices and foreign prices can be established by a simple geometric model developed by K. W. Clements.²

Clements uses the monetarist approach in the establishment and determination of exchange rates. In explaining exchange rate behavior, Clements emphasizes the role of the money market as a

determinant of the equilibrium level. Clements' model analyzes two basic conditions in the determination of the rate of exchange. The first is a case where it is assumed that all goods and services are traded internationally, while the second case includes a non-traded goods extension.

Analyzing Clements' first part of the model, if we let L be the demand for real cash balances, Y real income, i the nominal rate of interest then we know that

$$L = f(y, i)$$

Let M_0 be the nominal quantity of money, P be the price level and

$\frac{(M_0)}{(P)}$ be the supply of real balances, then $L(y, i) = \frac{M_0}{P}$ with

$P = \frac{M_0}{L(y, i)}$. If we assume that equilibrium in the domestic money market is determined by prices, Clements then established that the quantity theory results in a proportionality of prices and the money supply. He further concluded that

1. A rise in the money supply increases the price level in the same proportion.
2. A rise in the real quantity of money demanded causes the price levels to fall proportionally.

Clements' basic equation is expressed as follows:

P = price level in the domestic country

S = exchange rate (the price of foreign currency in terms of domestic currency)

p^* = the foreign price level

Then $p = s \times p^*$, which shows that the exchange rate equalizes the

price of goods and services in alternative currency.

Since the price level at home was expressed as $P = \frac{M_o}{L(y,i)}$, substituting the exchange rate $S = \frac{1}{p^*} \frac{M_o}{L(y,i)}$ which establishes the exchange rate in terms of the domestic demand and supply of money and foreign prices p^* .

Clements introduced the model relating the demand and supply for money with the purchasing power parity theory in the establishment of the exchange rate as follows:

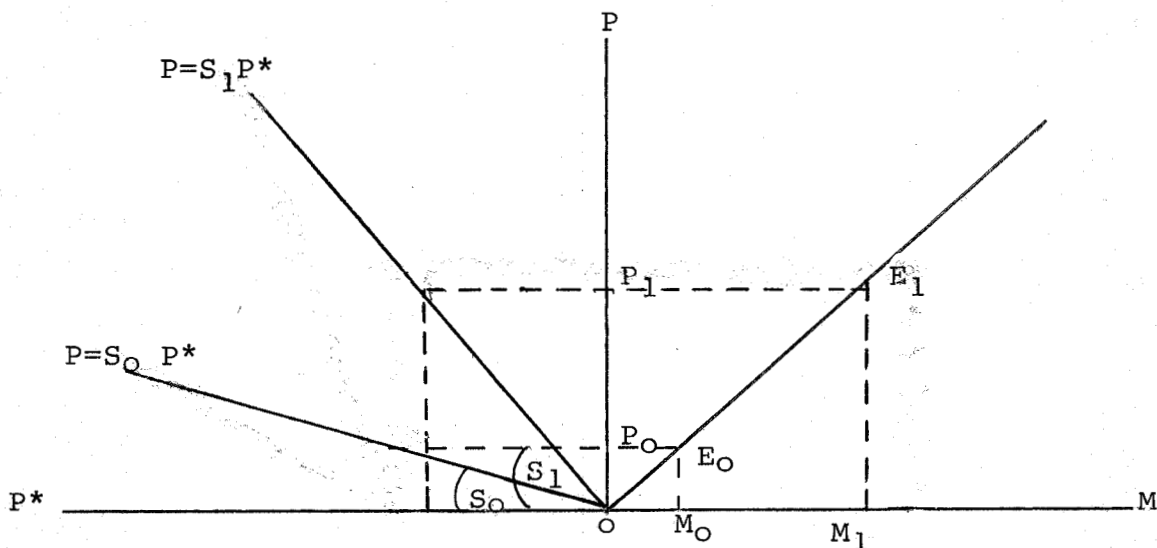


Figure 1

Figure 1 shows the relationship between money and prices. Assuming that the initial income (y_0) and initial interest rates (i_0) are held constant, then an expansion in the money supply from M_0 to M_1 causes the price to raise from P_0 to P_1 . In trying to keep the real balances constant, the percent increase in prices must equal the percent increase in the money supply.

In the purchasing power parity the relationship between the initial rate of exchange S_0 and foreign prices P^* is given. Clements establishes that domestic monetary expansion from M_0 to M_1 , with domestic prices increasing from P_0 to P_1 holding P^* constant, depreciates the foreign exchange to S_1 . He concludes that the percent depreciation in the foreign exchange must equal the percent expansion of the money supply. This has the same effect as a rise in domestic interest rates (i). A rise in interest rates due to inflationary expectations induces people to economize in their holding of monies, increasing prices and depreciating the exchange rate.

On the other hand, increases in real income (Y), assuming that M_0 and i_0 remain constant, causes domestic prices to fall. With lower domestic prices, ceteris paribus, the domestic economy will experience an appreciation in the rate of exchange, creating therefore, a stronger currency.

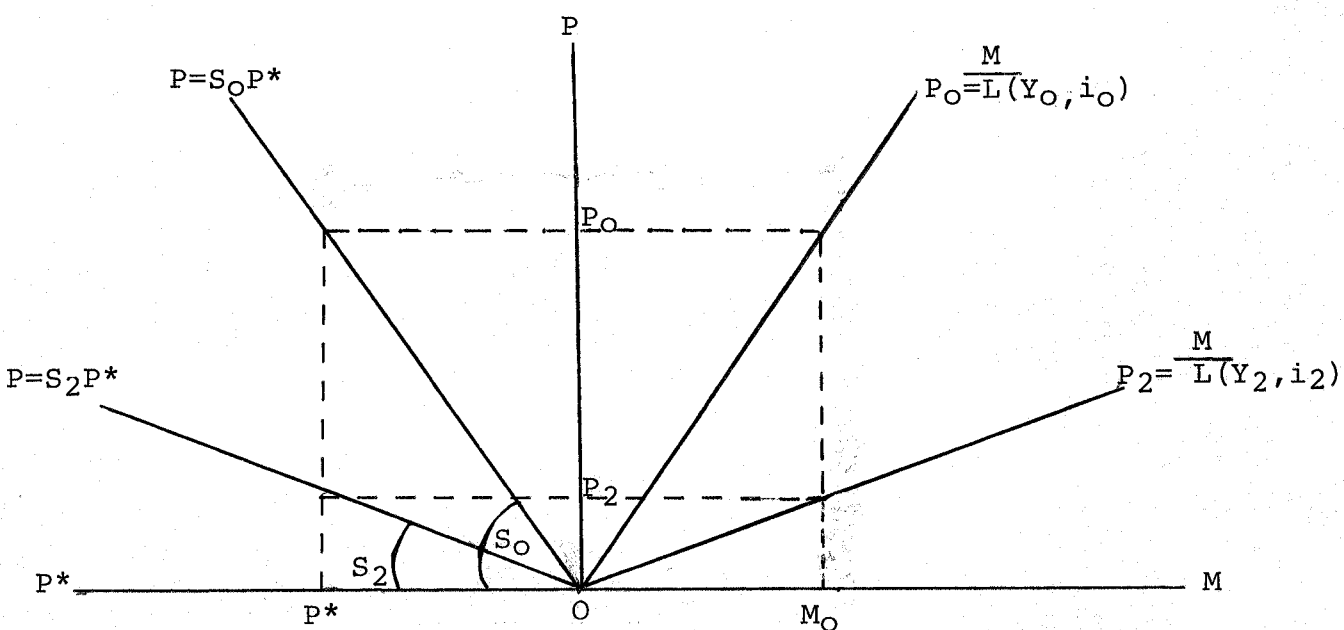
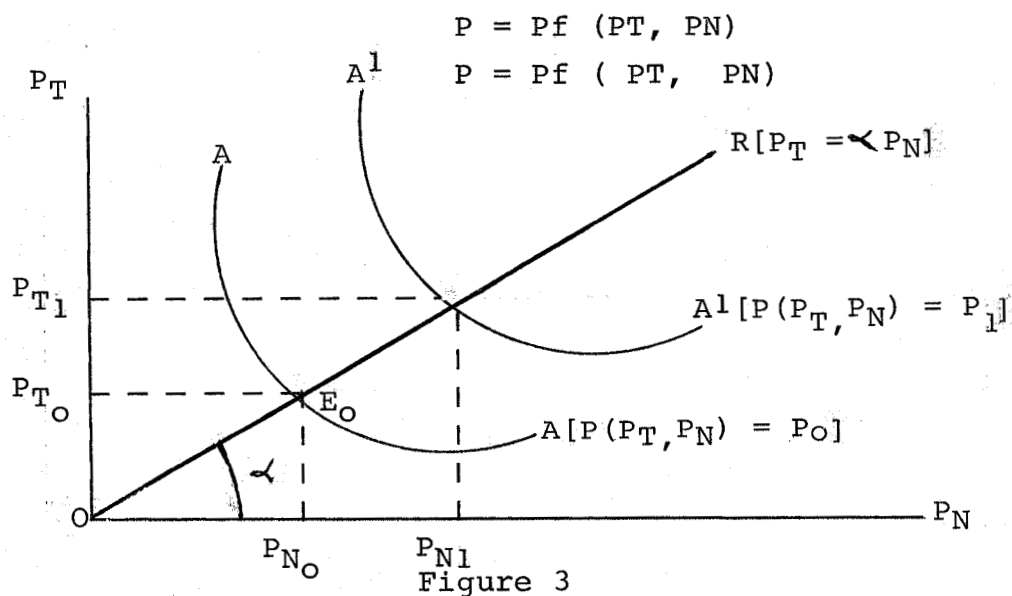


Figure 2

Clements' relation of $P = SP^*$ assumes that all of the goods and services produced in a domestic economy are internationally traded. However, we know in reality this need not be the case. Clements developed the second part of his analysis which relates the domestic price level to the price of traded goods only, through the use of purchasing power parity. This has proven to be a more realistic analysis. If we let PT^* be the corresponding foreign price of goods traded; PT the domestic price of traded goods and PN the domestic price of non-traded goods we have the following condition:



Curve AA is representative of the absolute levels of prices in the domestic economy as a function of the domestic price of traded goods and the domestic price of non-traded goods. The price level represented by AA is assumed constant throughout. When increases are experienced in PT and PN , rises in the general level of Prices

of the domestic country will be experienced. This would cause the AA schedule to shift to the right.

Assume that α is designated as the relative price of non-traded goods to traded goods. Then $P_T = \alpha P_N$. Further assuming that income and technology remain relatively constant, then schedule OR is representative of the relative prices of non-traded goods to traded goods. Equilibrium will be established at point E_0 which is where the relative prices are equal to the absolute price levels. The impact of this relation on the rate of exchange is shown through the purchasing power parity. A rise in the domestic level of absolute prices will increase the price of domestic traded goods (P_T), causing the exchange rate to decrease. A decrease in the exchange rate will be of the same magnitude as the increase in the price levels. Long run conditions are somewhat more subjective in this kind of analysis. In the short run the prices of domestic non-traded goods could be assumed to be "sticky" downward. This may be due to lags of information, costs of adjusting to the runs, etc.

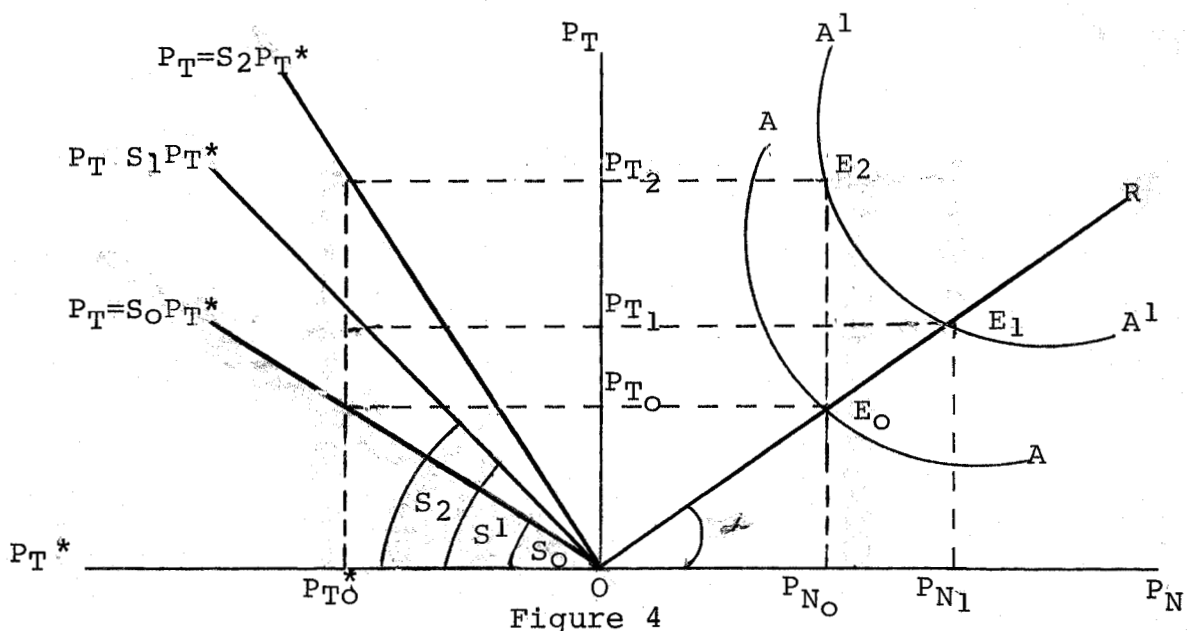


Figure 4

Changes in the price level with PN constant shifts the AA line to a new equilibrium point. Therefore, the brunt of the adjustment is carried by PT. The exchange rate is depreciated to S2, then at equilibrium we have E2, PT2, and PNo. Assuming that national income in the domestic country stays constant, excess demand for non-traded goods will be experienced. In the long-run, relative prices may fall returning the price of non-traded goods (L) to its normal level. The exchange rate will experience fluctuations in the short run, while experiencing either decreases or increases in value over the longer run.

As Table 1 illustrates, the inflation rate in Mexico as compared to that in the U.S. fairly well accounts for the increase in the peso price of dollars. Looked at in another way, the excess demand was relatively greater in Mexico than in the U.S., causing demand-pull inflation. A significant amount of this was caused by the size of public budget deficits, and the fact that the U.S. took remedial action to slow inflation prior to Mexico's efforts. Table 2 presents some data on Mexico's aggregate demand and supply growth rates.

Terms of Trade

So far, we have said very little about the relationship of the exchange rate to the terms of trade. While the foreign exchange of a country is affected by the instability in prices, adjustment in money prices usually imply adjustments in the ratios of the terms of trade. We have seen the relationship of prices as established by

Table 1
Purchasing-Power-Parity Exchange Rate
(pesos/dollar)

<u>Month</u>		<u>Prices Mexico¹</u>	<u>Prices U.S.²</u>	<u>P-P-P Ex. Rate³</u>	<u>Ordinary Ex. Rate (controlled)</u>	<u>Ratio P-P-P to ordinary Ex. Rates</u>
January	77	100.00	100.00	22.18	22.18	100.00
December	77	115.46	105.45	24.28	22.74	106.77
December	78	133.71	115.57	25.66	22.72	112.94
December	79	160.33	132.59	26.82	22.87	117.27
December	80	202.66	149.28	30.11	23.26	129.45
December	81	257.17	157.17	36.38	26.23	138.70
February	82	281.88	158.73	39.39	44.64	88.24
June	82	339.67	159.07	47.36	48.04	98.59
August	82	398.99	159.62	55.44	49.81	111.30
December	82	496.83	162.83	67.68	96.48	70.15

¹Whole Price Index for Mexico City. January 1977=100.00

²Wholesale Price Index, "All Commodities." January 1977=100.00

³Assumes that the prevailing exchange rate in January 1977 was the P-P-P exchange rate.

Source: Banco de Mexico and DIEMEX-Wharton calculations.

Table 2
Aggregate Demand and Supply
Real Growth Rates

	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1978-81</u>	<u>1982</u>
Aggregate Demand						
Internal Demand (1)	9.2	10.9	11.2	9.7	10.3	- 5.0
Private	7.7	10.8	8.5	9.0	9.0	- 3.8
Consumption	8.1	8.8	7.5	8.1	8.2	0.6
Investment	5.1	22.7	13.7	13.7	13.6	-25.3
Public	19.8	13.3	13.2	13.3	14.9	- 6.6
Consumption	9.9	9.6	9.5	9.1	9.5	- 0.4
Investment	31.6	17.1	16.7	17.0	20.4	-11.7
External: Exports	11.6	12.1	6.1	5.7	8.8	-10.4
Aggregate Supply						
Internal Supply (GDP)	8.2	9.2	8.3	8.1	8.5	- 0.7
External Supply: Imports	21.9	29.9	31.9	18.5	25.4	-35.5

(1) Includes changes in inventories

Source: Ministry of Planning and the Budget

exchange. The terms of trade are defined as the price of imports in terms of exports. It signifies the relative prices of imports to exports. The terms of trade can be defined as:

$$P \text{ (terms of trade)} = S \left(\frac{PN}{PT} \right)$$

When a country devalues their currency, as Mexico did last year, foreign money costs more in terms of domestic money. Since foreign money is needed to purchase foreign goods, foreign goods also cost more in terms of domestic money. It also means that domestic money is cheaper in terms of foreign money, so that domestic goods are also cheaper for foreigners to buy.

However, the full impact of devaluation or depreciation of the national currency in terms of another is dependent upon their relative price elasticities.³ When the elasticities are large the change in the terms of trade produced by devaluation will bring large increases to the national trade balance. Low elasticities would have little impact. In the case of Mexico, the government hopes that the cheaper peso will encourage more exports because it allows companies to sell products cheaply, and thus more competitively abroad.

Exchange Control

Exchange control is an exchange rate regime that favors direct government controls over international monetary transactions. In this case the authorities directly administer exchanges of foreign currency for national monies. Citizens who acquire foreign currency by selling goods, services or assets to foreigners may be required to sell that currency to the authorities for domestic

money, and citizens who wish to buy goods, services and assets from abroad may need to apply to the authorities for the foreign currency they required.

This does not necessarily mean that exchange control is a stringent or bad policy for those sectors of the economy doing business with foreigners. If all that the authorities were doing was buying and selling of foreign exchange at a price that equated receipts to sales, the results would then be like having a floating exchange rate regime with the state acting as a clearinghouse. However, as we will see in the case of Mexico, the authorities' willingness to deal and terms of these dealings with the nationals depends on the identity of the citizen, the nature of the commodity the citizen wants to buy or sell, and the foreign country he wants to deal with.

The Exchange Rate, Adjustments and Policies

There are two broad implications of exchange rate adjustment. First, balance of payment deficits and surpluses can be corrected or prevented by variations in the exchange rate. Second, exchange rate variations allows individual countries to control their own money supplies. Adjustments in the exchange rate can be carried out in four distinct scenarios. National currency could be depreciated, which means domestic currency becomes worth less in terms of foreign currency. Similarly, national currency can appreciate or increase in value in terms of foreign currencies. When a country is on the gold standard, its currency can be devalued. This is a

reduction in the value of the currency relative to its monetary standard, i.e., gold. It could also be revalued, meaning an increase in the relative value of the currency in terms of its monetary standard. When a national currency, like the Mexican peso, is devalued, the devaluation reduces the value of the currency in terms of gold while other currencies are worth the same in terms of gold. Thus, it means that the peso in this case is also worth less in terms of the other currencies.

Governments need to exercise great caution and care when deciding which scenario of exchange control adjustment to follow and must analyze their implications. The specific policies to be developed by the affected government must be developed to operate efficiently in an internal and an international sphere, since the pursuit of these policies will have a tremendous impact in their balance of payment accounts and current accounts as well as national aggregate demand.

For internal and external balances under a fixed rate of exchange system, government authorities have two ways of instituting their desired goals, fiscal policy and monetary policy. When authorities are able and willing to sterilize payment imbalances so that they can exercise their independent monetary policies, they are controlling interest rates. We know that changes in interest rates could stimulate or curtail aggregate demand which in turn affects national income. We have also seen the impact of interest rates in the determination of the rate of exchange. Fiscal policy on the

other hand affects the budget deficit, which in turn impacts the external balance. An increase in the government deficit, by stimulating income and therefore imports, will tend to increase the balance of payment deficit. An increase in the interest rate will decrease the payment deficit for two reasons. By reducing national income, it reduces imports and so decreases the balance of trade deficit; a higher interest rate also makes domestic assets more attractive relative to the foreign assets and so generates a capital account surplus provided that capital is internationally mobile. These conclusions are short run conclusions and offer only temporary relief from the internal-external balance dilemma. Since it requires a long time for the effect of fiscal and monetary policy to take place, short run effects of fiscal and monetary policy in the current account could be over before fiscal policy even begins to do its thing.

As related to the Mexican situation, fiscal and monetary policies were implemented. On May 16, 1982, "the Minister of Programming and Budget, Ramón Aguerre Velazquez, announced measures adopted by the Federal Government to attenuate the negative effects of devaluation and strengthen the fight against inflation." He went on to announce that, "it is asserted that as a result of the devaluation the budgetary scheme had been altered, both because of the effects on debt service and on the wage adjustment decree to make good the loss in purchasing power of the workers. As a consequence there was a need to reduce public sector expenditure.

Table 3

Federal Expenditures Budget 1982

(Billions of pesos)

Original budgeted expenditure		3,320.6
Less: personal services	589.5	
Debt servicing	722.1	
State and municipalities		
shares in Federal taxes	<u>193.8</u>	<u>1,505.4</u>
Adjustable budgetary expenditure		1,815.2
Reduction		<u>150.0</u>
% of reduction in terms of original budget		4.52
% of reduction in terms of adjustable expenditure		8.26

Source: Ministry of Programming and Budget

The decision had been made not to permit any budget increase (see Table 3). The budget will be reduced by a total of 150 billion pesos or 8.3% in the areas indicated and 4.5% of the original budget as a whole.

III. PROBLEMS FOR MEXICO

These collected policies are expected to alter Mexico's course--recession followed by slow growth in GDP. De la Madrid must win the cooperation of organized labor as well as that of the 1.6 million public service employees. Increased unemployment makes this problem more difficult, as may any sizable reduction in the public work force.

Inflation, financial uncertainties, a general feeling of unrest, and the U.S. recession have all combined to reduce tourism revenues. If nothing else, the uncertainties relating to tourism revenues have made planning much more difficult than was the case from 1960 to 1970 when these revenues rose 10.3 percent annually and in 1970-1980 they increased 14.9% per year. Border transactions follow the same pattern as tourism, compounding the problem.

Interestingly, both the labor problem and tourism problem are tied to inflation. From January 1977 to December 1982 the WPI for Mexico City increased almost 400 percent. Even with the policies enacted by the de la Madrid government, inflation is expected to remain strong through 1985. On the positive side, the accelerating trend may be broken. If so, the impact on tourist trade and wage settlements could be very settling on the economy.

A final problem faced by Mexico relates to business' inability to obtain (at low cost) the dollars needed to import materials necessary for production. Not only do exchange controls increase the cost of imports, they can be used to ration foreign exchange and thereby limit imports directly.

On September 1, 1982, the then President of Mexico José López Portillo signed into law a "Decree Regarding Generalized Exchange Control." This decree established the Central Bank of Mexico as the state clearinghouse dealing with matters of foreign exchange. The decree further established that foreign currency will not be legal tender in the nation and foreign currency will be exchanged at the appropriate rates, through the Central Bank. Control of the exit and entry of foreign currencies were also established. The sole purpose of this control condition is to prevent capital (dollarization) flight from the nation to foreign banks. In this decree, the Mexican president established a two tiered exchange rate regime--the preferential exchange rate and the ordinary rate.

On September 4, 1982, Carlos Tello, Director of the Bank of Mexico, explained in a press conference the new system of exchange control. He established that the preferential rate fixed at \$50 Mex. (\$105 today) to the U.S. dollar "will apply to all imports of goods authorized by the Ministry of Trade." The second exchange rate--the ordinary fixed at \$70 Mex. (\$150 today) to the U.S. dollar will apply to all exports of goods and services, imports of services among which tourism is the principal force and all payments of principal and interest corresponding to deposits in foreign currency.

In an article which appeared in the Wall Street Journal on March 11, 1983, Lynda Schuster presents several actual cases in which the authorities' willingness to deal or lack thereof is affecting the functioning of the national economy. Companies that

during the last 30 years never had any problems obtaining money and materials needed to turn a profit, are finding it almost impossible to stay afloat. These companies were importing raw materials from the U.S. rather inexpensively, but due to the devaluation of the peso and the exchange control their situation is a different one. Their exports might be more attractive abroad but imports have become more expensive, creating production bottlenecks.

The government, through the Central Bank, says that less expensive dollars (the preferential rate) are available for crucial imports. But merchants and entrepreneurs that tried to get these dollars from the Central Bank find out that these dollars are difficult to get or simply can't be liberated from the Mexican bureaucracy. The alternative is for the entrepreneurs to buy the necessary dollars at the free-market rate or in the black market. Most of them cannot afford to, making the importing of the necessary raw materials almost impossible.

The solution, according to the Mexican government, is to decrease imports and change to local raw materials. But to make this change firms need to buy machinery to handle the local materials; they need once again those "phantom" dollars to acquire the new machinery, since Mexico produces very small quantity of capital goods. Assuming that a firm can overcome the obstacles mentioned above, after his foreign sales are made then his dealings with the Central Bank begin. He will find that the receipts are paid through the Central Bank, at the lower rate of exchange.

IV. PROBLEMS FOR THE U.S.

Mexico is the United States' third largest trading partner, after Canada and Japan. In 1982, trade between the two countries totaled \$31.6 billion. The main U.S. imports were oil (552,000 bbl. per day, worth \$6.2 billion annually) and natural gas (300 million cu. ft. per day). Until the economic crisis, Mexico had become an increasingly important consumer of U.S. manufactured goods, machinery and services. Because of its external debt problem, Mexico cut its imports back drastically in 1982. U.S. exports fell by 60 percent, and the U.S. \$4 billion trade surplus with Mexico became a \$4 billion deficit in 1982. Estimates indicate this change has cost the U.S. economy 200,000 jobs.⁴ Future cuts in imports by Mexico will continue to "shut off" one of the industrial country's main engines of growth.⁵

The devaluation and import restrictions have significantly hurt U.S. border retailers with consequent effects on employment. Decreased expenditures have caused sales taxes to plummet. When viewed along with Reagan's cuts in funding for state and local governments, the effect on public employment is obvious.⁶

U.S. investors in Mexico are in a precarious position. Included are individuals, firms, and banks. After the nationalization, dollar accounts were converted to pesos, and a limit was placed on the pesos that could be removed from Mexico to 5,000. The Reagan administration has offered aid to U.S. banking interests, but not U.S. citizens. U.S. banks have made a large quantity

of loans to Mexico. The nine largest U.S. banks have loaned 60% of their shareholders' equity, and smaller banks in the Southwest are vulnerable. According to one view, overeager lenders are as responsible for Mexico's financial problems as the overeager borrower. The possibility of default could seriously disrupt the U.S. banking system.

V. IMF AND STABILIZATION

The November 10, 1982, agreement between Mexico and the IMF laid out a program to promote economic stabilization and ease the repayment of foreign debts. Some observers feel that the IMF's austerity plan may be somewhat self-defeating, leading not to manageable debt and growth but rather contractions in both Mexico and the U.S.

Most forecasts of Mexico's economic future under IMF constraints suggest a contraction in GDP and an increase in unemployment in 1983, and slow sustained growth over the next few years. Inflation is expected to moderate as the ratio of the deficit to GDP falls, and the rate of growth in the money supply decreases.

VI. SUMMARY AND CONCLUSIONS

The chief problems faced by Mexico can be grouped in two categories: external and internal. External problems are those that Mexico must take as given. These include the recovery of the U.S. economy, the world price of oil and interest rates. U.S. economic recovery seems to be critical to economic stabilization in Mexico.

Both oil and non-oil exports to the U.S. could exhibit a significantly improved performance. The current low level of oil consumption will likely be reversed as U.S. manufacturing rebounds, as for non-oil exports, these have an elasticity, with respect to U.S. GNP, greater than one. Therefore, it would not be surprising if exports lead the post 1983 expansion in Mexico. The peso devaluation has reduced the cost of Mexican exports in U.S. dollars, making these goods and services even more attractive. In a similar vein, an increase in the demand for oil should slow the downward movement in its price, and eventually probably restore it to previous levels. Wharton Econometrics has estimated a \$2 change in the world price would change Mexican GNP by 3.7 percent.⁷ Finally, if inflation continues to moderate in the U.S., interests rates could dip, thereby significantly reducing Mexico's debt service problems.

The two key internal problems facing Mexico seem to be the ratio of the deficit to GNP, and the rate of growth in the money supply. Not only will government expenditures need to be restrained, but Looney and Frederiksen have argued a tax reform is critical to stabilize the economy in the future.⁸ Money supply growth is expected to slow from 66 percent in 1983, and this too is very significant.

It is clear that from the data presented above, Mexico's huge anticipated oil revenues were the basis for its ambitious growth program. Since Mexico's growth was still modeled after an

industrialization model with its emphasis in inward growth, Mexico continued to borrow from foreign sources, increasing its debt. When the oil revenues failed to materialize, the country found itself overextended to such a degree that it could not meet its foreign debt commitments due to its liquidity problems. Mexico did not have any other choice but to take tough and stringent measures to keep the situation under control. At home the new administration has reduced the budget to the bare essentials and new monetary rules, including exchange control and the nationalization of the banking system were implemented. Abroad, Mexico is working on the rescheduling of its debt and new financing through the IMF and others.

The Mexican-American relations are so interwoven that it is impossible to completely unravel the interdependence between American and Mexican business. However, it seems that in most probability it will increase. The U.S. can take advantage of the situation by providing Mexico with the necessary funds to restructure their debt. In return, the U.S. obtains cheaper oil and natural gas. The U.S. can also obtain relaxation from the Mexicans regarding their protectionary policies relating to imports and investment in Mexico.

At first glance one might conclude that the exchange control exercised by Mexico would decrease American exports. However, one needs to look closer. Mexico is not a producer of capital goods. Most of their capital equipment is dependent on American industry.

A large proportion of the imports of Mexico are imports of U.S. intermediate products. In turn these intermediate products are transformed into final products and exported to the U.S. If the Mexican economy is to start moving again, their foreign debt needs to be restructured based on more realistic projections of oil revenues; oil production may need to be increased and relaxation and adjustments regarding the imports of raw materials and intermediate goods from the U.S. need to be established.

FOOTNOTES

¹"Economic and Social Conditions in Mexico," Comercio Exterior Mexico, September 1982, v. 28, No. 7, p. 301.

²K. W. Clements, "The Monetary Approach to Exchange Rate Determination: A Geometric Analysis," Weltwirtschaftliches Archiv., 1981, v. 117, No. 4, p. 20.

³See Wendell C. Gordon, International Trade, (New York: Knopf, 1962), pp. 341-346.

⁴Hang-Sheng Cheng, Federal Reserve Bank of San Francisco, Research Department Bulletin, July 29, 1983, p. 3.

⁵Business Week, February 21, 1983, p. 112.

⁶Philip N. Diehl, "The Effects of the Peso Devaluation on Texas Border Cities," Texas Business Review, May-June 1983, pp. 122-123.

⁷Wall Street Journal, January 26, 1983.

⁸Robert E. Looney and Peter C. Frederiksen, "Prospects for Economic Stability in Mexico," Texas Business Review, May-June 1983, pp. 117-119.