

**PHILIPPINE MACROECONOMIC POLICIES  
AFFECTING HOUSEHOLDS**

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# PHILIPPINE MACROECONOMIC POLICIES AFFECTING HOUSEHOLDS

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## I. INTRODUCTION

The Philippine economic performance in the 1980s is typical of highly indebted countries (HICs) which were caught in a bind as a result of prolonged recession in developed countries in the 1980s and the rise in real interest rates. The ability of the Philippines to increase exports was severely limited by the world economic slowdown and the fall in primary commodity prices. At the same time, its debt burden rose dramatically as real interest rates rose and funds from commercial banks dried up.

Under such difficult circumstances, the Philippine government embarked on a series of stabilization and structural adjustment programs. This study discusses the key macroeconomic policies adopted in recent years and how they may affect individual households. This discussion is given in Section II. The mechanisms by which monetary and fiscal adjustments affect the labor market, the goods market and government expenditures including the provision of public goods are broadly discussed in Section III. In the final section, some areas for future research are discussed.

## II. MACROECONOMIC POLICIES

### A. *Description of the Imbalance*

Analysis of the economic crisis and the Philippine experience in macroeconomic adjustment are contained in a number of studies (de Dios *et al.* 1984 and Montes 1987) and need not be repeated here. While reforms have been undertaken, they seem to be ineffective or inadequate, or both.

A cause for worry is a recent study on the Philippine economy which concludes that given the current economic structure and incentives, the Philippine economy's potential growth

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remains low, perhaps as low as three percent (Krugman 1992). The study says that the fairly rapid pace of economic growth from 1986 to 1989 was heavily dependent on rapid growth of imports without corresponding rapid export growth, and that it cannot be replicated on a sustained basis unless some structural changes are undertaken.

The economic crisis in the early 1980s had enormous social costs. And based on more recent studies, it would seem that the macroeconomic adjustments undertaken appear to have had limited effect on the alleviation of poverty. The Philippines has the unenviable position of being one of the few countries only country in Southeast Asia where the absolute number of the poor has actually been increasing. In 1988, there were 5.8 million poor families, about 55 percent of the population. This number is only a slight improvement over the 58 percent proportion of poor families registered in 1985 (Balisacan 1991). And while no hard statistics exist for 1991, the general perception is that the number of poor may have actually increased owing to massive unemployment resulting from the economic slowdown and energy crisis during the years 1991 and 1992.

#### B. *Recent Adjustment Program*

An adjustment program is supposed to eliminate serious imbalances or disequilibria in an economy. It may take the form of a short-run stabilization program aimed at minimizing distortions from a specific equilibrium path. It may also take the form of a long-run adjustment program aimed at shifting the equilibrium path itself. The disequilibria are of two kinds:

"an external imbalance that is an unsustainable deficit or surplus in the balance of payments in a fixed exchange rate regime; and an internal imbalance that is a discrepancy between aggregate expenditure or absorption, and output or income, at full employment of resources (including labor). In the context of structural adjustment the balance, or equilibrium, will relate to both the above aggregate balances and shifts in some sectoral balances as well. The source of disequilibrium could be either exogenous, such as an unanticipated permanent shock to an exogenous factor that affects the economy, such as the terms of trade in a small open economy. It could also be the policy stance of the government, such as an unsustainable policy induced public sector deficit." (T.N. Srinivasan 1988: 2).

The 1987-1992 adjustment program adopted by the government to obtain a three-year extended arrangement with the International Monetary Fund (IMF) is based on the Medium-Term Development Plan, 1987-1992. The program aims to achieve growth, alleviate poverty, attain price stability, and sustain external payments position.

The program has been summarized and analyzed in a number of studies (Lamberte *et al.* 1991 and Krugman *et al.* 1992). Some general comments have to be made at this point.

First, the Philippines failed to meet the major objectives of the program because of some external shocks and inappropriate government policy. The external shocks include the series of coup attempts (the most serious of which was the December 1989 incident), the drought and the consequent power outages, the July 1990 killer quake, the Gulf War, and the Mt. Pinatubo eruptions. On the other hand, there were internal policy shortcomings such as the conservative external debt strategy and myopic exchange rate management strategy. In addition, there were slippages in the fiscal and monetary areas.

Second, while there have been several structural programs in the 1980s calling for tariff reforms, rationalization of indirect taxes, restructuring of the industrial incentive system, and adjustment in energy prices, much remains to be done. Of course, there were progress in some areas such as tax reform, trade liberalization and dismantling of monopolies in the agricultural sector. But much remains to be done in the following areas: privatization, deregulation and rationalization of the energy sector, removal of the remaining quantitative restrictions in trade and their replacements with tariffs where warranted, financial sector reforms including a program to rehabilitate and restructure the Central Bank, and liberalization of the foreign exchange market.

Third, from 1990 to 1992, the Philippine government has been preoccupied with demand management policies. The decision of the government to stick to the program despite external shocks to the economy as mentioned above has been criticized in a number of studies (Diokno 1990 and 1992). Worse, cutting public spending for essential public services including physical infrastructure to match shortfalls in revenues, has contributed to the immediate slowdown of the economy; it also shifted the Philippine economy to a lower growth path in the medium term.

Fourth, both short-term stabilization programs and long-term structural adjustment programs in the 1980s have been preoccupied with their impact on macroeconomic aggregates. Of late, however, the World Bank (WB) and the United Nations Development Programme (UNDP) have shown some concern about the impact of adjustment on income distribution and poverty.

### C. *Review of Economic Performance*

After contracting by an average of 7.9 percent annually in 1984 and 1985, the economy registered an average annual growth of 4.8 percent. From a peak of 7.2 percent growth in 1988, GNP decelerated to 5.8 percent in 1989. Without a doubt, the change in political leadership and the economic reforms led to the recovery. It was also aided by an accommodative fiscal and monetary policy. During the period, significant structural reforms were undertaken to achieve greater economic efficiency and ensure the long-term sustainability of growth.

Unfortunately, because of some external shocks and delays and lapses in the implementation of structural reforms, the rapid growth rate became unsustainable. Starting with the December 1989 coup, the Aquino government had to grapple with a series of crisis: power shortage, the killer earthquake which claimed 1,500 lives and caused massive property damage,

the Gulf War and finally the Mt. Pinatubo eruptions. All these have wrought much damage to the economy, but the deceleration of the economy was as much due to the failure to institute the necessary reforms and policies. (For an excellent analysis, see P. Krugman *et al.* 1992.)

By the second half of 1990, the economy was on the verge of another foreign exchange crisis. From 1986 to 1988, current account surplus averaged about 0.3 percent of GNP. The current account balance dropped rapidly, posting a deficit equivalent to 5.6 percent of GNP of 1990. By the end of 1990, international reserves (excluding gold) were at a precariously low level of \$924 million. The threat of inflation reemerged, jumping to double-digit level in 1989, after being tamed from 1986 to 1988. Despite this surge in prices, real interest rates continued to rise steadily. As a result, the budget deficit in 1990 almost doubled compared to its previous year's level.

With these developments, the economic management strategy shifted from growth to stabilization. Thus, it is important to recognize that during the period 1990-1991, the adjustment measures, with fiscal and monetary policies playing a major role, were geared towards stabilizing the economy.

#### D. *Adjustment Policies*

##### 1. Fiscal Restraint

As in any stabilization policy which is concerned with reducing absorption, the objective of the Aquino medium-term fiscal plan was to progressively reduce the national government deficit as a percentage of GNP. But to simultaneously address the problems of reducing deficits and increasing investments, fiscal policy centered on measures aimed at raising revenues and optimizing the use of scarce budgetary resources (Diokno 1990, 1992).

Adjustments were made on the tax structure, tax administration, and the quality and distribution of government expenditures. As a result of the 1986 tax reform program and improvements in tax administration, tax effort increased to 14.4 percent in 1991. Budgetary assistance to government corporations as a share of total budget has declined dramatically. And despite the debt servicing requirements, social services expenditures have received priority attention from the Aquino government (Table 1).

Current expenditures grew rapidly from an average of 8.9 percent of GNP in 1980-1985 to 13.3 percent in 1986-1989, primarily due to the increase in interest payments and personal services. Interest payments increased as the national government assumed guaranteed liabilities of government corporations and financial institutions and mopped up liquidity for the Central Bank. The interest payments on assumed liabilities increased from ₱700 million in 1986 to ₱13.6 billion in 1991.

**Table 1**  
**SECTORAL ALLOCATION OF NATIONAL GOVERNMENT EXPENDITURES**  
**AS A PERCENTAGE OF GNP, NET OF DEBT SERVICE AND NET LENDING, 1980-1992**  
**(In Percent)**

P A R T I C U L A R S	1980	1981	1982	1983	1984	1985
Economic Services	<u>6.4</u>	<u>7.7</u>	<u>5.9</u>	<u>5.0</u>	<u>4.2</u>	<u>3.6</u>
Agriculture, Agrarian Reform and Natural Resources	1.0	1.2	1.3	1.0	0.7	0.8
Trade and Industry	0.4	0.9	0.6	0.4	0.1	0.2
Tourism	0.1	0.1	0.1	0.0	0.0	0.0
Power and Energy	1.1	1.1	0.6	0.3	0.2	0.2
Water Resource Development and Flood Control	0.6	0.6	0.6	0.3	0.1	0.3
Communications, Roads and other Transportation	2.7	2.8	2.3	2.2	1.4	1.5
Other Economic Services	0.6	1.1	0.6	0.8	1.6	0.6
Social Services	<u>3.3</u>	<u>3.6</u>	<u>3.4</u>	<u>3.1</u>	<u>2.4</u>	<u>2.7</u>
Education, Culture and Manpower Development	2.0	2.2	2.1	1.8	1.6	1.9
Health	0.6	0.7	0.7	0.7	0.5	0.6
Social Security and Labor Welfare	0.2	0.2	0.1	0.1	0.1	0.1
Land Distribution (CARP)	0.0	0.0	0.0	0.0	0.0	0.0
Housing and Community Development	0.4	0.4	0.4	0.5	0.2	0.1
Other Social Services	0.1	0.1	0.0	0.0	0.0	0.0
Defense	<u>2.4</u>	<u>2.4</u>	<u>2.3</u>	<u>2.2</u>	<u>1.5</u>	<u>1.8</u>
Domestic Security	1.7	1.7	1.7	1.5	1.1	1.3
Peace and Order	0.7	0.7	0.6	0.6	0.5	0.5
General Public Services	<u>1.9</u>	<u>2.1</u>	<u>2.4</u>	<u>2.1</u>	<u>1.6</u>	<u>1.9</u>
General Administration	1.0	1.1	1.4	1.1	0.8	1.0
Public Order and Safety	0.2	0.2	0.2	0.2	0.2	0.2
Other General Public Services	0.7	0.8	0.9	0.9	0.7	0.7
Net Lending	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Debt Service	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Interest Payments	0.0	0.0	0.0	0.0	0.0	0.0
Debt Amortization	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<u><b>13.9</b></u>	<u><b>15.8</b></u>	<u><b>14.0</b></u>	<u><b>12.4</b></u>	<u><b>9.7</b></u>	<u><b>10.1</b></u>
GNP (In P million)	243270	280543	313544	363268	508485	556074

Source: Department of Budget and Management.

Table 1 (cont'd.)

PARTICULARS	1986	1987	1988	1989	1990	1991	1992
Economic Services	<u>4.7</u>	<u>3.7</u>	<u>3.1</u>	<u>4.3</u>	<u>4.9</u>	<u>4.7</u>	<u>4.2</u>
Agriculture, Agrarian Reform and Natural Resources	0.9	1.1	1.1	1.4	1.4	1.4	1.3
Trade and Industry	0.1	0.2	0.1	0.1	0.1	0.1	0.1
Tourism	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power and Energy	0.2	0.3	0.0	0.1	0.6	0.1	0.1
Water Resource Development and Flood Control	0.3	0.2	0.2	0.2	0.4	0.3	0.3
Communications, Roads and other Transportation	1.3	1.3	1.5	1.9	1.6	1.8	1.6
Other Economic Services	1.9	0.6	0.3	0.6	0.7	0.9	0.7
Social Services	<u>3.5</u>	<u>4.1</u>	<u>3.9</u>	<u>4.2</u>	<u>4.6</u>	<u>5.1</u>	<u>4.8</u>
Education, Culture and Manpower Development	2.5	2.5	2.8	3.0	3.1	3.1	2.9
Health	0.6	0.6	0.7	0.7	0.7	0.7	0.8
Social Security and Labor Welfare	0.1	0.1	0.1	0.2	0.2	0.5	0.4
Land Distribution (CARP)	0.0	0.1	0.0	0.0	0.1	0.2	0.2
Housing and Community Development	0.3	0.1	0.1	0.1	0.1	0.1	0.1
Other Social Services	0.0	0.7	0.2	0.3	0.3	0.6	0.5
Defense	<u>1.9</u>	<u>1.9</u>	<u>2.3</u>	<u>2.2</u>	<u>2.1</u>	<u>2.0</u>	<u>1.8</u>
Domestic Security	1.3	1.3	1.6	1.4	1.4	1.3	1.2
Peace and Order	0.7	0.6	0.7	0.7	0.8	0.7	0.6
General Public Services	<u>1.8</u>	<u>1.9</u>	<u>2.1</u>	<u>1.9</u>	<u>2.2</u>	<u>2.1</u>	<u>2.6</u>
General Administration	0.9	1.0	1.0	1.1	1.2	1.1	1.2
Public Order and Safety	0.2	0.2	0.2	0.3	0.4	0.4	0.3
Other General Public Services	0.6	0.7	0.9	0.5	0.6	0.6	0.3
Net Lending	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Debt Service	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Interest Payments	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Debt Amortization	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	<u>12.0</u>	<u>11.5</u>	<u>11.5</u>	<u>12.6</u>	<u>13.8</u>	<u>13.8</u>	<u>13.5</u>
GNP (In P million)	596276	673130	755159	911251	1068486	1267600	1440600

Despite efforts to increase the level of investments, implementation delays were numerous. While public investment as a percent of GNP in 1991 was higher than the 1985 level of 3.9 percent, it was very much lower than the pre-crisis level of 9.7 percent in 1982. Furthermore, the 4.9 percent to GNP level is grossly inadequate considering the massive destruction wrought by the 1990 killer earthquake and the 1991 Mt. Pinatubo eruptions (Table 2).

The budgets in recent years were much tighter than what the nominal numbers suggest. In the first place, the relative size of the national government deficit had progressively declined from 1986 to 1989, only to increase again in 1990. But the deficit is expected to taper off again

in 1991 and 1992 (Table 3). The unanticipated rise in interest payments was the major reason for the deterioration of the fiscal position in 1990 as actual interest payments exceeded the planned level by ₱15.7 billion. Secondly, if interest payments are netted out, the primary fiscal balance exhibits surpluses from 1987 to 1991 (Table 4). This indicates how significantly the interest bill has contributed to deteriorating fiscal finances. Finally, since debt service accounts for a disproportionately large share of total budget in recent years, government spending adjusted for debt service and net lending is lower than its pre-crisis peak level (Yap 1990).

**Table 2**  
**PUBLIC INVESTMENTS, 1980-1991**  
**(In Billion Pesos)**

Year	National Government	Government Corporation <sup>1/</sup>	LGUs	Total	Percentage of GNP
1980	8.4	11.1	0.5	20.0	8.2
1981	12.7	13.9	0.6	27.2	9.7
1982	9.3	13.3	0.7	23.3	7.4
1983	10.4	18.1	0.8	29.3	8.1
1984	9.8	12.9	0.9	23.6	4.6
1985	8.8	12.3	0.8	21.9	3.9
1986	11.7	5.9	0.6	18.2	3.1
1987	12.9	7.9	1.5	22.3	3.3
1988	15.2	9.0	1.4	25.6	3.2
1989	21.6	15.0	1.8	38.4	4.2
1990	29.1	26.8	2.6	58.5	5.5
1991	37.2	21.1	3.7	62.0	4.9

<sup>1/</sup> 1990 figure based on GCMCC financial report as of 23 October 1991 and 1991 figure based on GCMCC financial report (October actual) dated 25 November 1991.

There has been an overreliance on domestic borrowing as a way of financing the budget deficit. It accounted for about 71 percent of national government deficit from 1986 to 1991, thereby putting pressure on domestic interest rates. As a result, investment and growth are dampened. Furthermore, given the huge domestic public debt, the higher rates result in widening the budget deficit.

**Table 3**  
**PUBLIC SECTOR DEFICIT, 1985-1991**

	1985	1986	1987	1988	1989	1990	1991 Estimate	1992 Forecast
National Government	11.1	31.3	16.7	23.2	19.6	37.2	26.6	3.6
Major Corporations	8.1	6.8	3.2	(2.0)	4.4	19.1	15.4	13.7
LGUs and Social Security Institute	(0.9)	(5.9)	(5.3)	(5.4)	(4.2)	(11.6)	(8.9)	(11.5)
Government Financial Institutions	18.5	12.0	(1.3)	(1.8)	(3.3)	(3.1)	(2.0)	(3.2)
Central Bank	15.5	18.2	10.9	16.9	20.8	21.9	21.5	36.1
Oil Price Stabilization Fund	0.0	0.0	0.0	0.0	7.1	7.4	(11.5)	2.5
Intersectoral Transfers	(16.1)	(32.7)	(8.7)	(1.1)	(5.3)	(13.1)	(9.6)	(4.2)
<u>Total Public Sector Deficit</u>	36.2	29.7	15.5	29.8	39.1	57.8	31.5	37.0
<u>As a percent of GNP</u>	6.1	4.8	2.2	3.6	4.1	5.4	2.5	2.6

## 2. Tight Monetary Policy

The Central Bank's obsession to control inflation has led the government to pursue a tight monetary policy. Growth in money supply was severely restricted in 1991. As a result, interest rates rose to their highest levels under the Aquino government (F. Medalla 1992). At the same time the high interest rate policy of the Central Bank is also aimed at protecting the peso by keeping speculators from converting pesos into dollars.

## 3. Exchange Rate Policy

Altering the exchange rate is an important policy tool for a country with a trade deficit. A trade deficit implies that the absorption of traded goods (exports and import-substituting goods) exceeds their production. Since by definition, the production of nontraded goods is always equal to absorption, an important implication is that to close the trade deficit permanently, it is necessary to alter the real exchange rate, specifically to increase the price of nontraded goods and lower the price of traded goods. It will restore trade balance as a result of

two effects. Producers will shift their production toward traded goods because their price relative to the price of goods produced domestically but not traded internationally has increased, in relative terms. As a result, their incomes will rise. Consumers, on the other hand, will shift to nontraded goods because, in relative terms, their prices have declined, thus reducing expenditures. As a result of the nominal devaluation, exports will increase and imports of foreign goods will fall.

**Table 4**  
**BUDGET DEFICIT AND INTEREST PAYMENTS**  
**(In Billion Pesos)**

	Traditional Budget Deficit	INTEREST PAYMENTS			Primary Budget Surplus	% OF GNP
		Regular	Assumed Liabilities	Total		
1985	(11.1)	14.6	0.0	14.6	3.5	06
1986	(131.3)	20.9	0.7	21.6	(9.7)	10
1987	(16.7)	24.7	12.2	36.9	20.2	29
1988	(23.2)	32.7	13.2	45.9	22.7	28
1989	(19.6)	41.4	13.3	54.7	35.1	37
1990	(37.2)	57.1	14.0	71.1	33.9	32
1991	(26.6)	69.8	13.6	83.4	56.8	45

Sources: Department of Budget and Management  
National Economic and Development Authority  
Bureau of the Treasury

In the area of exchange rate policy, actions do not match announced intentions. While the government has outwardly indicated its support for a flexible exchange rate, in reality the Central Bank has been managing the movements of the exchange rate. It is generally perceived by economists and financial experts that a high interest policy was pursued by the Central Bank to defend the exchange rate.

From 1986-1989, the peso depreciated by only 6.6 percent against the US dollar. The effective exchange rate depreciated by only 16.7 percent from 1986 to 1988 mainly because of the adjustments in the currencies of the country's major trading partners. It hardly moved in 1989 despite the worsening of the country's trade and current account balance in that year. And when the peso came under heavy pressure in the foreign exchange market in mid-1990, the Central Bank attempted to stabilize the peso through exchange market intervention and by introducing a number of administrative measures (Lamberte *et al.* 1991: 35-36).

The minor role played by exchange rate adjustment is said to be the weakest aspect of the stabilization program. F. Medalla (1992: 10) laments that while the current account deficit is in many ways a more serious problem than the public sector deficit, exchange rate adjustment, which affects external balance more directly than monetary or fiscal tools, was not given a major role. A counterfactual analysis may show that the stabilization program may have been less contractionary if a higher depreciation had been effective in the fourth quarter of 1990. Some argue that the depreciation of the peso to ₱28/US\$1 "came in too late and appears to be too little considering the size of the deficit and the more than 10 percent differential between the official and black market rates" (Lamberte *et al.* 1991: 36).

Because of the poor exchange rate policy, trade deficit was reduced not by exporting more or importing less but by reducing output growth. Worse, the gains from stabilization were temporary since the incentive structure remained the same. The fact remains that economic power will result in import growth that is much faster than both export growth and output growth.

### III. TRANSMISSION MECHANISM

Imbalances in the economy can be corrected through the use of macroeconomic adjustment policies, generally through fiscal, monetary and foreign exchange policies. In the Philippines, as argued by F. Medalla (1992), there has been an overreliance on fiscal and monetary tools to correct the imbalances. Exchange rate adjustment played a very minor role in the most recent stabilization program in 1990-1991. The purpose of this section is to describe the transmission mechanism with the use of fiscal and monetary policy.

#### A. *Fiscal Policy*

In the early 1980s, the government embarked on an ambitious infrastructure program to perk up an economy that was reeling under the effect of a global recession. Unfortunately, the revenue performance was faltering; as a result, huge budget deficits ensued. There are three ways of financing the deficit: (a) increased tax collection; (b) foreign or domestic borrowings; and (c) money creation. If the government borrows from the commercial banks, it uses a portion of household savings, leaving less loanable funds for private enterprises---the so-called "crowding out" effect. But "crowding out" of private investment takes place only if such

borrowing leads to an increase in real interest rate. Furthermore, when government expenditures raises income level, then there ought not to be a one-to-one decline in investment.

The Central Bank may choose to accommodate the fiscal expansion by printing and/or increasing the supply of money and through open-market purchase of bonds with which the government pays for its deficit.

In recent Philippine history, because of the huge Central Bank deficit, and the tight monetary ceiling imposed in programs agreed upon with the International Monetary Fund, financing deficit through money expansion has not been resorted to.

Fiscal deficits from 1990 to 1991 have been targeted for reduction through lower public expenditures and higher revenue; the latter through new tax measures and speedier privatization of state firms and acquired assets. This fiscal strategy was to be implemented under a program of tight money and nominal public sector deficit ceilings. Unfortunately, as shown in a recent study (Diokno 1992), shortfalls in revenues due to nonpassage of the proposed tax measures, or lower taxes due to economic slowdown, or delays in the sale of public firms and assets, were matched by reductions in public spending. Worse, public spending cuts were also resorted to whenever there was a cost overrun due to higher interest rates or greater debt service due to higher than anticipated debt payments.

Partly because of the budget squeeze in 1990 and 1991, the economy stagnated. The nine percent import levy which was imposed to make up for the nonpassage of some tax measures also contributed significantly to the economic slowdown. Thus, the adjustment measures which were designed to stabilize the economy may have dampened the inflation rate, but they also resulted in lower output and higher unemployment. Unfortunately, the budgetary cuts which hit infrastructure spending severely have shifted the economy to a lower growth path. The future flow of investments may be slower than usual in the absence of the necessary transport, energy and telecommunications facilities required by foreign and domestic investors.

## B. *Monetary Policy*

The transmission mechanism of monetary policy, i.e., the link between the financial sector and real sector of the economy can be traced through a careful analysis of the balance sheet of the Central Bank. Within a closed economy IS-LM framework, the effect on income of a change in the stock of money depends on the relative interest sensitivity of the demand for money and the demand for goods.

There are two steps in the transmission mechanism. The first is that an increase in real balances,  $(M/P)$ , creates a portfolio disequilibrium which causes portfolio holders to weigh the cost of holding zero-earning money as against interest-bearing assets, thus changing asset prices and yields. In short, the change in money supply changes interest rates. The second step of the transmission process occurs when the change in interest rates affect aggregate demand.

The Central Bank has the power to change the size of the deposit liabilities of commercial banks (KBs) and therefore the money supply, loan supply and interest rate by changing its own liabilities and using any of its policy instruments or other transactions that have direct bearing on its balance sheet.

Central Bank control of the money supply relies on a fundamental relationship between the liabilities of the Central Bank, the monetary base (H), and the liabilities of the commercial banks (KBs), referred to as private money.

The basic link between Central Bank's monopoly over the production of H and KBs' private money is established by the government through the minimum reserve requirement. The most common method of changing the size of the balance sheet is through open-market operations. If the Central Bank buys securities, the monetary base increases, and such operation is deemed expansionary; if it sells securities, the monetary base declines, and such operation is considered contractionary.

But buying securities is also considered expansionary in another sense. Since it creates excess demand in the bond markets, interest rates which move in the opposite direction to bond prices, will fall and stimulate investment (Pranchowny 1985: 162).

In the Philippines, the Central Bank has at its disposal the following monetary policy tools: (a) changes in the reserve requirement; (b) interest rate policy with respect to the maximum deposit rates and lending rates of banks; (c) supervision and directions from the Central Bank; and (d) selective credit control such as credit priorities, allocation and eligibility rules (maturities of loans and required securities against bank loans), variation of the margin requirement for opening letter of credit, maximum capital ratio and risk asset/capital ratio.

Changes in monetary policy affect real variables such as output, prices, employment and real wages. This can be illustrated by citing the recent experience of the Philippines. During the Marcos regime, loans both at market and concessional rates were geared to a favored group of people close to the regime. This process resulted in poor investment and led to the financial crisis in the 1980s. At about the same time, the second oil price shock took place further aggravating the fragile state of the Philippine economy. As a countercyclical measure, the government embarked on a massive infrastructure program. But with weakening revenue performance, the budget deficit ballooned from 2 to 5.5 percent of GNP.

The crisis was further aggravated by Central Bank's direct intervention in the financial market. It administratively fixed the interest rates way below market rate, imposed the gross receipts tax which restricted competition in the banking system. Its policy of restricted bank entry and exit has sheltered both the big and small banks from competition, allowing the former to earn abnormally high excess profits and the latter to operate at high costs (Tan 1989). The Central Bank made generous rediscounting facilities at extremely low discount rates making the commercial banks more dependent on the discount window as a regular source of loanable funds.

Government budget deficits were financed through money creation. This, together with the huge balance of payments (BOP) deficit and the assassination of former Senator Benigno Aquino, created negative expectations on the economy's immediate and medium-term recovery and growth. This prompted capital flight, increased the general price level due to panic buying and higher production costs, and slowed down investment spending due to heightened uncertainty and lower prospects for growth. From 1983 to 1985, total output contracted by 15 percent, investment declined by 50 percent, and bank supply of credit to the private sector fell by 49 percent.

The Philippine experience in the early 1980s showed how changes in monetary policy in response to fiscal and BOP imbalances affect real variables such as output, prices, employment and real wages. There are three ways by which we can show how monetary policy affects consumer spending. The first is through the stock of wealth held by the community. It may include real assets and financial assets. Capital gains arising from changes in stock and share prices affect the level of wealth and therefore, consumption. The second route is through the so-called "cost-of-credit" effect. Changes in interest rates affect consumer behavior with effects ranging from intertemporal substitution effects (between savings or consumption between period  $t$  and  $t+1$ ) and wealth effect. The cost of borrowing, interest rate, determines the financing of consumption. The third route is through credit rationing by financial institutions and a regime of controlled interest rates.

Unfortunately, the impact of the change in interest rate on savings and consumption is not clear-cut. Changes in the term structure create an ambiguous result since substitution effect and income effect imply different behaviors on savings.

On the part of the business sector, a straightforward way of showing the direction of transmission mechanism is through the effects of interest rates on credit availability and/or quantity of bank loans. As firms find more loans available in the credit market, their needed operational expansion spurs investment and the hiring of more factor inputs, more production, increased bank deposits and higher income. As economic activity expands, higher real cash balances are required to meet an increasing demand for goods and services.

The determinants of the Central Bank's policy instruments in implementing its monetary objectives depend on the following factors: (a) the state of development and structure of the financial system (i.e., whether there is a strong government securities market) and the strength and size of individual banks comprising the systems; (b) the nature and magnitude of the policy action; and (c) the promptness of the response of and degree of impact on the monetary aggregate. (San Jose 1990: 145).

The extent and degree of their effects on the real sector of the economy are not fully predictable in their timing or in the extent to which they affect demand and supply (Dornbusch and Fischer 1990). For instance, if a certain policy instrument produces fluctuation in the goods market which widens the gap between actual and expected value, a continuous accommodation

of such policy will, in the long run, get out of control and produce an environment of substantial inefficiency and uncertainty.

#### IV. SUGGESTIONS FOR FUTURE RESEARCH

##### A. *Theoretical Framework*

An ideal framework for analyzing the impact of macro adjustment policies on economic agents--whether consumers or producers--is one which allows a counterfactual analysis of a state of affairs in which the economic agent is affected by prices, incomes and levels of public services in a complicated general equilibrium framework. Such framework was suggested by Behrman and Deolalikar (1991). Yet, in evaluating the effects of adjustment on the poor and the social sector in Jamaica, Behrman and Deolalikar used time series data to analyze whether macroeconomic adjustment was associated with significant deterioration in various indicators of health, nutritional and welfare outcomes, particularly among the poor.

The effects on economic agents, such as a consumer, of macro policy in an adjustment program depends on (i) effect of macro policies on the incomes of and prices facing the consumer, and (ii) the effect of income and price changes on the behavior of the consumer.

The relationship between the incomes and prices faced by the poor and adjustment policies such as currency devaluation, contractionary monetary and fiscal policies, wage and price controls, and foreign trade liberalization has been the subject of a number of studies (Addison and Demery 1985; Behrman 1988; Scobie 1989; Glewwe and de Tray 1988). According to Behrman and Deolalikar (1991), "although economic theory provides a framework for analyzing these links, the number of such links and their complex interactions make it virtually impossible to predict *a priori* the impact of adjustment policy instruments on the resources controlled by the poor." On the second relationship, the consensus of the recent research is that "because of the possibility of the substitution of households--among diverse sources of nutrient intakes, across the food intakes and labor supplies of different household members, and among various health and schooling inputs--it is difficult to predict the magnitude (and in some cases the direction) of changing incomes and prices on household human capital outcomes without careful empirical studies."

As shown by the results of the previous studies, the theoretical linkage is not as simple as it seems. First, to be meaningful, the analysis has to be done in a general equilibrium framework for which sometimes the results are intractable. For example, in a simple two-sector economy--say agriculture (A) and manufacturing (M)--it is quite easy to show that a tax on labor income in the manufacturing sector will have an adverse impact on labor in both sectors under some assumptions, including labor mobility. The analysis becomes more complicated as the number of sectors and factors of production increases.

In any event, there are at least three strands of ideas in the economic literature from which a formal analysis on the micro effects of macro policy can be derived: (a) private-ownership economy with public goods and a government; (b) general equilibrium incidence analysis and the subsequent computable general equilibrium (CGE) models; and (c) net incidence analysis.

On the optimal study of public goods, one may consider an Arrow-Debreu private-ownership economy with public goods and a government, as postulated by Groves and Ledyard in *Optimal Allocation of Public Goods: A Solution to the 'Free Rider Problem'*, 1975. The economy has  $L$  private goods and  $K$  public goods. The model has two types of ordinary economic agents---consumers and producers---plus a special agent, the government. The model allows for  $I$  consumers and  $J$  producers. Private and public goods are differentiated by specifying that the entire net production of public goods is consumed by each consumer while the net production of private goods must be divided among consumers. A government,  $G$ , is completely specified by a language  $M$ , an allocation rule  $y(\cdot)$  and consumer tax rules,  $\langle CI(\cdot) \rangle$ . This highly theoretical construct may allow the determination of the appropriate level and allocation of public spending consistent with taxpayer's willingness to pay but is unable to handle other macro policies as, for example, trade liberalization or relaxation of banking rules.

The second strand of literature, also theoretical but subject to computational verification using existing CGE models, appropriately specified, is the Harberger-McClure-Mieszkowski (HMM) model for evaluating tax incidence using a general equilibrium framework. For example, the impact of a mandated general wage increase in the organized sector can be analyzed using the HMM model. In a specific Philippine case, Clarete and Whalley (1991), using an applied static general equilibrium model of the Philippine economy, evaluated the welfare cost and burden of various taxes, namely: excises, tariffs, VAT, corporate and personal income taxes.

The third strand of economic literature is the net incidence analysis as popularized by Gillespie, "Effect of Public Expenditure on the Distribution of Income" in *Essays in Fiscal Federalism* edited by R.A. Musgrave, 1985. The methodology involves looking into the individual's income position after adjusting for the benefits received from government spending and benefits or costs resulting from certain tax impositions versus his income position without the spending and tax measures. It has two major drawbacks. First, the data requirements for such an analysis are unavailable, although proxy data can be gathered given sufficient time and resources. Second, its application will be restricted to direct incidence through government spending and taxes. For example, it is not designed to handle the impact of trade liberalization or dismantling of monopolies in the coconut, sugar, or fertilizer industries.

All things considered, the use of a general equilibrium framework appears to be the most promising. At the next phase of the study, it would be useful to analyze the impact of macro adjustment on factor owners. Specifically, it should be able to answer the question: who bears the burden of adjustment?

Some possible applications of the proposed CGE modelling on the sectoral concerns could be cited here. First, consider the impact of government regulations on the power generation and distribution sector. One may look at a baseline where the National Power Corporation (NAPOCOR) assumes a major role in the regulation of power supply and setting of power and tariff rates. NAPOCOR affects households indirectly through MERALCO or other electric firms, with the tariff affecting the behavior of households. It also affects the goods market through the tariff and power supply reliability. A counterfactual case can be modelled with a deregulated power sector. Comparing the two cases, one can then discuss the impact of deregulation on income and relative prices, and which sectors or factor owners will be favored or penalized.

Second, the impact of macro adjustment policies on the informal sector. One can construct a model of an economy where the manufacturing sector is disaggregated into small, medium and large. The impact of *Kalakalan 20* (which exempts small firms from taxation) on factor owners can then be shown by assuming a tax on income of medium and large firms only. This can be evaluated based on certain assumptions on labor and capital mobility.

Third, consider the possible application of the proposed CGE model on gender issues. The modeler may look at the impact of macro adjustment policies on female-intensive industries (e.g., garments and electronics) *vis-à-vis* male-intensive industries (e.g., construction and mining). Appropriately specified, the model, for example, can look into the effect of the imposition of the 9-percent import levy import on employment and output; it can also look into its impact on female and male workers.

#### B. *The Political Economy of Reforms*

The process of formulating and implementing economic reforms should be a worthwhile subject of formal inquiry. According to Behrman and Deolalikar, "at a certain level, the question of how macroeconomic adjustment affects the poor is the wrong question to ask, because adjustment policies are not homogeneous, and it is possible, within limits, for a government to choose policies which differ in their adverse effects on the poor." The same thing can be said of households and firms.

Within the Philippine context, it is probably incorrect to assume that in designing the Memorandum of Economic Policy (MEP), the country's negotiators have always been guided by the desire to improve the welfare of specific households or income classes. In the first place, the information necessary for such an approach is difficult, if not extremely expensive, to generate. For example, on the expenditure side, the focus of discussion has always been on the size of the deficit rather than the specific allocation of government expenditures, say for education or health; of course, the World Bank will call the attention of the government negotiators on its inability to meet its infrastructure spending targets. On the tax side, the Department of Finance (DOF) has been more concerned with meeting its revenue target than with the redistributive impact of taxes.

One of the questions that the MIMAP project would like to ask is: What outcomes at the micro level would have to occur if the existing macro adjustment policies are to succeed in easing rather than worsening the initial imbalances? Looking at the government as a special economic agent, the answer could be: improved policy formulation and strengthening of the tax machinery and economic research institutions.

It could be argued that the imposition of an additional 9-percent import levy could have been avoided if there were closer coordination between the Executive Department and Congress. Presumably, had such a close link existed, alternative revenue measures could have been approved. On the other hand, if the Department of Finance had known of the general equilibrium effects of the measure, it would not have imposed the levy in the first place.

In reality, the choice of adjustment measures is dictated by what is politically and administratively feasible. Hence, the restructuring of the Central Bank has not been pushed by the Executive Department presumably because it is not politically feasible. But those responsible for approving such a proposal must be convinced on the basis of its merit. Congress has to be convinced not only that the objective is desirable but that the measure proposed is the best way to achieve the objective. This requires good working relationships between the Executive Department and Congress. At the same time, it requires good technical advice. Thus, by way of improving economic policy formulation, the link between the two branches of government has to be strengthened. The technical expertise of the standing committees of Congress should also be upgraded. Given the frequency of elections, and the change of leadership in Congress, a permanent staff of technical people should be institutionalized in both houses of Congress.

The administrative machinery has to be improved too. The nature and speed of reforms are oftentimes dictated by the quality and commitment of people in the bureaucracy. For example, in most developing countries, tax reformers have put emphasis on simplification (an extreme case is the flat income tax) rather than equity because the tax machinery is perceived to be weak or unable to handle more equitable but administratively complex tax structures.

Research institutions should link with interest groups so that they may jointly influence the adoption of meaningful reforms in the economy. Without a doubt, the close link between the Philippine Institute for Development Studies (PIDS) and the Philippine Chamber of Commerce and Industry (PCCI) has improved dramatically the quality of discussion on important economic issues, which in turn has brought about meaningful economic reforms during the last few months.

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