

DOCUMENT OF INTERNATIONAL MONETARY FUND AND NOT FOR PUBLIC USE

MASTER FILES

ROOM C-130

01

EBD/87/39

February 11, 1987

To: Members of the Executive Board

From: The Secretary

Subject: Summaries of Working Papers (WPs) - 1986

Attached for the convenience of Executive Directors is a collection of summaries of all Working Papers issued during 1986. The collection has been assembled by the Editorial Division of the External Relations Department. It is hoped that it will provide easy access to the research work done by the staff and will serve as a record of such work.

This compilation covers summaries of Working Papers for the new series that began in September 1986. In future, summaries of Working Papers will be issued on a six-monthly basis.

Additional copies of this paper may be obtained from Documents Distribution in Room C-120.

Att: (1)

Other Distribution:  
Department Heads  
Division Chiefs



INTERNATIONAL MONETARY FUND  
External Relations Department  
Summaries of Working Papers  
Prepared by Editorial Division  
Approved by Azizali F. Mohammed  
February 10, 1987

<u>Contents</u>	<u>Page</u>
WP/86/1 by A. Lans Bovenberg "Indirect Taxation in Developing Countries: A General Equilibrium Approach"	1
WP/86/2 by Paul R. Masson "The Dynamics of a Two-Country Minimodel Under Rational Expectations"	2
WP/86/3 by Jeroen J.M. Kremers "Budgetary Disequilibrium and the Monetary Role of Government Budget: Deficit Financing in the Netherlands"	3
WP/86/4 by J.M. Boughton, R.D. Haas, and P.R. Masson "The Role of Exchange Rate Movements in Transmitting International Disturbances"	4
WP/86/5 by Vito Tanzi and Mario I. Blejer "Public Debt and Fiscal Policy in Developing Countries"	5
WP/86/6 by Daniel Gros "On the Volatility of Exchange Rates: A Test of Monetary and Portfolio Balance Models of Exchange Rate Determination"	6

<u>Contents</u>	<u>Page</u>
WP/86/7 by Luis A. Manas-Anton "Relationship Between Income Tax Ratios and Growth Rates in Developing Countries: A Cross-Country Analysis"	7
WP/86/8 by Luigi Spaventa "The Growth of Public Debt: Sustainability, Fiscal Rules, and Monetary Rules"	8
WP/86/9 by Mohsin S. Khan and Malcolm D. Knight "Import Compression and Export Performance in Developing Countries"	9
WP/86/10 by Nissan Liviatan "Inflation and Stabilization in Israel: Conceptual Issues and Interpretations of Developments"	10
WP/86/11 by Rusdu Saracoglu and Iqbal Zaidi "Foreign Exchange Constraints and Imports in Developing Countries"	11
WP/86/12 by Nadeem Ul Haque and Abbas Mirakhor "Optimal Profit-Sharing Contracts and Investment in an Interest-Free Islamic Economy"	12
WP/86/13 by Peter Wickham "The Role of Exchange Rate and Other Pricing Policies in the Adjustment Process"	13
WP/86/14 by Michael P. Dooley "An Analysis of the Debt Crisis"	14
WP/86/15 by M. Casanegra de Jantscher "Problems of Administering a Value-Added Tax in Developing Countries"	15
WP/86/16 by Omotunde E.G. Johnson "Trade, Exchange Rate and Financial Policy Coordination in the Context of Border Trading: A Theoretical Analysis"	16
WP/86/17 by Shinji Takagi "Real and Monetary Factors in the Joint Determination of the Exchange Rate and the Interest Rate"	17

"Indirect Taxation in Developing Countries:  
A General Equilibrium Approach" by A. Lans Bovenberg

Indirect taxes are an important element in stabilization tax packages that aim at raising revenue in the short run. This paper evaluates, with the help of a general equilibrium approach, alternative instruments of indirect taxation in middle-income developing countries. It uses data for Thailand as an illustration because many of the characteristics of its indirect tax structure--such as cascading (under which taxes apply both to intermediate and to final demand), rate differentiation, and the importance of trade taxes--apply to other middle-income developing countries as well.

In evaluating indirect taxes the paper examines not only their revenue effects but also their structural effects in terms of the degree to which they achieve the objectives of efficiency, equity, and international competitiveness.

Regarding the revenue effects, the paper shows that the interaction between taxes and distortions created by various other economic policies can be important. Each instrument of economic policy affects the bases of all tax instruments.

Regarding the efficiency objective, it demonstrates that tax instruments interact significantly with other distortions. Therefore, "efficient" tax packages should take these distortions into account. In the presence of trade distortions, for example, efficient tax packages should avoid implicitly taxing exports.

Regarding the equity objective, the study finds that the backward shifting of indirect taxes may be extremely important. Therefore, depending on the elasticity estimates, rate differentiation can be relatively ineffective in redistributing income from the demand side.

For developing countries that want to improve the international competitiveness of their export sectors, the study reveals an important link between outward-looking supply-side tax policies in these countries and trade policies in industrial countries. If industrial countries pursue protectionist policies, developing countries may suffer short-run welfare losses from domestic outward-looking tax policies that improve their competitiveness as well as world welfare. Thus, protectionist policies in the industrial countries can provide significant disincentives for developing countries to formulate outward-looking tax policies that might benefit themselves as well as the world as a whole.

"The Dynamics of a Two-Country Minimodel Under Rational Expectations"  
by Paul R. Masson

This paper analyzes the properties of MINIMOD: a small, two-economy global model (covering the United States, and the rest of the world as a unit) whose parameters were obtained by simulation of a larger model and from other estimation results. In contrast to short-run forecasting models that incorporate adaptive expectations, the version of MINIMOD discussed here uses rational (i.e., model-consistent) expectations, which make it possible for the longer-run effects of policy actions to be brought forward in time. With this type of model, steady-state effects and dynamic stability are especially important, and the paper analyzes these properties in detail.

MINIMOD is shown to require particular attention to two parameters in order for it to have satisfactory properties. The first relates to the responsiveness of consumption to the stock of wealth, which must be high enough to prevent net foreign claims of one economy on the other from accumulating without bound. The second feature relates to the financing of government deficits: for a given level of expenditure, there must be some feedback from the stock of debt onto tax rates, as it is unrealistic to suppose that debt as a ratio to other forms of wealth would be allowed to rise without limit. These two features are incorporated into the model, which is then subjected to monetary and fiscal policy shocks. These simulation results demonstrate the sensitivity of the effects of these shocks to changes in structural features of the economy--the form of the J-curve relating to the adjustment of trade flows to exchange rate changes, the length of the lags in the adjustment of money demand, and the degree of price flexibility.

"Budgetary Disequilibrium and the Monetary Role of the Government Budget:  
Deficit Financing in the Netherlands" by Jeroen J.M. Kremers

This paper presents an empirical study of the choice to finance government deficits by the creation of either long-term public debt or short-term public debt and money. Using quarterly data on the public finances of the Netherlands, the paper characterizes regularities in the pattern of deficit financing empirically and assesses their ramifications in the wider context of budgetary management. Specifically, it addresses the question of whether the flexibility of the financing choice as a short-run policy instrument can be affected by budgetary disequilibrium.

The conclusions are as follows. First, in the Netherlands during the 1960s a deficit financing strategy evolved according to a stable pattern with a countercyclical orientation. This conclusion is supported by an estimated equation for long-term public debt creation. Long-term debt followed the total deficit in a smooth fashion, and--since the deficit fluctuated countercyclically--this entailed a countercyclical deficit financing pattern as well.

Second, this equation for long-term public debt, which satisfies rigorous econometric diagnostic criteria, broke down in the early 1970s. During the 1970s and 1980s, the deficit financing policy was less homogeneous than before. Initially, this was attributable to a turbulent international monetary environment: for a time overfunding was used to absorb speculative capital inflows from abroad. Rising disequilibrium in public deficits and taxation, however, combined with a virtually autonomous growth of public expenditure, led to a temptation to monetize the deficit. Although the temptation to monetize on a large scale was resisted, the econometric and heuristic evidence of this paper suggests that excessive disequilibria in Dutch public finances after the 1960s made it difficult to use the deficit financing choice as a flexible short-term policy instrument. This difficulty stands in contrast to the countercyclical policy of the 1960s, when the budgetary disequilibrium was limited and controlled.

Finally, as a more general contribution, the paper illustrates a potentially useful approach to analyzing budgetary policies. This approach distinguishes both theoretically and empirically two components in the budgetary pattern: short-term fluctuations of the budget and the medium-term feedback from budgetary disequilibria that serves to keep the budget under control in the long term. The paper studies the impact of long-term components (budgetary disequilibria) on a short-term component (the flexibility of the deficit financing choice). Their respective consequences for the economy remain a subject for further research.

"The Role of Exchange Rate Movements in Transmitting International Disturbances" by J.M. Boughton, R.D. Haas, and P.R. Masson

This paper examines the role of exchange rate movements in transmitting disturbances among industrial countries. Noting that changes in exchange rates do not in general cause but rather reflect changes in policies or private market preferences, the authors raise three specific issues. First, in a world in which exchange rates float freely without provoking policy reactions from national authorities, will monetary expansion in a large country generally increase or decrease output in other countries? The paper argues that, although conventional theory suggests the latter, a number of theoretical arguments imply that a monetary shock could increase output elsewhere, so the direction of the effect is ambiguous a priori. After reviewing evidence from large econometric models as well as from a small model (MINIMOD) developed earlier by two of the authors, it is concluded that monetary expansion in the large country will normally cause output abroad to decline, but by only a small amount.

Second, is it true--as conventional theory suggests--that the domestic and foreign effects of monetary policy are more (and those of fiscal policy less) powerful under freely floating exchange rates than when exchange rate changes are offset by unsterilized intervention? The available evidence from econometric models indicates that the effects of monetary policy on output are generally more powerful under floating rates, but those of fiscal policy are about the same whether the authorities intervene or not. However, this result may occur because available models do not adequately capture the effects of fiscal policy on exchange rates or because exchange rate movements alter the channels by which fiscal policy is transmitted but do not affect the magnitude of the aggregate effect.

Third, the paper asks whether the way expectations are formed has an important influence on policy effects. By simulating two versions of MINIMOD, the consequences of assuming backward- versus forward-looking expectations are examined. The paper concludes that with forward-looking expectations, expansionary fiscal policy still increases foreign output. In the case where a fiscal contraction is announced today but not implemented until a future date, the announcement itself--if it is believed--may lead to a depreciation of the country's currency and to a decline in long-term interest rates, thereby raising output both at home and abroad.



"Public Debt and Fiscal Policy in Developing Countries"  
by Vito Tanzi and Mario I. Blejer

This paper discusses the relationship between public debt and fiscal policy in developing countries. It starts by isolating the main reasons that may explain or justify the growth of public debt and speculates on the reasons why public debt is mostly domestic in industrial countries and mostly external in developing countries. It is shown that this has much to do with the relative availability and cost of domestic and external sources of finance.

The existence of a large public debt imposes various constraints on fiscal policy that may differ according to whether the debt is owed to foreign or domestic sources. In general, the increase in spending for interest payments leads to an increase in the fiscal deficit. This, in turn, forces the country to raise tax revenue or to reduce other types of public spending. Some countries have tended to increase growth-retarding taxes or to reduce productive expenditures without strong political appeal. The existence of a large public debt may bring about changes in expectations and raise the cost of rolling over the existing debt. Real interest rates are thus likely to rise, forcing additional adjustments.

A large foreign debt will at some point require trade surpluses to generate the foreign exchange necessary to service the debt. The paper shows that, for the 15 highly indebted countries identified in Secretary Baker's initiative, the very large swing in the trade balance in recent years was mainly the result of a contraction in imports. As these imports are often inputs for production, the effect of this reduction on growth is inevitable.

When the debt is domestic, its financing will have serious implications for the conduct of monetary policy. To service the debt may require very high interest rates. As this increase will come at a time when real wages are being reduced, the social consequences of this action may be serious.

An econometric analysis examines trends and developments in external indebtedness in the 15 Baker countries between 1972 and 1984, as well as the factors that contributed to the growth of public debt and those determining the effective cost of foreign borrowing. The results clearly confirm the importance of fiscal deficits in the determination of foreign debt while changes in terms of trade do not seem to have affected the level of debt. Interest rates on new commitments turn out to be highly significant. In addition, the interest rates on commercial credit are shown to be strongly affected by the size of commercial debt and the terms of trade, while the cost of official credit is particularly affected by fiscal imbalances.

"On the Volatility of Exchange Rates: A Test of Monetary and Portfolio  
Balance Models of Exchange Rate Determination" by Daniel Gros

The highly erratic behavior of floating exchange rates since the breakdown of the system of fixed exchange rates was largely unanticipated. Some claim that this variability of exchange rates is "excessive" and that their movements should somehow be limited. Others contend that since exchange rates are driven by fundamentals, such as monetary and fiscal policies, the volatility of exchange rates only reflects the volatility of the underlying policies.

This paper contributes to the discussion by testing whether the volatility in the fundamentals identified by the most popular monetary and portfolio balance models is large enough to produce the observed volatility in exchange rates over the past ten years. Exchange rates could be said to be "excessively" volatile if the volatility predicted by the fundamentals of all these models is smaller than actual exchange rate volatility.

The major floating exchange rates are tested, including the deutsche mark, the Japanese yen, the British pound, the U.S. dollar, and the intra-European Monetary System (EMS) exchange rates. The results show that monetary and portfolio balance considerations cannot explain the observed variability in the exchange rate of the deutsche mark vis-a-vis the U.S. dollar, the Japanese yen, and the Swiss franc, but can explain the observed variability of the mark vis-a-vis the other EMS currencies (the French franc, the Italian lira, the Belgian franc, and the Netherlands guilder). This suggests that the remaining variability in the intra-EMS exchange rates is determined by fundamentals. The much higher variance of the other, more freely floating, exchange rates cannot be explained by the models of exchange rate determination that are available today.

"Relationship Between Income Tax Ratios and Growth Rates in  
Developing Countries: A Cross-Country Analysis" by Luis A. Manas-Anton

The proposition that income taxes have a negative effect on output growth is one of the central arguments in the old controversy in the theory of public finance about the choice between a tax system based on consumption or on income. In recent years, this controversy has been rekindled by the emergence of the "supply-side" approach, which emphasizes the negative effects of high income taxes on savings, productive investment, labor supply, and, consequently, on growth. The paper presents some empirical evidence on the interrelationship in selected developing countries between output growth and the reliance on income taxes. It uses readily available cross-country and pooled cross-country time-series data and estimates of multiple regression equations with a variety of specifications, all containing important determinants of growth derived from the Dennison growth accounting tradition.

The regressions show that the ratio of income taxes to total tax revenue (as well as to gross domestic product) and the growth rate of output are negatively related and that the regression coefficients are significant, but this result does not hold in all specifications. When the ratios of individual and corporate income taxes to total tax revenue are related to growth rates, the regression coefficients are still negative but statistically insignificant in both cases.

The paper therefore concludes that while there is some evidence supporting a negative relationship between growth rates and the reliance of a country on income taxes, this relationship cannot be asserted with much confidence. Even this conclusion, however, is extremely tentative and subject to limitations.

"The Growth of Public Debt: Sustainability, Fiscal Rules,  
and Monetary Rules" by Luigi Spaventa

This paper addresses the question of the sustainability of debt accumulation in the context of the historical experience of fast growth of public debt. It considers the effects of fiscal rules on the growth of debt and of the growth of debt on the dynamics of taxation; it then examines the effects of monetary financing of the deficit on the dynamics of debt and taxation, as well as on the interest rate and capital intensity.

In its widest notion, sustainability requires that, when the interest rate exceeds the growth rate of the economy, the government's fiscal policy should observe an intertemporal budget constraint (IBC) to the degree that the debt growth rate is less than the interest rate. This requirement is compatible with a rise to very high levels of the debt to gross domestic product (GDP) ratio. Observation of the IBC when public expenditure is inflexible, however, has drastic implications for the dynamics of the tax burden: taxes must rise together with the debt stock. There is, indeed, no limit to this rise if debt growth is unchecked.

Sustainability of debt growth is then synonymous with sustainability in the rise of the tax burden required by any fiscal rule to achieve the IBC. Society is not indifferent to the level and dynamics of taxation necessary to match the level and dynamics of interest payments. Keynes, referring to the experiences of the 1920s, considers situations in which "the claims of the bondholders are more than the taxpayer can support." His two remedies to obtain a once-and-for-all reduction of the real value of the debt were either a capital levy or a currency depreciation. Neither of these two remedies, it is argued, would be effective under present conditions; indeed they may be counterproductive.

The paper draws a sharp distinction between monetization of the debt by a sudden jump in the price level and a simultaneous fall in the real value of outstanding debt, and its monetary financing of the deficit through different steady inflation rates. The effects on taxation of different degrees of monetary financing are examined.

Some tentative policy conclusions are drawn from the preceding analysis. First, even if there are no limits to the tax burden, or if such limits are neglected, the IBC is insufficient to establish a condition of sustainable debt accumulation when the size of the debt affects the real interest rate in the medium run. Second, observing the IBC determines the behavior of taxation, but limits on the burden that taxpayers are willing to bear may make fiscal policy unsustainable.

"Import Compression and Export Performance in Developing Countries"  
by Mohsin S. Khan and Malcolm D. Knight

The debt crisis that began in 1982 forced a number of developing countries that had relied on external financing into rapid adjustment of their current account positions. In many of these countries external adjustment mainly took the form of import reduction, or what has been termed "import compression," to generate the trade balance surpluses necessary to service the existing stock of foreign debt. It was recognized at the outset, and borne out in retrospect, that adjustment of this magnitude could be achieved only at significant cost in terms of reduced absorption and growth unless exports expanded sufficiently to allow import levels to be maintained, or at least reduced less drastically.

While the effects of import compression on consumption and growth have been discussed in the literature, there has been little concern expressed with regard to the direct effects such a policy can have on export performance. In most developing countries imports of intermediate and capital goods are themselves a critical input in the production of exports, so that import compression can have an adverse impact on exports. Furthermore, the slower growth of exports will, other things being equal, reduce foreign exchange availability and lead to a greater need for import compression to achieve the desired trade balance surpluses.

This paper develops a model that takes explicit account of the feedbacks between imports and exports that arise through the effects of imported inputs on exports and the availability of foreign exchange on imports. Empirical tests of this model for 34 developing countries tend to confirm both these hypotheses. These results point clearly to the need for additional foreign financing to reduce the necessity of import compression and its attendant negative effects on the supply of exports.

"Inflation and Stabilization in Israel: Conceptual Issues and  
Interpretations of Developments" by Nissan Liviatan

The July 1985 stabilization program in Israel succeeded in reducing inflation dramatically over the first year, at the cost of relatively little additional unemployment. The policies adopted in the stabilization program consisted not only of the traditional restrictive fiscal and monetary measures but also included a sophisticated system of incomes policies and price freezes, combined with a fixed exchange rate policy referred to as the "transition strategy." (The need for a special transition strategy, it should be noted, is controversial, both in Israel and abroad.) This paper analyzes the stabilization program against the background of past inflation.

In analyzing the structure of the program the paper draws a distinction between the roles of the temporary elements, such as wage-price freezes, and those that have to do with longer-term fundamental determinants of stability as reflected in the Government's budget and in the external position of the economy. The motivation for supplementing the adjustment of the "fundamentals" is explained by the need to design a transitional strategy to break the inflationary inertia through direct price and incomes policies. The paper analyzes the actual developments in the fundamentals before and after the launching of the program and evaluates the performance of the transition strategy during the first year.

This evaluation is supplemented by an analysis of the effects of the stabilization program on the internal and external financial position of the Israeli economy. The improvement associated with the program was in fact reflected in the (broadly defined) financial area, while the improvement in the trade balance and in relative prices took place prior to the implementation of the program. The most important question is whether the achievement of the stabilization program can be extended to the future. In the longer run, the transition strategy has to be replaced by more conventional policies, but it is yet too early to state whether the Government is ready for these policies.

The concluding section lists some of the principles and difficulties of consolidating longer-term stability.

"Foreign Exchange Constraints and Imports in Developing Countries"  
by Rusdu Saracoglu and Iqbal Zaidi

The role of import restrictions in developing countries has been noted and discussed in a number of articles, but there is as yet little formal modeling work capable of explaining rigorously the observed levels of imports and their interactions with such variables as exports, output, and international reserves. This paper attempts to fill some of the gaps by estimating a disequilibrium model of developing country imports that incorporates determinants of private sector import demand as well as foreign exchange rationing by the authorities.

The disequilibrium model operates in two distinct modes, a rationing mode with import supply less than import demand, and a nonrationing mode with import supply greater than import demand. In the rationing mode, there are quantitative restrictions on imports, and the desired imports of the private sector are greater than actual imports permitted by the authorities. Conversely, in the nonrationing mode, there are few or no quantitative restrictions, and the private sector is able to import the desired volume of goods and services. The parameters of the model are estimated using a full information maximum likelihood estimator.

Statistical evidence in support of the model was obtained from time series data for five developing countries, and the results point to the necessity of taking government import restrictions into explicit account when estimating import flows of developing countries. In all cases, estimation results conform with the notion that there was regime switching; that is, periods of both import rationing and nonrationing were observed for the developing countries included in the study. The periods of rationing tended to be more prevalent in the early years of the sample, and the authorities varied import restrictions inversely with the country's capacity to import, where this capacity was measured by real export earnings. The estimated price elasticities of import demand were negative and most were statistically significant.

"Optimal Profit-Sharing Contracts and Investment in an  
Interest-Free Islamic Economy" by Nadeem Ul Haque and Abbas Mirakhor

In a financial system conforming to the Islamic injunctions against interest rates, business credit is based principally, although not exclusively, on profit-sharing contracts in which the risks are shared between the lenders (savers-investors) and the borrowers (entrepreneurs). Concerns have been expressed that eliminating an ex ante fixed rate of return would lead to a decline in investment. These concerns can be explained theoretically by suggesting that a major reason for the fixed interest rate is that it allows lenders to avoid the costs of monitoring the behavior of the borrowers. Removal of the fixed interest rate from the financial system creates a type of moral hazard problem because monitoring costs may serve as a deterrent to lenders, thus leading to a reduction in investment.

Although much has been written on Islamic banking, no serious attempt has been made to analyze rigorously the implications for economic behavior of adopting Islamic profit-sharing contracts. This paper attempts such an analysis by presenting a model of profit-sharing arrangements between individual investors and firms. Cases of both certainty and uncertainty are considered. An important issue is the observability of profits by the investor when uncertainty is present and there are costs to obtaining information. This paper shows that individual contracts can be designed to take into account the moral hazard problem that arises from asymmetric information on profits. Such contracts may turn out to be optimal. Indeed, in a conventional system, such optimal contracts are being written where some form of moral hazard is present (e.g., wage contracts).

The analysis shows that there is no strong theoretical reason to support the often-made a priori assertion that investment levels would decline if an Islamic profit-sharing system were adopted. To avoid an adverse effect on investment, however, the adoption of an economy-wide profit-sharing system requires the implementation of a legal and institutional framework that facilitates contracting. The Islamic law of contracts provides for such a framework, which has not yet been fully adopted in countries where an Islamic banking system is being established. In the absence of such a framework, monitoring costs could be prohibitive, and investment could consequently be discouraged. On the other hand, the analysis shows that if legal measures are present to safeguard the terms of contracts, investment levels may increase following the adoption of an economy-wide profit-sharing system.



"The Role of Exchange Rate and Other Pricing Policies in the  
Adjustment Process" by Peter Wickham

This paper, an earlier version of which was presented at the seminar Economic Adjustment: Policies and Problems held in Wellington, New Zealand, in February 1986, focuses on the role of exchange rate and other pricing policies in the adjustment process.

The paper discusses the types of shocks (real and monetary) that impinge upon an economy, and whether such shocks are to be considered as transitory, cyclical, or of a more permanent nature. In doing so, it acknowledges the practical difficulties that policymakers may face in determining the nature of shocks.

The paper reviews the role of exchange rate policies in the adjustment process. A needed point of reference is some notion of what constitutes an appropriate alignment of the exchange rate. In this context it uses what Williamson (1983) refers to as the "fundamental equilibrium exchange rate" or FEER, that level of the real effective exchange rate consistent with both internal balance and medium-term or cyclically adjusted external balance. The paper examines the influence of "shocks" in changing the FEER or in causing the real effective rate to depart from the FEER. It also examines the trade and production structure of an economy and argues that even in countries where factor mobility may be limited in the short run, the role of exchange rate policy in inducing allocative and structural changes over the medium term must not be underestimated. It emphasizes the high costs of delaying exchange rate adjustments, as well as the links between such a policy stance and excessive regulation of domestic financial intermediaries.

The use of exchange rate policy is then considered. First as a response to extant disequilibria, and second in its role in ensuring smoother adjustment in the future to changing economic circumstances. With regard to the first, particular attention is paid to the coordination of exchange rate and other policies in countries attempting to disinflate. The final section of the paper considers the merits of removing other policy-induced distortions, such as tariffs, quotas, and interest rate ceilings, with illustrations provided by recent experience in New Zealand.

"An Analysis of the Debt Crisis"  
by Michael P. Dooley

In this paper it is argued that if the contractual value of a country's external debt remains above the market's valuation of that debt, gross domestic capital formation will be constrained. Moreover, the persistence of such a divergence between market and contractual values represents a failure of the institutional framework, not a failure of policies pursued by debtor or creditor countries. In fact, even policies that might reduce external debt over time may do little to establish a climate in which residents and nonresidents will undertake productive investment in the debtor country.

For 15 heavily indebted countries real gross investment relative to GNP has fallen by about one third in recent years compared with its level before 1982. While many factors have contributed to this decline, it is argued in this paper that the failure to allocate expected losses on existing debt may have been an important independent factor in discouraging investment. The argument presented is based on the idea that in evaluating new physical investment opportunities in an indebted country, a resident or nonresident investor must consider his standing relative to existing creditors. If the "property rights" of existing claimants are poorly defined, the rights that a new credit would bestow on its owner are also unclear. Since new credit cannot be clearly separated from existing credits, potential investors must assume that the market value of their claims will immediately become identical to the value of all existing claims. This is summarized by the market discount on existing debt. If this discount exceeds the expected return on all new investment opportunities, the immediate capital loss will ensure that no new gross physical investment will occur in the debtor country.

"Problems of Administering a Value-Added Tax in Developing Countries"  
by M. Casanegra de Jantscher

During the last two decades the major innovation in the tax systems of developing countries has been the introduction of value-added taxes (VAT) extending through the retail level. Such comprehensive VATs are now employed in 22 developing countries. Rates of VAT differ considerably the standard rate ranges from 5 percent to 25 percent. In some countries the VAT is levied at a single rate, while others apply multiple rates. Although the tax was originally applied to the sale of goods, practically all countries now tax some services. All countries exempt exports, and most also exempt some goods and services intended for domestic consumption. The yield of value-added taxes varies widely, from 0.5 percent of gross domestic product to more than 8 percent. Differences in yield are explained partly by the level of rates, coverage of the tax, and differences in economic structure. The effectiveness of tax administration also helps explain why the tax yields more in some countries than others.

An important requirement for successful VAT administration is to structure the tax to minimize problems of implementation. From the administrative point of view a single rate is highly desirable; if necessary, the VAT can be supplemented with selective consumption taxes to reduce regressivity. Despite initial skepticism about high VAT rates, experience (e.g., in Brazil and Chile) has shown that rates in the neighborhood of 18-20 percent can be enforced. Exemptions complicate VAT administration because the distinction between what is exempt and what is taxed is often tenuous or arbitrary. Nevertheless, distributional objectives have led many countries to exempt basic and nonbasic commodities. Zero-rating, a more complex form of exemption that requires the granting of refunds and therefore burdens the administration, has wisely been limited to exports by most countries. The need to provide special treatment for small businesses under VAT is much more pressing in developing than in industrial countries. Various methods for dealing with small taxpayers are in use, but all methods present technical and practical problems.

Successful introduction of a VAT depends in large measure on whether the country has had previous experience with general sales taxes, the nature of the taxes that the VAT will replace, the lead-in time, and how the VAT is structured in terms of rates, exemptions, and treatment of small taxpayers. The main issues of VAT administration concern identifying taxpayers, processing returns, controlling collections, making refunds, auditing taxpayers, and levying penalties. Once a VAT is in place, administrative constraints tend to distort some of its features. Administration with insufficient resources frequently overemphasize enforcement efforts among large taxpayers, and restrictive refund practices tend to distort the character of consumption-type VATs. Thus the broad-based and neutral tax discussed in public finance treatises is very different from the VAT prevailing in most developing countries. Administrative constraints are responsible for the difference.

"Trade, Exchange Rate and Financial Policy Coordination in the Context  
of Border Trading: A Theoretical Analysis" by Omotunde E.G. Johnson

Macroeconomic policy coordination among industrial countries is seen to be of great importance, particularly for exchange rate stability, because the international trade and financial flows involved are substantial. Among developing countries, the question of policy coordination has not surfaced so prominently as in the case of industrial countries, primarily because financial flows among developing countries have not been of great magnitude. Among African countries, however, especially those in West Africa, the potential for active trade across countries (border trading) has meant that, as a minimum in defining their economic policies, countries cannot ignore what their neighbors are doing. Exporters and importers direct their activities according to export taxes, import taxes, relative prices set by marketing boards, and the convertibility of currencies of different countries. This paper focuses on the constraints imposed on economic policy by border (or cross-border) trade and on some of the gains from economic policy coordination in an environment where the potential for such trade is sizable.

Border trade takes place in reaction to differential effective export and import taxes and marketing costs, as well as to divergencies between official exchange rates and parallel market rates. The paper argues that, in the absence of macroeconomic policy coordination among countries that border each other and that tend to have similar exports and imports, economic agents may be able to reduce their real effective trade taxes net of transactions costs by engaging in border trade. The attempt to do so has adverse economic effects on each country. In particular, the levels of government revenue in relation to gross domestic product may be lower than optimal, from the viewpoint of economic growth, and productive resources are diverted to pay the transactions costs of border trading. In addition, since border traders can reduce their own tax burden, additional taxation may have to be borne by other activities; a welfare loss may ensue from this modification of the effective tax burden.

A reduction of border trade can be accomplished by macroeconomic policy coordination. The paper discusses two possible approaches to such coordination. According to the "reference country" approach, all other countries fix their tax rates and exchange rates in light of the rates independently established by one of the countries of the region. Where political and social factors are favorable, "full harmonization" of economic policies is more likely to optimize government revenue in relation to output for all countries.

"Real and Monetary Factors in the Joint Determination  
of the Exchange Rate and the Interest Rate" by Shinji Takagi

The paper presents a simple monetary model to analyze the joint determination of the exchange rate and the interest rate as endogenous variables that respond to the same economic disturbances. This type of analysis turns out to be useful because it provides a framework in which the information contained in the covariance of the exchange rate and the interest rate can be used to infer the nature of economic disturbances underlying exchange rate determination. A positive covariance generally implies an economic environment in which monetary factors are dominant, and a negative covariance an environment in which real factors are dominant.

The paper shows that significantly negative or positive correlations between exchange rates and interest rate differentials were often observed between sets of major countries during 1978-86. Moreover, in a monetary model of exchange rate determination, the presence of statistically significant correlations is shown to be inconsistent with the strictly random walk behavior of exchange rates. The random walk behavior of empirical exchange rates implies an economic structure in which changes in both the money supply and real variables are permanent. Such an economic structure is inconsistent with the statistically significant correlations often observed between exchange rates and interest rates. This inconsistency suggests either that there is a deviation of empirical exchange rates from a random walk that cannot be detected by conventional tests or that a monetary model is not a satisfactory way of characterizing the process of exchange rate determination.

