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Abstract:

The ability of predators to reduce prey populations is generally ascribed to the consumption of prey individuals. However, predators may also induce behavioral changes in prey, individuals, which can reduce prey survival and reproduction. Pea aphid populations are impacted by a variety of predators, many of which induce escape responses in individual aphids. We created disturbance-only predators (surgically manipulated predators that were unable to consume prey, but were still able to forage and interact with prey) and measured their ability to suppress aphid population growth over a six-day period. The greatest reduction in aphid population growth was caused by normal predators that were able to both consume and disturb aphids, but aphid population growth was also strongly reduced by nonconsumptive, disturbance-only predators. These field experiments are the first to show that predators reduce prey population growth partly through predator-induced changes in prey behavior, as well as through consumption of prey individuals.

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Conditionality and Adjustment in
Socialist Economics:
Hungary and Yugoslavia

Laura Tyson

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CONDITIONALITY AND ADJUSTMENT IN HUNGARY AND YUGOSLAVIA

1. Introduction

This paper examines the influence of the International Monetary Fund (IMF) on the adjustment efforts of Yugoslavia and Hungary during the 1980-1984 period. Both countries received IMF and World Bank loans during this period and both benefited from the implicit "seal of approval" associated with such loans in their negotiations with private lenders. In both countries, access to IMF lending depended on the design of adjustment programs incorporating explicit conditions of performance or "conditionality" that had to be met if lending was to continue. Such conditionality is always a part of IMF lending and raises a number of questions that we pursue in this paper. First, what were the basic objectives of the adjustment programs, and did the forms of conditionality hammered out in IMF negotiations with country authorities support or impede these objectives? Second, did the forms of conditionality chosen reflect the unique economic systems of Hungary and Yugoslavia or were they typical of conditionality programs designed for market economies? Finally, did the involvement of the IMF actually make any difference to what happened? In particular, what were the effects of IMF involvement on the policies chosen, on the speed of adjustment, and on actual economic performance?

Precise answers to these questions are elusive for two reasons. First, a veil of secrecy traditionally surrounds IMF agreements with individual countries. Without privileged access, it is nearly impossible to ascertain all of the details of such agreements. Some information leaks into the public domain mainly through the commercial banks and through the press, but it is

always incomplete and sometimes inaccurate. Consequently, the discussion in
this paper rests on fragmentary information. Not all of the conditions of IMF
agreements with Yugoslavia and Hungary are known and, even when a particular
type of condition is known, quantitative targets or constraints associated
with its enforcement are generally not. The paucity of information is par-
ticularly pronounced in the case of Hungary because the Hungarian authorities
have not made public any of the details of their negotiations with the IMF.
In contrast, heated public debates over conditionality among public figures in
Yugoslavia provide a rich source of information. In the Hungarian case,
therefore, the discussion rests on a number of assumptions including the
assumption that the overall terms of conditionality were qualitatively similar
to those of the Yugoslav case.

The difficulty of doing counterfactual history poses a second methodo-
logical problem in the search for precise answers to the questions that
motivate this paper. It is impossible to assess accurately the effects of IMF
involvement on policy choices and economic outcomes without knowing what would
have happened in the absence of such involvement. Since we cannot replay
history, the basic methodological approach in this paper must be one of
informed speculation. In particular, we will try to assess the effects of IMF
involvement by comparing what actually happened to what the economic systems
and recent economic histories of Hungary and Yugoslavia suggest would have
happened in the absence of such involvement.

The remainder of the paper proceeds as follows. In Section 2, we examine
the basic objectives and features of standard IMF adjustment programs. The
main types of conditionality usually contained in such programs are described,
and their underlying assumptions about how the economy works are identified.

Section 3 focuses on some of the unique features of the Yogoslav and Hungarian
economies that make them different from the economies after which the assump-
tions and features of standard IMF programs have been fashioned. Sections 4
and 5 address the major questions of the paper. In Section 4, the role of the
IMF in mobilizing finance to support adjustment during the 1980-1984 period is
assessed, and some of the basic forms of conditionality adopted in the IMF
programs are identified and discussed. Several types of conditionality are
examined, including conditions relating to basic macroeconomic targets and to
critical prices, as well as the interest rate, the exchange rate, and the wage
rate. Finally, in Section 5, economic performance under the IMF program is
evaluated; and the differences and similarities between the experiences of the
two countries are described. Section 6 summarizes our main conclusions.

2. Adjustment Programs and Conditionality

The IMF is essentially interested in short-term adjustment. Its primary
function is to grant short-term loans to help countries finance balance-of-
payments deficits that are either temporary or intended to be temporary
because of the adoption of adjustment policies. The IMF can help finance a
country's adjustment efforts in two ways: (1) directly by short-term loans
and (2) indirectly by providing a seal of approval that shores up the
country's creditworthiness and restores its ability to draw on private
capital markets. In recent years, because of the growing importance of the
IMF's seal of approval in mobilizing private capital, the IMF's own lending,
while often quantitatively small, has been qualitatively important in putting
together the necessary private finance to support an adjustment program.[1]

The herd instinct exhibited by the private banking community has enhanced the IMF's leadership role by increasing its leverage. In several countries, including Hungary and Yugoslavia, private banks collectively lent to the point where adjustment was undesirably postponed and then sought to reduce their exposure in ways that compounded liquidity problems. At that point, the IMF's involvement in the formation and financial support of an adjustment program became critical to a country's ability to maintain reasonable access to private credit.

The starting point for the IMF's advice in the development of an adjustment program is an estimate of how large an improvement in a country's current account deficit is required and over what time period. This estimate depends, in turn, on an assessment of the available foreign capital inflow and its sustainability. The IMF does not have complete discretion in choosing how dramatic or rapid a country's adjustment program should be but is constrained by conditions in international capital markets. Of course, the issue of leverage is important; and the IMF's involvement may assist a country in raising money from private sources.

Once the IMF has established a current account target, it considers next the issue of internal balance--what is the level of demand that can be sustained without generating pressure for accelerating inflation?[2] Total domestic demand for both domestically produced and imported goods or absorption is given by the sum of consumption, investment, and government expenditure, $D = C + I + G$. Total supply to the domestic market is the sum of gross domestic product (GDP) and the difference between imports and exports, $S = GDP + M - E$. Ex post, demand equals supply, $D = S$, and we have, solving for GDP, the traditional identity, $GDP = C + I + G + E - M$. If the trade account

must be improved, total absorption must fall. With a fall in real expenditure, real income must also fall.

It is important to emphasize that this relationship is true for all economies regardless of differences in economic system. If capital market conditions necessitate an improvement in the trade account, domestic absorption must fall. Such was the case in both Hungary and Yugoslavia at least as early as 1980 and, in this important sense, austerity in domestic demand thereafter cannot be blamed on the IMF. The IMF can affect both the severity of austerity (mainly through its influence on the pace at which the trade account improves) and the policies used to realize austerity with politically charged distributional implications, but it is not responsible for austerity per se.

A standard IMF adjustment program aims primarily at the introduction of policies to cut domestic demand by controlling the flows of nominal income to the major domestic spending groups: households, government, enterprises, and the banking system. Such programs usually involve controls on wages to lower real household income and consumption, controls on aggregate credit to lower investment expenditure, and increases in taxes and reductions in government expenditure both to reduce government demand directly and to reduce government pressure on credit and money markets. In addition to controls on demand, controls on the rate of growth of the money supply are traditionally a central part of the package designed to control inflation.

These expenditure-reducing policies are also usually accompanied by expenditure-switching policies designed to encourage exports and discourage imports. A devaluation raises the domestic prices of both exports and imports, encouraging demanders to substitute domestically-produced goods for

imports and suppliers to divert goods from the domestic market to the export market. Substantial devaluation is, thus, usually an important part of an IMF policy package.

All that has been said to this point about the IMF's analysis is consistent with either Keynesian or monetarist views on how the economy operates. Both schools imply that an improvement in the current account requires expenditure-switching policies to improve a country's international competitiveness and stabilization policies to reduce domestic demand consistent with the required fall in absorption. Moreover, in theory, neither approach requires that these policies reduce GDP except when initial output exceeds long-run capacity. In practice, of course, an IMF adjustment program almost always results in a fall in either or both the level and rate of growth of domestic output. Such a fall hinders the stabilization program since it results in less supply as well as less demand. In practice, it seems to be true that a severe contraction in both supply and demand leads to a larger decrease in demand than in supply; and so it is possible to establish balance at a lower level of GDP.[3]

There are several reasons why one might expect to find that an IMF stabilization program leads to a contraction in GDP. One is simply that the actual set of policies adopted results in overkill; domestic demand is inadvertently cut more than is required to match reduced absorption. A second reason is that economies are much less flexible in practice than either the Keynesian or monetarist model suggests so that the shift of resources toward tradable sectors implied by expenditure switching leads to short-run supply difficulties and declines in aggregate output. A third reason is that the only way a country can meet a current account target in the time allowed is to

cut imports of intermediate and capital goods for which there are no immediately available domestic substitutes. Output falls for lack of crucial inputs. Finally, demand-management policies often fall disproportionately on investment leading to lower growth of capital and capacity over time.

The second and third arguments, which might be termed "structuralist," imply that excessively ambitious and rapid adjustment programs can result in significant waste of resources because of limited substitution possibilities in demand and production in the short run. Unfortunately, of course, constraints in international capital markets may leave both the IMF and the country it is advising with little choice but to accept such a program and the loss of output it implies. However, it is important to understand that, in the short run, output losses, due to excessive adjustment policies in an environment where there are serious rigidities, will far exceed any efficiency gains from better resource allocation. There is a real tradeoff which is especially important for developing countries and is often neglected in theory.

Concern over the output effects of demand-management policies and an underlying belief in the efficiency of markets have led the IMF to include "supply side" policies in most standard adjustment programs. The basic objectives of such policies are to improve price signals, "to get the prices right," and to encourage greater reliance on prices in resource allocation. Supply-side policies frequently recommended include the liberalization of trade and payments regimes and the freeing of certain critical product and input prices including the prices of food and basic services, the interest rate, and the exchange rate. An implicit assumption of such policies is that economic actors respond to price signals in the manner and to the extent that they do in economic systems based on the market mechanism. As we shall see,

this assumption does not conform very well with important aspects of Yugoslav and Hungarian economic reality.

Together, the IMF's recommendations for both demand-management and supply-side policies are negotiated between the IMF and the country seeking access to IMF lending; and the policies agreed upon are embodied in a set of conditions specified in a letter of agreement. These conditions include both performance criteria, which, if violated, involve suspension of further disbursements by the IMF until a new agreement is reached and policy understandings which do not carry any explicit sanctions for nonfulfillment. Discussions of IMF conditionality usually do not distinguish between these two types of conditions, and the remainder of this paper follows this convention.[4]

3. Basic Features of the Economic Systems of Hungary and Yugoslavia

In order to answer questions about the effects or the appropriateness of IMF conditionality in Hungary and Yugoslavia, it is necessary to understand the basic features of the economic systems of these two countries. Unfortunately, this is no small task since both systems have many unique features that distinguish them both from one another and from the systems of other developing countries with which the IMF is traditionally involved. Moreover, there are no standard theoretical models that capture these features very well. Both the traditional market-type economy (MTE) model that is the usual starting point for analyses of developing countries and the centally-planned economy (CPE) model and its recent shortage-economy variant overlook important aspects of economic reality in Yugoslavia and Hungary.[5] In the following discussion, we present a thumbnail description of these economies during the

1980-1984 period emphasizing only these features that are most relevant to the questions at hand.[6]

Economic reforms in Hungary and Yugoslavia have had, as their basic goal, the replacement of the central planning system by a price-guided market system based on socialist ownership. While traditional quantitative planning has been eliminated, however, it has been replaced by a system that is hard to characterize as a market-socialist system for several reasons. First, enterprises remain subject to vertical control exercised by both state and party organizations in a variety of ways, some formal, some informal, some permanent, and some temporary. Sometimes vertical control affects the price signals influencing an input or output decision--for example, through either economy-wide taxes or subsidies or enterprise-specific ones. Such methods of vertical control working through prices will be called indirect methods in this discussion. Price controls and detailed regulations on price formation are important examples of such methods. Other methods of vertical control set more direct restrictions on input and output choices--for example, through quantitative limitations on input availability, detailed conditions on input use, or detailed specifications of output composition. Such methods of verti-cal control will be called direct or administrative methods in this discussion.

Overall, economic reforms have weakened administrative controls over enterprise output choices; but such controls have retained a strong grip on input choices especially choices involving the use of capital, foreign exchange, and, in the case of Hungary, labor. Even in product markets, administrative restrictions sometimes play a substantial role especially when the products involved are important to the Council for Mutual Economic

Assistance (CMEA) trade contracts.[7] Even the relative absence of administrative measures does not imply the absence of significant vertical influence on product market conditions in the short run through indirect policies affecting prices, such as taxes, subsidies, and pricing regulations, and in the longer run through administrative controls on input use.

Even more fundamentally, product markets, as well as input choices, are influenced by the profound effects of vertical control on enterprise objectives. In theory, the decisions of Hungarian and Yugoslav enterprises are to be guided by considerations of profitability; and various reforms have linked both managerial and worker rewards to profitability performance. In theory, too, this motivational structure is designed to make enterprises responsive to changing price and cost indicators in their output and input choices. Practice has diverged from theory for two important and related reasons. First, considerations of equity or fairness in income distribution have led to a variety of indirect and administrative policies undermining the link between profitability and rewards. Second, enterprises have operated with the expectation that, because they are socially owned and because vertical authorities are ultimately responsible for their welfare and performance, such authorities will bail them out of financial difficulties. The result of this expectation is the so called soft-budget constraint which significantly reduces enterprise sensitivity to considerations of price, cost, and profitability compared to what it would be in a market economy.

Even though Yugoslavia and Hungary share the feature of soft-budget constraints with their East European neighbors, it is an oversimplification to characterize them as shortage economies in which enterprises struggle to produce as much as possible with little regard to costs or salability of

output. Evidence drawn from enterprise surveys and interviews indicates that enterprise managers and workers are informed and concerned about costs and prices and that, with the imposition of domestic austerity measures after 1980, they became increasingly concerned about excess capacity and falling domestic sales.[8] The real issue is one of the degree of sensitivity of enterprise decisions to such market information--not the existence of such sensitivity. What seems certain is that such sensitivity is weaker than it would be in market economies based on private ownership, profit-maximization, and hard-budget constraints. As a result, supply-side policies to "get the prices right" are likely to be considerably less effective in the Hungarian and Yugoslav systems than in such market systems.

As far as input allocation is concerned, supply-side policies designed to correct the prices of critical inputs, such as capital and foreign exchange, may be undermined both by the softness of budget constraints and by the fact that, for reasons of policy, administrative measures are the preferred and predominant method of control. For example, in both Hungary and Yugoslavia, administrative controls over the allocation and use of capital and foreign exchange are used, not because the prices of the inputs are incorrect and administrative intervention is a necessity, but because they give state and party authorities control over the distribution of critical resources among competing enterprise, sectoral, and regional claimants.

Administrative measures to influence the distribution of capital and foreign exchange at the microeconomic level are also important tools for the realization of macroeconomic targets. Administrative policies to control the distribution and use of foreign exchange are critical to efforts to control the balance of payments, and administrative policies to control the level and

distribution of enterprise funds and the level and allocation of bank and state credit are critical to efforts to control aggregate investment spending. Obviously, such methods do not guarantee that macro targets will be realized as evidenced by balance-of-payments difficulties and recurrent investment cycles in both countries.[9] But when macroeconomic objectives become paramount, often in response to an unsustainable balance-of-payments situation, such methods prove effective and are traditionally relied upon in lieu of the monetary, fiscal and exchange-rate policies usually associated with demand management in MTEs. The use of such methods allows the authorities to achieve tighter control over the distribution of macroeconomic cutbacks both among categories of spending and among groups of spenders than is normally possible with the indirect macro controls of the MTEs.

So far the discussion has emphasized the basic similarities between the Yugoslav and Hungarian systems, but the issue of macroeconomic control brings up important differences between them. Even the most casual glance at evidence from the 1970s indicates that macroeconomic control has been considerably weaker in Yugoslavia than in Hungary. There are several reasons for this. First and of the utmost importance, reforms in Yugoslavia gradually eliminated the ability of state and party authorities to control nominal incomes in socialist industry. Repeated and varied approaches to income policies have failed in the realization of macro targets for nominal income growth. The inability to control nominal incomes has meant an inability to control real incomes as well. The behavior of real wages has been the result of the uncontrolled interaction of nominal income growth and inflation and, given the history of inflationary expectations, cost-based pricing regulations, and the strong links between domestic price increases and

devaluations, inflation has been both uncontrollable and unpredictable in the short run. In contrast to the situation in Yugoslavia, in Hungary the authorities have retained strong control over nominal incomes; and this has been a critical ingredient in their ability to control the inflation rate.

The decentralization of economic policymaking is a second important characteristic of the Yugoslav system that sharply distinguishes it from the Hungarian one and is responsible for Yugoslavia's weak macroeconomic control. Authority for making and implementing policy and the indirect and administrative tools for the realization of policy objectives rest mainly with powerful, competing regional authorities in Yugoslavia. National policy formation requires consensus among these authorities, and policy execution relies on the implementation of policy measures by them. During times of economic difficulty, underlying unresolved questions about the distribution of economic costs among different regions impede the process of policy formulation and weaken the degree of policy implementation. On a more fundamental level, distributional conflicts among powerful regional interests make it difficult to maintain effective administrative controls over the use of capital and foreign exchange resources. Yet, in the absence of macroeconomic tools at the national level, macro stability depends on the implementation of such controls at the regional level.

Overall, underlying differences in the degree of political unity explain differences in economic policy formulation and implementation in Hungary and Yugoslavia. As the discussion at the beginning of this section suggests, there are important structural similarities between these two economies; but politics affect both the objectives of policy and the ability to use the existing structure to realize these objectives. While the economic objectives

of the two countries have been similar, the ability to formulate and implement policy has not. Decentralization and regional conflict have significantly weakened this ability in Yugoslavia while continued centralization and party unity have strengthened it in Hungary.

4. Comparison of International Monetary Fund Conditionality in Hungary and Yugoslavia

The Influence of the International Monetary Fund on Adjustment Lending

Given this picture of the basic features of IMF adjustment programs and of the Hungarian and Yugoslav systems, we now examine the influence of the IMF on adjustment programs in both countries during the 1980-1984 period. Table 1 provides the basic information about the timing and extent of IMF finance in these programs. Relative to the total of medium- and long-term loans from private convertible currency sources, IMF lending was an important source of finance in both countries. For example, the 1984 IMF loan amounted to about 38 percent of the value of medium- and long-term funds raised by Hungary from private capital market sources in 1984. In Yugoslavia, capital inflow from IMF lending in 1984 amounted to about 45 percent of the value of long-term capital inflow from the commercial banks in that year.[10]

In Yugoslavia, the IMF played a critical role in organizing the 1983 emergency lending package which was the equivalent of a rescheduling agreement. The package amounted to about $6.5 billion in loans financed by approximately 500 western commercial banks, 15 western governments, the IMF, the Bank for International Settlements (BIS), and the World Bank. It was understood by all participants that the package was to underwrite the 1983 adjustment program whose targets and policy measures were laid out in the

TABLE 1

International Monetary Fund Loans to Yugoslavia and Hungary, 1980-1984

Hungary

November, 1982 — $78.5 million in compensatory finance
$517.8 million one-year standby agreement

January, 1984 — $436 million one-year standby agreement

Yugoslavia

June, 1980 — $441 million two-year standby agreement

January, 1981 — $1,960 million three-year standby agreement
(replaces June, 1980, agreement)

April, 1984 — $379 million one-year standby agreement

third year of the IMF standby agreement. Without the IMF's seal of approval, it is unlikely that the aid package would have been supported by Yugoslavia's major creditor banks which were reportedly reluctant to extend new lending even with this approval.[11] Similarly, it is clear that, without continued IMF involvement in Yugoslavia in 1984, creditor banks would have been unwilling to reschedule debt or to extend new credits to the extent they did.

In Hungary, IMF involvement was also critical to the flow of lending from other sources during the 1982-1984 period. Hungary applied for IMF membership at the end of 1981 at a time of great financial difficulty. During the first quarter of 1982, there was a sharp outflow of short-term funds from Hungary, and its convertible currency reserves fell sharply. During this period, Hungary had great difficulty raising any new finance from private sources. After it became clear that Hungary's application to the IMF would be accepted, the lending situation began to ease.

In April, 1982, Hungary received a $210 million bridging loan from a group of 13 central banks (not including the U. S. Federal Reserve Bank) arranged by the BIS with strong support from the Bank of England. The BIS granted a further six-month credit of $300 million in September (after refusing an urgent request in July) on the understanding that Hungary would become eligible to draw on IMF facilities before the end of the period. In August, a syndicate of 15 western banks, led by Manufacturers Hanover, granted Hungary a three-year loan of $260 million [at 1.25 points over the London Interbank Offered Rate (LIBOR)].[12] This loan was hailed as the first commercial bank credit to any East European country since the imposition of martial law in Poland.

The seal of approval given by the IMF to Hungarian adjustment efforts was critical to Hungary's ability to raise funds from western sources. Given the general nervousness of the international private banking community about the situation in Eastern Europe and their strong herd instinct, Hungary would not have been able to arrange any significant loans on its own during this period. The participation of the IMF provided a mechanism for the private banks to distinguish among the various Eastern European countries and to make a reasonable assessment of creditworthiness. Hungary's participation in policy dialogue with the IMF and its adoption of IMF-approved adjustment policies reassured the banks and demonstrated the IMF's leverage.

Overall, it seems clear that, at the very least, IMF involvement in the adjustment efforts of Hungary and Yugoslavia did have one beneficial effect on both countries--it bought them more time for adjustment by promoting additional lending. This allowed both countries to avoid the sharp contractions in output that would have resulted from tighter capital market constraints. In other words, contrary to an often-voiced opinion, the severity of domestic austerity in both countries was reduced rather than increased by IMF involvement.

The Influence of the International Monetary Fund on Adjustment Policies and Objectives

In this section, we identify the basic conditions of IMF standby agreements with Yugoslavia and Hungary and evaluate their objectives and their effectiveness or appropriateness relative to these objectives. We also discuss whether other types of conditions might have been more suitable to achieve these objectives given the special features of the Yugoslav and Hungarian systems. As we indicated in the introduction, we know much more

about conditionality in Yugoslavia than in Hungary. What we do know supports our assumption that the general structure of the standby agreements was similar in both countries, and we will rely on this assumption in the following discussion.

As is traditional in IMF agreements with other countries, the IMF agreements with Yugoslavia set out a number of conditions relating to demand management. The basic objective of these conditions was to reduce domestic absorption to achieve targets of improved external performance. At various points during the 1980-1984 period, these targets included increases in foreign exchange reserves, limits on new foreign borrowing, and improvements in the current account. Similar targets were undoubtedly set in the IMF agreements with Hungary.

In the Yugoslav case, demand-management conditions specifying quantitative limits on the growth of net domestic assets (domestic credit creation) of the banking system, central bank credit to the Federal Government, and public sector revenues and expenditures were designed to restrain the growth of domestic demand.[13] Presumably, similar monetary and fiscal conditions were also set for Hungary. In addition, in Hungary a quantitative target for real wage growth was set, whereas in Yugoslavia the authorities agreed to restrain nominal income growth although no quantitative limit was set. This difference in treatment may reflect IMF recognition that the Yugoslav authorities exercised significantly weaker control over incomes than did the Hungarian authorities. In neither country did the IMF agreement specify a limit on the allowable rate of inflation and, indeed, as the later discussion of exchange-rate conditionality and price liberalization indicates, the IMF clearly accorded lower priority to controlling the inflation rate than to other policy

objectives. In this respect, its policy preferences proved at odds with the policy preferences of both the Hungarian and the Yugoslav authorities.

With regard to the effectiveness or appropriateness of the demand-management conditions identified here, several observations can be made. First, although credit and monetary conditions influence aggregate spending (especially investment spending) in both countries, their effectiveness is premised on a model of economic reality that overstates enterprise sensitivity to external credit conditions and understates the role of administrative controls on such spending in these economies. Given soft-budget constraints and the resulting weak links between monetary-credit conditions and enterprise spending [dramatically demonstrated by the growth of inter-enterprise trade credit (see Table 2) and large changes in the velocity of money in Yugoslavia],[14] the authorities in Hungary and Yugoslavia tend to rely on administrative measures to limit investment spending. Moreover, as argued earlier, such measures are preferred because they permit greater control over the microeconomic incidence of investment cutbacks.

This implies that, in the institutional setting of Hungary and Yugoslavia, it is difficult for either the IMF or the authorities to predict how monetary and credit limits will affect investment spending. Moreover, in an environment of persistent excess demand for investment funds and soft-budget constraints, such limits are not sufficient and are probably not even necessary to achieve the required control over macro balances. Administrative instruments work in the sense that both the Yugoslavs and the Hungarians have the ability to control aggregate investment albeit with major efficiency costs. Given the effectiveness of such instruments in the short run, a more

TABLE 2

Macroeconomic Indicators

	1975-1979	1979-80	1980-81	1981-82	1982-83	1983-84
	Rates of growth in percent					
Hungary						
Gross domestic product	4.1	0.1	2.9	2.8	0.7	2.6
Consumption	3.4	0.6	2.9	1.2	0.5	1.2
Fixed investment	4.3	- 5.8	- 4.3	- 1.6	- 3.4	- 4.4
Domestic absorption	3.0	- 0.6	1.4	- 0.1	- 1.7	0.2
Producer prices	3.1	15.3	6.3	4.7	5.6	3.9
Consumer prices	5.6	9.1	4.6	6.9	7.3	8.3
Real wages	1.3	- 1.7	1.1	- 0.7	- 3.2	- 2.6
Yugoslavia						
Gross domestic product	6.9	2.6	1.1	0.5	- 1.3	2.1
Consumption	5.8	0.6	- 1.4	0.4	- 0.3	- 0.7
Fixed investment	8.6	- 5.9	- 9.8	- 6.2	- 9.0	-10.0
Domestic absorption	7.0	- 1.0	- 1.3	- 0.3	- 2.1	1.2
Producer prices	9.3	27.3	45.0	25.0	32.0	57.0
Retail prices	14.3	30.4	46.0	30.0	39.0	57.0
Real wages	3.2	- 7.5	- 5.7	- 4.2	-11.0	- 5.7
Money supply	29.5	23.0	26.6	26.6	20.1	43.1
Inter-enterprise trade credit	NA	NA	36.7	51.3	250.0	59.1

Sources: Growth rates of national account aggregates are based on World Bank
   data. Estimates of price and wage growth are based on data contained in
   official country sources. Estimates of growth in money supply and inter-
   enterprise trade credit for Yugoslavia are based on data contained in the
   National Bank of Yugoslavia (June, 1984 and 1985).

appropriate policy condition than monetary and credit limits would seem to be an explicit quantitative limit on investment spending. Such limits are routinely established in both countries as part of their annual and long-term planning activities.

The traditional use of monetary-credit limits for demand-management objectives in IMF agreements is also premised on a model of economic reality that assumes certain simple, predictable links between monetary growth on the one hand and prices and balance-of-payments deficits on the other.[15] In both Hungary and Yugoslavia, several systemic factors, including distinctions between hard- and soft-enterprise funds, inter-enterprise trade credit, resulting variations in velocity, and regulations on domestic price formation weaken these links and make predictions about the price or balance-of-payments effects of a given credit limit misleading. As the Yugoslav case indicates, the result is that a given dose of nominal credit contraction often results in a harsher than anticipated dose of real credit contraction, resulting in illiquidity, threatened bankruptcy, and overkill in the contraction of domestic demand.

A final observation about the appropriateness of the IMF's demand-management conditions concerns their underlying distributional objectives. In both Yugoslavia and Hungary, the IMF negotiated conditions to influence the incidence of austerity among consumption, investment, and government spending in what it perceived to be desirable ways. In the Yugoslav case, demand-management conditions included limits on the growth of public sector revenues and expenditures and limits on central bank credit to the Federal government. Limits of this type are traditional in IMF agreements with developing countries, most often because there are close links between deficit financing,

money creation, and inflation in such countries. In the Yugoslav context of balanced or surplus budgets for most levels of government and a relatively small Federal deficit, these links are unimportant and another explanation for IMF policy must be sought. The most plausible explanation, consistent with both the IMF's general concern over longer term supply-side issues and its preference for private market actors, is its desire to redirect resources away from "nonproductive" government activities to productive investment activities.

A similar explanation applies to the limitations on real wage growth in the IMF standby agreement with Hungary. In the 1979-1982 period, prior to the negotiation of this agreement, the Hungarian authorities had reduced domestic demand by sharp cuts in investment spending while consumption (both private and collective) had continued to increase, albeit at reduced rates. This pattern of demand restriction reflected Hungary's long-term commitment to protect consumption gains even during time of macroeconomic stress but was at odds with the IMF's traditional preference to cut back both consumption and government spending to reduce the crowding out of investment due to overall austerity.

In addition to demand-management conditions, the IMF agreements with Yugoslavia in 1983 and 1984 contained explicit exchange-rate conditions. These conditions took the form of targets for the required real devaluation of the dinar to be realized by a specified date. The basic objective of such targets was to promote expenditure switching by improving the incentives for exports, enhancing the competitiveness of exports on western markets, and reducing the incentives for imports. The rationale behind such targets was the IMF view that Yugoslavia's poor export performance during the 1976-1983

period was mainly the result of an incentive bias against exports due to an increasingly overvalued exchange rate.

It is impossible from available information to determine whether the IMF agreements with Hungary included explicit exchange-rate conditions. Apparently, IMF negotiators did press Hungary to devalue the forint to improve export incentives, but the Hungarians resisted the adoption of a specific devaluation target as an explicit condition. A more active exchange-rate policy may have been a policy understanding between the IMF and the Hungarians.[16] This would certainly be consistent with the pattern of forint depreciation in 1983 and 1984. (See the next section for an analysis of exchange-rate changes in Hungary during the 1980-1984 period.)

Clearly, IMF pressure on exchange-rate policy was much greater in Yugoslavia than in Hungary both because the inflation differential between Yugoslavia and its western trading partners was much greater than that between Hungary and its western trading partners and because the available evidence suggested that the degree of overvaluation of the dinar was substantial.[17] In addition, the IMF was in a more powerful bargaining position vis-à-vis Yugoslavia than vis-à-vis Hungary for a variety of reasons. The macroeconomic situation in Yugoslavia seemed much more precarious, and the Yugoslav authorities appeared much less able to maintain macro control. The Yugoslav leadership was divided and decentralized while the Hungarian leadership presented a united front in discussions with the IMF.[18] Finally, during 1981-82, the Yugoslavs had failed to fulfill policy understandings on exchange-rate policy leading the IMF to substitute explicit conditions with sanctions for such understandings in the 1983-84 agreements.

Although exchange-rate policy is a traditional ingredient of IMF policy advice, there are several reasons to question its effectiveness in the Yugoslav and Hungarian settings. During the 1980-1984 period, the pricing practices and regulations in force in both economies established a tight link between the exchange rate and the domestic prices of both tradable and non-tradable goods. In Yugoslavia, increases in the costs of imported inputs and increases in the dinar prices of exports translated into direct upward pressure on domestic prices. The result was predictable given Yugoslavia's past experience with the inflationary consequences of devaluation and the experiences of many other semi-industrial countries as well.[19] Fear of the inflationary consequences of devaluation was the major reason for heated Yugoslav opposition to the imposition of exchange-rate conditions by the IMF.

On its side, the IMF appeared willing to accept what it believed to be the short-term costs of an acceleration of inflation for the benefits of improved export incentives and competitiveness resulting from devaluation. The IMF was also relatively sanguine about the inflationary consequences of devaluation because these consequences were viewed as necessary to produce declines in real incomes and domestic absorption in the Yugoslav setting. The IMF was surprised by the strength of the inflationary pressure accompanying the 1983-84 devaluations, especially in light of the sharp reductions in the real money supply occurring at the same time.[20] Clearly, the simple macro models linking money, demand, and prices on which standard IMF policy is based proved to be misleading predictors of price changes in Yugoslavia at least in the short to medium run.

A fear of the inflationary consequences of devaluation also motivated Hungarian opposition to exchange-rate conditions. In Hungary, the prevailing

pricing regulations meant that a devaluation would automatically increase the domestic prices of both tradables and nontradables resulting in either no change in the relative prices of such goods or in changes attributable to differences in the application of pricing rules across these goods. Perhaps the transparent nature of the links between devaluation and the domestic price level in the Hungarian pricing system was one reason why the IMF did not push harder for explicit exchange-rate conditionality.

If the effects of devaluation on prices in both Yugoslavia and Hungary were predictable, its effects on the trade balance (the ultimate target of exchange-rate policy) were not. Imports in both countries were subject to a variety of formal and informal rationing schemes and were mainly limited to raw material and other productive inputs for which there were no easily available domestic or CMEA substitutes. Even if a devaluation eliminated the excess demand pressure for imports, thereby eliminating the need for quantity rationing, overall imports could not be expected to fall. And the preference of the authorities to regulate both the composition of imports and their distribution among enterprises could be expected to undermine most of the efficiency gains normally associated with devaluation and a move away from quantity rationing.

Given the inflationary effects of devaluation and the likely absence of its effects on aggregate imports in these economies, a more appropriate policy approach to improving the trade balance might have focused on direct measures to stimulate exports. Because of their relative insensitivity to price signals, both Yugoslav and Hungarian enterprises could be expected to respond less dramatically to the incentive effects of a devaluation than would enterprises in systems with harder budget constraints. In addition, especially in

Hungary, lack of experience in and knowledge of selling in western markets meant that there were serious structural impediments to exports in such markets which a devaluation would not address. Given the costs and uncertainties associated with breaking into these markets, enterprises preferred to sell their goods on domestic or bloc markets.

In this setting, the price signals of a devaluation could not be expected to support the kind of export boom required to break the foreign exchange shortage strangling growth in these economies. Additional policies to promote exports directly were required. Yet such policies were not included in the conditions of IMF agreements with Yugoslavia, and available evidence also suggests that they were not included in IMF agreements with Hungary. This finding is in line with the traditional IMF bias against explicit export subsidies or other policies that result in dual exchange rate or multiple exchange rate systems. While understandable from a longer term perspective, this bias is questionable in a short-run situation of severe foreign exchange shortage. Even more remarkable from this perspective is the fact that, in its 1984 agreement with Yugoslavia, the IMF actually called for cuts in public spending to be concentrated on export subsidies.

Finally, in the Hungarian case, the IMF supported a reduction in a variety of subsidies in accordance with the general reform objective of bringing Hungarian prices more closely into line with world prices. As part of this reform process, export subsidy rates on dollar trade fell in a variety of critical export sectors between 1981 and 1983.[21] The net effect of the decline in export subsidies, accompanied by stricter controls on imports that made domestic sales conditions more attractive, was a decline in incentives to export.[22] This occurred at the very time that the IMF was pressing for a devaluation to improve these incentives.

In both countries, the IMF seemed to lack a sense of policy priority. Its support of measures to reduce government interference in the economy and to rationalize the price structure actually conflicted with what should have been accorded top policy priority, namely, a rapid and dramatic improvement in export earnings in the short run.

Conflicts between short-run and long-run policy priorities are also evident in the imposition of IMF conditions to correct price distortions in Yugoslavia and Hungary. Both the Hungarian and Yugoslav authorities were outspoken in their concern about inflation and its economic and political consequences in their negotiations with the IMF. Yet the IMF pushed for a variety of policy measures to relax price controls and to adjust sensitive consumer and producer prices that were heavily subsidized. In the Yugoslav case, the IMF actually imposed conditions relating to the termination of a general price freeze in 1984 and to the upward adjustment of critical energy and transportation prices. Similar conditions may have been set in earlier agreements during the 1981-1984 period. In the Hungarian case, we do not know if explicit conditions regarding prices were set, but we do know that the IMF expressed a preference to achieve the target reduction in real wages by a reduction in consumer price subsidies.

Although the correction of domestic price distortions is a desirable objective in the long run, the short-run costs of such a policy direction must be considered relative to other objectives. In Yugoslavia where accelerating inflation in 1983-84 was producing unexpectedly large declines in real incomes, undermining public confidence in the divided leadership, and aggravating social and political tensions, policies to control overall prices and the relative prices of critical inputs might have been a useful short-term adjunct

to other demand-management measures to quell inflationary expectations. In these circumstances, Yugoslav leaders viewed the struggle against inflation as the primary objective of policy and correctly viewed the IMF's conditions on devaluation and the relaxation of price controls as running counter to this objective. In Hungary, the leadership was committed to a gradual process of price rationalization, but fear of inflation limited the pace of the process. Ironically, however, the price pressures generated by the reduction in subsidies made the Hungarians more opposed to devaluation since the room for politically acceptable inflation was used up by price increases resulting from price rationalization. Thus, the IMF might have been more successful in its negotiations with the Hungarians to push for larger devaluations had it been more willing to support a slowdown in the pace of price liberalization in the short run.

In addition to the demand-management, exchange-rate, and price-liberalization conditions noted already, the 1984 IMF agreement with Yugoslavia contained an especially controversial condition relating to interest rates. The condition set a schedule for large increases in nominal rates with the objective of realizing positive real interest rates within a specified period of time. Although there was some sentiment in support of such a policy within Yugoslavia, there was also vigorous opposition. Many Yugoslav officials argued that such a policy would further aggravate inflationary pressure. Others raised concern about the excessive burden that positive real interest rates would impose on enterprises that depended heavily on credit for both working and fixed capital. According to these critics, if enterprises were to lose the substantial subsidies they were receiving in the form of credits at negative real interest rates, their already precarious financial situation would be seriously aggravated.

It is hard to understand why the IMF attached so much importance to
interest-rate policy in its 1984 standby with Yugoslavia. On the macro side,
sharp reductions in real credit availability and a plethora of administrative
restrictions had produced sharp reductions in aggregate investment spending
and Yugoslavia had met most, if not all, of its demand-management conditions.
Although the IMF might have preferred that the incidence of these reductions
be guided by price signals for efficiency reasons, it must have been clear
that nonprice considerations would continue to have a dominant influence on
investment allocation even if interest rates rose to positive levels. Posi-
tive real interest rates were necessary but hardly sufficient to the realiza-
tion of greater efficiency in the Yugoslav institutional setting. Moreover,
in the short run, because a large percentage of Yugoslav enterprises would not
be able to operate profitably at such levels, the predictable results would be
further softening of enterprise budget constraints and further growth in
inter-enterprise trade credit. The alternative was widespread bankruptcy with
severe losses in output and employment--an alternative that was not polit-
ically feasible.

The most plausible explanation of IMF pressure for real interest rates was
concern over the possible effects of negative real interest rates on saving
and capital flight. The dramatic deterioration in the errors and omissions
term in the Yugoslav balance-of-payments accounts in 1983 suggested that such
concern might be warranted.[23] According to anecdotal information, both
enterprises and Yugoslav migrant workers were leaving a substantial fraction
of their foreign exchange earnings abroad. If such earnings could be
attracted to Yugoslavia by positive real interest rates, the tasks of
rebuilding foreign exchange reserves and improving the current account would

be made easier. Such reasoning depended, of course, on the underlying assumption that interest-rate considerations were important to decisions about earnings repatriation. Although this may have been the case, there was no empirical evidence to support it. Furthermore, in the Yugoslav context, fears of further devaluation and of additional, unpredictable restrictions on the use of repatriated foreign exchange by both consumers and producers were probably at least as important as interest-rate considerations in repatriation decisions.[24]

Overall, in light of the bitter controversy surrounding the interest-rate condition and the fact that it aggravated already serious inflationary pressure and widespread liquidity probems, the IMF's decision to impose it seems questionable. Since the real crisis was one of foreign exchange shortage, more direct policies to stimulate greater foreign exchange earnings through export subsidies would seem to be preferable to an interest-rate policy to encourage greater repatriation of such earnings, especially when the effects of the interest rate policy were very uncertain. The export subsidy approach also had the attraction of political support while the interest-rate policy did not. This made the odds for the effective implementation of the subsidy approach much greater in the decentralized Yugoslav system.

The Influence of the International Monetary Fund on Economic Performance in Hungary and Yugoslavia during the 1980-1984 Period.

Both Hungary and Yugoslavia were forced to accept reductions in domestic absorption levels during the 1980-1984 period in order to improve their external balances in conformance with tighter external capital market conditions. Austerity in domestic demand would have been required even in the absence of IMF involvement; indeed, in Hungary austerity began in 1979--three

years before its first agreement with the IMF. As noted earlier, IMF involvement actually brought in more external financing than would have been available otherwise and, thus, allowed for a slower pace of downward adjustment in domestic absorption in both countries during the 1980-1984 period.

The data in Table 2 indicate that investment spending bore the disproportionate share of the cutback in domestic absorption in both Hungary and Yugoslavia. In both countries, investment rates fell each year and in 1984 were sharply below preausterity levels. In Yugoslavia, aggregate personal consumption also fell between 1980 and 1984, while in Hungary it rose over the same period; in both countries, consumption's share in total domestic demand increased.

In neither country was the decision to concentrate cuts in domestic demand on investment the result of IMF conditionality. Indeed, as noted earlier, the IMF traditionally exhibits a preference to moderate the crowding out of investment in austerity programs. In both Hungary and Yugoslavia, as in the other countries of Eastern Europe that underwent austerity during this period, this decision was the result of several domestic considerations. First, as a matter of policy, political leaders chose to protect consumption levels from deep sustained reductions to avoid the overt and covert political dissatisfaction that such reductions were likely to entail. Since private consumption was the largest single component of domestic demand, this choice necessitated a very heavy burden on investment.

A second reason for the disproportionate impact of austerity on investment was the effort by state authorities to minimize short-term output losses associated with import cuts. In order to maintain the flow of imports of raw

materials and other inputs required for immediate production, imports of capital goods required for investment projects and future productive capabilities were squeezed disproportionately hard. This was a rational policy response from a short-term perspective but was questionable from a longer term point of view.

Finally, as noted earlier, both the Yugoslav and Hungarian authorities had a variety of administrative means at their disposal to control the level of investment and, during past periods of macroeconomic stabilization, they had relied on such means as the primary method of curtailing domestic demand. Thus, their behavior during the 1980-1984 period was consistent with their past behavior and does not suggest any aberration due to IMF pressure.

In both countries the interest rates on investment finance increased during the 1980-1984 period in Hungary as a result of an internal policy decision and in Yugoslavia as a result of IMF pressure. In Hungary, higher interest rates were used mainly as one of several measures to reduce enterprise discretionary funds and not as a price signal to allocate funds among competing users.[25] In Yugoslavia, despite IMF pressure, interest rates in real terms remained negative through the middle of 1984, and administrative rationing of credit by banks and state authorities remained the dominant method of investment control. By the last quarter of 1984, real interest rates had risen approximately to zero as the Yugoslavia authorities struggled to meet the condition of the 1984 IMF agreement.[26] Throughout the entire period, given the softness of enterprise budget constraints, the regionalization of capital markets, and the continued desire of regional and national authorities to direct investment to priority objectives, administrative rationing was both desired and necessary to realize effective control over investment.[27]

Compared to Yugoslavia, Hungary had much tighter control over the course of nominal incomes in the social or state sector. Nominal income growth in this sector was a target of economic policy in Hungary and detailed administrative controls over enterprise income and wage distribution were used to pursue it. In Yugoslavia, the authorities were not able to control nominal incomes in much of the social sector, despite repeated and varied efforts, although they were able to restrict nominal income growth in government and quasigovernment organizations. The inability to target the course of nominal incomes or to control the rate of inflation meant that, even in the social sector, the behavior of real incomes was not a meaningful policy target as it was in Hungary. Thus, the decline in real incomes realized in the social sector can be viewed as reflecting an active policy choice in Hungary whereas in Yugoslavia it better reflects the interaction of largely uncontrolled nominal income growth with inflation. In Hungary, the decline in real social sector wages in 1982, 1983, and 1984 conforms with the performance criteria calling for a 2-4 percent decline in real wages in the 1982 IMF agreement and does suggest that IMF pressure may have been an important influence. In Yugoslavia, in contrast, IMF involvement exercised only an indirect influence on real wages through the cumulative effects of other conditions on the inflation rate.

As far as the pattern of external adjustment is concerned in both Hungary and Yugoslavia, a decline in convertible currency imports was an important component of the improvement in the convertible currency trade balance realized during the 1980-1984 period. In 1984, convertible currency imports in nominal terms were only 81 percent of their 1980 value in Hungary and 69 percent in Yugoslavia. In both countries, a portion of this decline is

attributable to the appreciation of the dollar which caused the nominal dollar value of other convertible currency imports to decline. Nevertheless, available evidence on the behavior of import prices suggests that convertible currency imports declined in real terms in both countries as well. For example, a recent study by Robinson indicates that convertible currency imports in real terms declined at an average annual rate of 2.2 percent a year in Hungary between 1981 and 1984.[28] Official Yugoslav statistics indicate that aggregate imports declined in real terms at an average annual rate of 8.8 percent a year between 1980 and 1984, and this decline was concentrated in convertible currency imports (Table 3).[29]

As in past periods of macroeconomic stabilization in both countries and similar to the recurrent slowdown phases in investment cycles in other East European countries, administrative quantitative controls on convertible currency imports were relied upon to realize improvement in the trade balance. Thus, it seems likely that this pattern of adjustment would have emerged, as it did throughout Eastern Europe, even in the absence of IMF involvement.

The IMF influence may have been an important determinant of export performance in Yugoslavia. Under strong IMF pressure, the real effective exchange rate in Yugoslavia fell sharply by about 45 percent between 1981 and the end of 1983 (see Table 4). After growing by only about 1.7 percent per year between 1980 and 1982, Yugoslavia's nominal exports to convertible currency markets grew by about 6.1 percent per year between 1982 and 1984, and some of this growth may be attributable to the improved incentives stemming from dinar devaluation.[30] Estimates of the behavior of the real quantity of convertible currency exports reported by Bajt (1985) confirm the view that the

TABLE 3

Convertible Currency Merchandise Trade

	1978	1979	1980	1981	1982	1983	1984
			Billions of U. S. dollars				
Hungary							
Merchandise exports	3.18	4.06	4.86	4.88	4.88	4.86	4.97
Merchandise imports	3.96	4.23	4.59	4.43	4.11	3.97	3.73
Trade balance	- .78	- .17	.27	.45	.77	.88	1.24
Current account balance	-1.24	- .82	- .37	- .73	- .06	.32	.33
Yugoslavia[a]							
Merchandise exports	3.97	4.77	5.65	5.72	5.85	6.27	6.59
Merchandise imports	8.37	11.34	11.32	10.60	9.64	8.07	7.76
Trade balance	-4.40	- 6.57	- 5.80	- 4.88	-3.79	-1.80	-1.17
Current account balance	-1.27	- 3.30	- 2.20	- 1.82	-1.42	.30	.87

aThe Yugoslav statistics are distorted by the use of unrealistic statistical exchange rates that are used to convert trade denominated in other convertible currencies to dollar values. In periods, such as the 1981-1984 period when actual European exchange rates were declining relative to the dollar, the use of statistical exchange rates that diverged from actual market rates tended to inflate the dollar value of Yugoslav trade.

Sources: World Bank and IMF data sources and official country statistics.

TABLE 4

Real Effective Exchange Rates
(1979 = 100)

	1979	1980	1981	1982	1983	1984
Forints per dollar[a]	100	88.6	79.0	77.7	82.4	84.3
Dinars per dollar[b]	100	106.4	113.5	132.3	165.0	170.1

[a]Based on real effective exchange rate for the forint calculated by Balassa.
His calculations are derived by weighting Hungary's trade with its major part-
ner countries among the developed market economies (using export and import
weights) and by adjusting nominal values for differences in the rate of
inflation of wholesale prices in Hungary and these partner countries.

[b]Based on real effective exchange rate for the dinar calculated by the
National Bank of Yugoslavia. Calculations are derived by weighting the
exchange rate of the dinar against convertible currencies using their weights
in total current account receipts and payments. The nominal values are
adjusted by differences in the rates of inflation of wholesale (producer)
prices in Yugoslavia and its convertible currency trading partners.

exchange-rate depreciation may have provided a stimulus to exports. According to Bajt's calculations, real convertible currency exports increased at an average annual rate of nearly 11 percent in 1983 and 1984 after falling at an average annual rate of 7.6 percent in 1981 and 1982. Earlier work on the adverse effects of increasing dinar overvaluation on exports during the 1976-1980 period is also consistent with this interpretation.[31]

The introduction of new export subsidy measures and the strengthening of existing ones, as well as the linking of import rights to export earnings at the enterprise level, also enhanced incentives to export during the 1980-1984 period. Consequently, it is difficult to assess the effects of exchange-rate policy alone. Given the magnitude of the real devaluation that occurred--the real effective value of the dinar fell by about 60 percent between 1980 and 1984--the growth in export earnings seems relatively weak and suggests that the price elasticities of export supply and export demand were relatively small at least in the short to medium run. At the present time, there is no careful empirical work to support this supposition. Relatively low price sensitivity on the supply side, however, is consistent with the behavioral implications of soft-budget constraints.

In Hungary, the forint appreciated in real terms by about 22 percent between 1979 and 1982. This trend was reversed in 1983 and 1984 when the forint depreciated in value by about 8.5 percent. IMF pressure may have been behind the exchange-rate adjustments in 1983 and 1984. Despite these adjustments, however, the real effective exchange rate of the forint in 1984 was about 16 percent higher than its 1979 level. In addition to the disincentive effects of exchange rate trends between 1979 and 1984, the so-called competitive pricing rules in effect after 1980 tended to discourage convertible

currency exports.[32] As noted earlier, the reduction in a variety of sub-
sidies in line with reform objectives apparently also had a similar discourag-
ing effect by reducing the forint price of exports relative to the forint
price of domestic sales (Kis, Robinson, and Tyson). Given this constellation
of policies and their effects on export incentives, it is not surprising that
Hungary's convertible currency exports stagnated in nominal terms and that it
lost market share in the developed market economies.[33] Recent estimates
indicate, however, that in real terms convertible currency exports may have
increased at an annual rate of about 6-6.5 percent between 1980 and 1984.[34]
Interviews and other anecdotal evidence suggest that this export growth was
largely the result of a vigorous party campaign waged at the enterprise level
to mobilize exports and an accompanying import control program that linked
enterprise access to foreign exchange to its export performance.[35] In other
words, administrative measures rather that IMF "price" policies were relied on
by the Hungarian authorities to stimulate exports during the period.

A final striking difference between austerity in Hungary and austerity in
Yugoslavia lies in the behavior of the inflation rate. In Hungary, the infla-
tion rate for producer prices during the 1980-1984 period was comparable to
that realized in the 1975-1980 period. The acceleration in the inflation rate
for retail prices registered in 1979 and again in 1983 and 1984 was, in large
part, the consequence of a reduction in subsidies called for by reform and did
not indicate a serious intensification of inflationary pressure.

In Yugoslavia, in contrast, the inflation rates for both producer and
retail prices between 1980 and 1984 were sharply higher than their 1975-1979
levels and accelerated toward the end of the period. Sharp and sustained

contractions in real credit availability and domestic demand were accompanied
by high and accelerating rates of inflation. Although paradoxical when viewed
from the traditional monetarist models on which IMF advice rests, this result
is consistent with a variety of empirical studies of the inflation process in
Yugoslavia that show a weak link between demand conditions and prices and a
strong cost-push pattern of inflation [see, for example, Tyson (1977b), Tyson
and Neuberger, and Mencinger (1975)]. If these studies, based on past
Yugoslav behavior, are a guide to what happened in the 1980-1984 period, then
it seems clear that the real devaluation policy specified as part of IMF
conditionality aggravated inflationary pressure as most Yugoslav critics
feared it would. The real interest rate policy imposed in 1984 may also have
had a similar effect by increasing the nominal costs of enterprise capital,
thereby exerting upward pressure on producer prices. Finally, IMF pressure to
terminate an overall price freeze and to raise the prices of certain basic
services also contributed to an upward jump in the inflation rate in 1984.
Overall, it seems very likely that, as a result of some of the conditions
adopted in the IMF agreements with Yugoslavia, the inflation rate during the
1980-1984 period was higher than it would have been otherwise. If the IMF had
accorded a higher priority to reducing inflation and, if it had dropped its
traditional excess demand interpretation of inflationary pressure, it might
have been able to develop alternative conditions that achieved the same degree
of success in reducing domestic demand and improving external performance at a
lower inflationary cost.

5. Conclusions

Our review of IMF conditionality in Yugoslavia and Hungary during the
1980-1984 period provides partial answers to the questions we posed at the

beginning of the paper. First, the basic objectives of IMF conditionality in both countries were a reduction in domestic demand and an improvement in external performance. Most of the conditions actually imposed tended to support these objectives although sometimes the pursuit of other objectives, particularly the reduction of price distortions, actually made the realization of the primary objectives more difficult in the short run.

Second, there was nothing unique about most of the forms of IMF conditionality in either Hungary or Yugoslavia. The conditions chosen seemed to rest on the assumption that the traditional demand-management explanations of and cures for balance-of-payments deficits drawn from the experiences of market economics applied to both Hungary and Yugoslavia despite their unique institutional settings.

Third, our analysis indicates that IMF conditionality did affect what actually happened in both countries to some extent. Both countries benefited from the additional finance made available as a result of IMF approval of their austerity plans. In Hungary, IMF pressure for a reduction in real wages probably played a role in the reduction that actually occured in 1983 and 1984, and IMF pressure for an exchange-rate adjustment may have played a role in the 1983-84 depreciation of the forint. In Yugoslavia, IMF conditionality was behind the introduction of real exchange-rate and real interest-rate policies and the relaxation of price controls. As a consequence of these policies, the inflation rate in Yugoslavia was probably higher than it otherwise would have been and export performance may have been stronger. Overall, as might be expected given the relative negotiating strength of both countries vis-à-vis the IMF, our findings indicate that IMF influence on what actually happened was much stronger in Yugoslavia than in Hungary.

Finally, in both countries, the major outcomes of austerity--a dispropor-
tionate share of the cutback in domestic demand on investment, stagnation or
cutbacks in convertible currency imports, and an expansion of convertible
currency exports--were the result of domestic policy choices taken in response
to external capital market constraints and were not fundamentally affected by
IMF involvement. Moreover, the authorities in both countries continued to
rely on traditional administrative means to realize these outcomes. Invest-
ment was restricted by direct controls over the use of enterprise funds and
quantitative credit rationing in accordance with national or regional priori-
ties. Imports were subject to a variety of formal and informal quantitative
rationing methods, and exports were encouraged by external pressure on enter-
prises to realize enterprise-specific export targets and to link export
earnings to their own import needs.

In the absence of reforms to harden enterprise-budget constraints and
create meaningful foreign exchange and capital markets, administrative
measures of this type perforce remained more effective at realizing macro-
economic targets than IMF policy conditions aimed at getting the prices
right. In addition, such measures allowed the state and party authorities to
continue to guide the distribution of resources rather than to cede their
authority to the dictates of market forces as standard IMF prescriptions would
have them do.

Footnotes

[1]While the major focus of this paper is on the role of the IMF, the World Bank has also started to play an increasingly important role. The Bank has instituted new forms of program lending (including "structural adjustment" loans) to assist countries in restructuring their economies in the medium term to deal with "structural" balance-of-payments problems. In theory, the IMF only lends short term to deal with short-term problems; and the Bank lends medium to long term to promote long-term development and structural change. In recent years, however, the distinction has become blurred as the IMF has had to roll over short-term loans and institute newer, medium-term instruments such as the Extended Fund Facility (EFF); and the Bank has recognized that short-term crises in the balance of payments have medium and long-term implications. The Bank's seal of approval is also important to private banks and increases the Bank's leverage in policy dialogue with recipient countries. However, while the distinctions and policy "distance" between the two institutions have thus narrowed in recent years, they still differ in their time horizon and basic approach.

[2]The implicit model underlying the standard IMF adjustment program assumes that inflationary pressure is the result of excess demand. The simplest form of this model relates inflation to growth in the money supply which, in turn, is assumed to be the major factor behind excess demand. See Khan and Knight (1981) for a formal specification of an implicit IMF model.

[3]There is continuing controversy on this point as suggested in the work of Taylor (1981) and Robinson (1986).

[4]For a complete discussion of differences in timing and enforcement of different types of IMF conditions, see Williamson (1982).

[5]For a description of a typical CPE, see Brown and Neuberger (1969) and, for a description of the shortage-economy model, see Kornai (1980).

[6]The basic features described here are those that seem to be the most important to an understanding of how the economies functioned during the 1980-1984 period. For a more detailed discussion of these economies both during this period and during earlier phases of the postwar period, see, for example, Tyson (1980) and Hewett (1981).

[7]In Hungary, profile restrictions specifying the composition of output continued to be applied to state enterprises through the end of 1984.

[8]This perception is based on interviews carried out by the authors in Yugoslavia in 1981 and 1982 and in Hungary in 1983 and 1985.

[9]For evidence on investment cycles in Hungary and Yugoslavia, see Bauer (1978) and Tyson (1983).

[10]The value of medium- and long-term funds raised by Hungary in international capital markets is based on information contained in Table 5.4.10, United Nations, Economic Commission for Europe, Economic Survey of Europe in 1984-85 (1985). The value of long-term capital inflow from commercial banks into Yugoslavia in 1984 is estimated from data contained in the National Bank of Yugoslavia (September, 1984).

[11]Available anecdotal evidence suggests that the IMF had to lobby hard to win a commitment from the private banks for new medium- and long-term credits.

[12]After hanging fire for several months, the loan was put together with strong pressure from the Bank of England to overcome objections by British banks.

[13] In addition to such limits on domestic demand components, quantitative limits were also set on foreign borrowing and foreign reserve changes in the Yugoslav-IMF Agreements and presumably in the Hungarian Agreements as well. Since the ultimate objective of these agreements was an improvement in the external economic situation, these kinds of quantitative limits were reflections of the desired or allowable pace of improvement expected by the IMF.

[14] For a discussion of inter-enterprise trade credit and liquidity crises in Yugoslavia, see Tyson (1977a). Tardos (1984) argues that especially during the squeeze on enterprise incomes that accompanied austerity in Hungary after 1980, inter-enterprise trade credit became a significant phenomenon there as well.

[15] The Khan and Knight article cited earlier contains a formal description of the major features of this model.

[16] In the Yugoslav case, the IMF negotiated a policy understanding on exchange-rate movements during the 1981-1983 period and, finally, adopted an explicit exchange-rate target in 1984.

[17] The IMF had at its disposal estimates of the overvaluation of the dinar from the computable general equilibrium (CGE) model developed by World Bank researchers. These estimates indicated that the dinar was overvalued by about 25 percent in 1980 despite a nominal devaluation of about 31 percent. By mid-1981, the inflation differential between Yugoslavia and its trading partners had more than offset the real effects of the devaluation. As a result of a devaluation in October 1982 under IMF pressure, the real effective exchange rate of the dinar fell by about 17 percent between the end of 1981 and the end of 1982, but this was not sufficient to eliminate the

overvaluation of the exchange rate suggested by model simulations. In the case of Hungary, the extent of overvaluation must have been uncertain in the minds of the IMF negotiators. There was a nominal devaluation against the dollar in 1981 and 1982, but the forint rate actually appreciated against the currencies of Hungary's major European trading partners during this period. In addition, the forint had appreciated against both the dollar and the European currencies in 1980, and there were no available model estimates of the extent of overvaluation stemming from this appreciation. Finally, given the soft-budget constraints and the long history of restricting imports from Western markets to goods for which there were few domestic or CMEA substitutes, it must have been difficult for the IMF negotiators to understand the role of the exchange rate in Hungary's system let alone to estimate its "equilibrium" value.

[18]Finally, it is at least possible, though nowhere documented, that the IMF was encouraged to adopt a more cautious role with the Hungarians so as not to stir up Soviet concern about or opposition to Hungarian membership in the IMF. If the IMF were perceived as forcing the Hungarians to adopt policies which they opposed for domestic or bloc reasons (and a large forint devaluation was arguably such a policy), then Soviet concern about the effects of IMF membership on Hungarian autonomy was a likely result.

[19]For empirical work on the links between devaluation and inflation in Yugoslavia, see Tyson (1977b), Tyson and Neuberger (1979), and Bajt (1985). Bajt argues that, although devaluation has an inflationary impact in Yugoslavia, the main reasons for increased inflation are the concentrated market structure that allows firms to increase their prices when price controls are relaxed and increases in personal incomes.

[20]See Table 2 for evidence on the behavior of inflation and real money conditions in Yugoslavia during the 1980-1984 period.

[21]Evidence indicating a decline in export subsidy rates in light manu-facturing, machinery, chemicals, metals, and food products is presented in Robinson.

[22]According to results in Kis, Robinson, and Tyson (1985), the ratio between the price received for dollar export sales and the price received for sales to domestic users fell in most of the major exporting sectors except machinery between 1981 and 1983. This evidence suggests a noticeable deterioration in export incentives during this period with some recovery in 1984 but not to 1981 levels.

[23]A debit of about \$1.2 billion was recorded in the errors and omissions category of the Yugoslav balance of payments with the convertible currency area in 1983. An average credit of about \$650 million was recorded for this category in 1981-82. See International Monetary Fund, International Financial Statistics, various issues.

[24]During the 1981-1983 period, both consumers and producers were con-fronted by a variety of new policies that restricted their ability to use foreign exchange holdings as they wished. For example, in 1982 limits were placed on the amount of foreign exchange that individuals could take out of the country; and enterprises were forced to hand over part of their foreign exchange earnings to the Federal Government to help service outstanding debt which it guaranteed.

[25]Several enterprise managers interviewed in Hungary by Tyson in May, 1985, indicated that interest rates had been unexpectedly increased sometime during the 1980-1984 period on the outstanding portion of long-term loans contracted earlier at lower interest rates.

[26]According to the National Bank of Yugoslavia estimates, interest rates behaved as follows during the 1980-1985 period:

	1980 August	1981 August	1982 June	1983 July	1984 July	1984 October	1985 January
Nominal long term rates	12.0	12.0	18.0	38.0	48.0	57.0	62.0
Inflation in retail prices	30.4	46.0	30.0	39.0	50.7	55.6	62.0

This evidence suggests that Yugoslavia began to adhere to the real interest rate condition imposed by the 1984 IMF agreement by the last quarter of the year. Interest rates taken from the National Bank of Yugoslavia (June, 1984, and June, 1985).

[27]Administrative control over the allocation of investment in Yugoslavia was weakened by inter-enterprise trade credit and other inter-enterprise forms of lending which made the final distribution of credit different from the one realized through administrative means. Also, the Yugoslav authorities did not have strong administrative controls over the distribution of enterprise retained income as the Hungarian authorities had. For these two reasons, it seems likely that the Hungarian authorities had better control over the micro allocation of investment than the Yugoslav authorities had.

[28]According to recent statistics reported by the United Nations, Hungary's imports from nonsocialist countries stagnated between 1981 and 1984. (United Nations, Economic Bulletin for Europe, 1985.) The difference between the United Nations and Robinson results may be attributable to the fact that a portion of Hungary's convertible currency imports came from socialist countries.

[29]The Yugoslav trade figures must be treated with caution and skepticism because of the anomalies introduced by the use of statistical exchange rates to convert trade flows denominated in convertible currencies other than the dollar into dollar values.

[30]Of course, this pattern of export growth is attributable in part to the recovery in convertible currency export markets that occurred in 1983-84 after the sharp recession in 1981.

[31]See, for example, the analysis of the effects of dinar overvaluation on export incentives and export growth in Robinson and Tyson (1985).

[32]Under competitive pricing regulation, prices on domestic sales could be raised only if export prices increased and export profitability increased in convertible currency trade. Thus firms were encouraged to eliminate exports with below-average prices or profitability so they could more easily raise their domestic prices.

[33]The stagnation in the dollar value of Hungary's convertible currency exports is partly the result of the appreciation of the dollar relative to the currencies of Hungary's major European trading partners. The dollar appreciation along with the slower growth of European markets relative to the U. S. market also, in part, explains why Hungary continued to lose market share in the developed countries as reported by Balassa (1985).

[34]According to data reported by the United Nations Economic Commission for Europe, Hungarian exports to nonsocialist countries increased in real terms at an average annual rate of 6.5 percent between 1980 and 1984. (United Nations, Economic Bulletin for Europe.) Recent estimates by Robinson show an average annual growth rate of 6.1 percent between 1981 and 1984. Most of the reported increase occurred in 1983 and 1984, after a stagnation in real

exports between 1980 and 1982. Finally, a dramatic increase in energy and fuel exports in 1983 attributable to a large increase in reexports of Iranian and Libyan oil is partly responsible for the apparent growth in real exports. (Wharton Econometric Forecasting Associates, 1984.) If fuel and energy exports are excluded, exports to the convertible currency area grew at an average annual rate of about 5.5 percent between 1980 and 1984 according to the United Nations data.

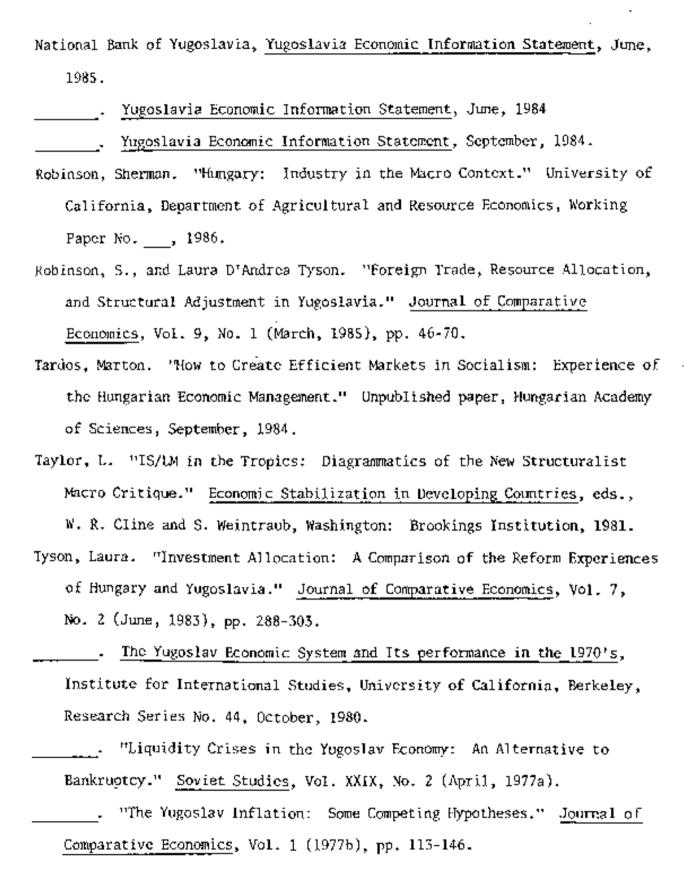[35]Evidence from enterprise interviews conducted by Tyson in May, 1985, support this interpretation. Enterprise managers reported that they had been under extreme pressure from state and party authorities to export even when it was unprofitable to do so and that their access to foreign exchange and investment credit was linked to their convertible currency export performance.

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