

## WORKER MANAGEMENT, ADMINISTERED PRICES, AND WORLD INFLATION\*

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### I. INTRODUCTION

Inflation is surely the most talked about economic problem today. It is more than a once-and-for-all increase in the cost of living. Inflation is a continual tendency for the general level of prices to rise. This trend, always a recurring theme in modern industrial economies, has become increasingly stubborn and pervasive in recent years. No market economies are immune, including Yugoslavia's and its unique market-oriented socialist worker-management model. Thanks to its income maximizing worker-managers who »administer prices« the Yugoslav economy is most receptive to the disease of inflation especially of the »cost push« or »administered price« variety. The purpose of this paper is to examine in what sense this assertion is in fact correct. I shall argue that inflation in Yugoslavia can not be fully explained by the behavior of worker-managers. Indeed, the price-raising activities of worker-managers which lead to domestic inflationary pressures may be, in fact, surface manifestations of more fundamental external disturbances in the world economy in recent years. The worker-management model is not necessarily inflation prone. It does not carry a clear threat of macroeconomic instability. Section II presents a brief overall view of worker-management. Section III discusses »administered price inflation«. Section IV examines recent Yugoslav experience against the internal and external environment, Section V presents the summary and conclusions.

### II. WORKER-MANAGEMENT: AN OVERVIEW

As a point of departure, a few words regarding worker-management are in order. They serve to put our discussion in perspective. Cor-

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porate governance is undergoing transformation. From small work-groups in the business enterprise for the assignment of tasks and sometimes distribution of income as in Great Britain and other European countries to full-blown workers-management as it is in Yugoslavia. The country's unique system of worker-management was put into place with the passage of the «Basic Law in the Management of Enterprises, by the Working Collectives» on June 27, 1950 by the People's Assembly of Yugoslavia. The law transferred the operation and management of all factories and in general all economic enterprises in the country to persons employed in such enterprises. The Law and its subsequent amendments is based on the principle that though an economic enterprise is public property it is managed on behalf of the community by the firm's employees. In coordinating the activities of these worker-managed enterprises, the Yugoslavs have managed to use the market system and prices. In effect, they have shown that private enterprise is not necessary for the use of the price system. This in essence is the «Yugoslav model» which has set the country on a new course since its abandonment of the «Soviet Model.»<sup>1)</sup>

As any enterprise in a market environment, the worker-managed Yugoslav enterprise in order to survive is expected to cover its costs, including a minimum level of wages. The worker-managers may search out new markets, diversify production, decide upon profit distribution as among wages (or better incomes) and reinvestment in the growth of their firm. They buy their inputs freely on the market typically from other firms selling on the market. Yugoslav enterprise collective hires labour but with the difference that above minimum wages, worker-managers receive income in the form of shares in profits which may vary according to occupation.

Entry of new firms and foreign trade including joint ventures with foreign firms stimulate competition and curb monopoly, thereby keeping domestic costs and prices in line with the international economy. Worker-managers are also subject to varying control and influence through the political processes including community and trade union influence, which may at times compete in importance, especially in advocating higher skill differentials, with the workers' council.

<sup>1)</sup> See, for example, Branko Horvat, *An Essay on Yugoslav Society* (International Arts and Sciences Press, Inc., New York, 1969); Rikard Lang and Dragomir Vojnić, «Neki aktuelni problemi razvoja privrednog sistema na temeljima socijalističkog samoupravljanja», Dragomir Vojnić, editor, *Aktuelni problemi privrednih kretanja i ekonomske politike Jugoslavije* (Ekonomski Institut and Informator, Zagreb, 1976); Dimitrije Dimitrijević and George Macesich, *Money and Finance in Contemporary Yugoslavia* (Praeger Press, New York, 1973); George Macesich, *Yugoslavia: Theory and Practice of Development Planning* (University Press of Virginia, Charlottesville, 1964); *Proceedings and Reports of the Center for Yugoslav-American Studies, Research, and Exchanges*, Vols. I-XI, George Macesich, editor (Florida State University, Tallahassee.).

### III. ADMINISTERED PRICE INFLATION<sup>2)</sup>

The reasoning underlying «administered price inflation» may be summarized by the now familiar term "Cost-price spiral inflation" discussed within the context of the American model. Although there are many variations on this theme, their common thread is the belief that the pricing mechanism is becoming progressively less sensitive. Again simplifying the various positions taken, three variations of the «cost-push» theme appear sufficiently important from a public policy viewpoint to warrant consideration. One is that union pressures for wage increases are the causal element in inflation. The second is that oligopolistic sectors administer prices and so are the main causal element in inflation. The third incorporates elements of the first two and tangentially places the blame for inflation on the existence of both unions and oligopolistic industries.

The first variation argues that unions are responsible for inflation in that they fail to recognize that wage increases which go beyond overall productivity gains are inconsistent with stable prices. Thus the argument is that unions push up wages, which raises costs and therefore prices. The more sophisticated argue that since the monetary authorities are committed to a policy of «full» employment they will expand the money supply so as to make possible the sale of the old output at the new price level.

The second variation argues that prices are set in a different way in those sectors of the economy which are composed of many firms than they are in industries where there are only a few major producers. According to this argument prices set by oligopolistic industries are «administered» so that they are excellent conductors of inflationary pressure. They are relatively immune to traditional anti-inflationary policies in that their prices, having once reached a high level are stickier in declining when demand declines than are those of competitive industries.

The third variation argues that both unions and oligopolistic industries are primarily responsible for inflation. Unions, so this argument goes, lodge themselves in oligopolistic industries and share in the «spoils» derived from the demand side. Thus unions in such industries may take advantage of the inelastic or expanding demand conditions on the product market to obtain higher wages without fear that the entry of new firms will reduce union wage gains or cause more unemployment. According to this variation, the product market permitting, the oligopolist will grant a higher wage rate as a means of avoiding a more costly strike. Moreover, in contradistinction to more traditional views, such unions need not only be old craft unions, they may be the new industrial unions which many economists have tended to treat as relatively powerless in setting excessive wages. It is for this reason, presu-

<sup>2)</sup> See, for example, George Macesich, «Inflation: Theory and Reality»; Marshall R. Colberg, «Indexing in a World of Inflation»; Robert D. Auerbach, «The Processes of Inflation»; in *Proceedings and Reports of the Center for Yugoslav-American Studies, Research, and Exchanges*, Vol. 9, George Macesich, editor (Florida State University, Tallahassee, 1975).

mably, that the advent of new industrial unions, when coupled with oligopolistic industries, have changed the American (and presumably world) economy so greatly as to largely frustrate attempts to control inflation along traditional lines. In effect, the arrangement implicitly assumes that the pricing mechanism is becoming progressively less fluid or »automatic«.

Still other views of inflation attempt to synthesize the various views hoping thereby to achieve reality. According to one such view, prices and wages are not set in the traditional manner. They are set rather with reference to some »mark-up« over the cost of living. Accordingly, inflation is generated whenever labour and management attempt to get more than 100 per cent of the selling price; wages and prices are continuously raised thereby generating a continuing process of inflation.

The process of inflation, though it may originate in the non-competitive sector where market power is sufficient to raise prices and wages, will »spill over« into the competitive sectors, thereby gaining momentum.

This may occur, it is argued, either from the demand or cost side, or both. Since the prices of the products and services of the non-competitive sector rise, there will be a change in the composition of demand. Consumers will switch their demand to the products and services produced by the competitive sector so that prices rise in this sector. There is excess demand in the competitive and a deficiency of demand in the non-competitive sector. Owing to factor immobility, however, unemployment in the non-competitive sector will not cause wages or prices to fall to the extent that unemployment persists.

Attempts by the government to remove excess demand by traditional fiscal and monetary policy so as to check the over-all price rise, while removing excess demand in the competitive sector, increase still further the unemployment in the non-competitive sector.

The same situation will prevail even if the »spill-over« occurs on the cost side. Thus the »spill-over« will occur because wage or price rises in the non-competitive sector are signals for labour and employers in the competitive sector to do the same in order to protect, if not increase, their relative income shares. Accordingly, the government is confronted with the dilemma of either inflation or unemployment.

The above views do not consider as practical the argument that the monetary authority by refusing to expand the money supply could »nip-in-the-bud« an inflationary spiral. The bases for such an assertion are, first, that velocity would increase, thereby frustrating the efforts of the monetary authority; second, even if velocity could no longer increase, the monetary authority could probably overcome the strong institutional forces making for rigidity in the pricing system only at the risk of what might be serious depression.

In order to control inflation, therefore, steps should be taken to remove institutional rigidities, including unnecessary regulations in many industries, from within the economic system. It is only then, presumably, that control along more traditional lines would have effect.

We may turn now to an appraisal of these views of inflation by drawing on both economic theory and recent experience. Although the theoretical and empirical evidence is not inconsistent with the above views

of inflation, it does suggest that their common link is the existence of favorable aggregate demand conditions which permit inflation to continue. This in turn suggests that increases in the aggregate level of demand are the most likely source of inflation. However, opinion regarding the causes of the increase in the aggregate level of demand is divided between adherents of the Keynesian-type of income expenditure theory and adherents of the quantity theory of money.

The fundamental discovery of those de-emphasizing demand-pull or the traditional view of inflation is that prices and wages go up when somebody raises them. There is a general agreement as to the facts. We take it to be true that sellers will not raise their prices without limit nor in all circumstances. What are limits and circumstances under which sellers will raise their prices? It is precisely to the answering of this question that economists have directed their labours.

In effect, the consensus is that the state of demand will set the limit and circumstances under which the sellers can »raise« or »lower« their prices. The state of demand permitting, sellers can »raise« their prices without being penalized by a loss of sales and income, so they decide to »raise« prices. If, on the other hand, the state of demand permits a rise in prices only at the expense of losing net income, sellers will decide not to »raise« prices. There is then no conflict between the view that prices rise because somebody raises them, and the view that somebody decides to raise them because the state of demand permits such a rise without losing sales and incomes.

The views discussed in this paper which de-emphasize the demand-pull approach to inflation do not provide an alternative theory of inflation which is independent of the state of demand. They seem to have gained currency during the post-World War II period in the American economy (and elsewhere especially since the 1960's) when a favorable state of demand was assured by the existence of large liquid assets holdings by individuals and firms. The assurance of a favorable state of demand was assured by the existence of large liquid assets holdings by individuals and firms. The assurance of a favorable state of demand permitted price rises without the loss of incomes, and so sellers decided to »raise« prices. In effect, the decisions of sellers to »raise« prices is simply a form whereby a disequilibrium situation was brought into balance. In the absence of a favorable state of demand, however, such a decision may result in »distortions« in the relative price structure, or a one-time increase in the general level of prices coupled with a loss of sales and increased unemployment. There is nothing in the process whereby sellers decide to »raise« prices which will assure a favorable state of demand. It is essentially for this reason that many economists argue that these views have descriptive but not analytical validity.

#### IV. YUGOSLAV EXPERIENCE

##### A. Internal Environment

Attempts to test empirically the cost-push (or wage-push) model

against Yugoslav experience have not met notable success.<sup>3)</sup> This is not surprising. In the first instance quantifiable data on the ability of worker-managers to push up wages and costs are not available. In the second instance all workers in a Yugoslav firm share in the wage, or better income, setting process. Finally none of the studies have demonstrated that workers-managers by simply raising prices thereby assure a favorable state of demand. These studies do suggest that it is the existence of a favorable state of demand which enables worker-managers to behave in an inflationary manner.

One study attempts to sort out the case for demand-pull or cost-push inflation by using quarterly data for the period 1963—70 and monthly data for the post reform period 1966—70, with mixed results.<sup>4)</sup> The study also attempts to estimate simple Phillips curves so as to gauge the trade-off between the rate of inflation and the rate of unemployment, aside from the obvious difficulty of attaching meaning to such results for Yugoslavia thanks to its large unemployment pool. For example, it is apparently somewhere in the neighborhood or beyond 6 per cent unemployment (in 1967 380,000 were registered as seeking employment) that incomes or wage rates become flexible. Even so, such trade-off as occurs at the higher unemployment rates takes place through the political and legal process rather than the labour market. Moreover, labour in the country is not particularly mobile. In fact, labour mobility is probably greater between Yugoslavia and other, especially European, countries than between the several republics in the country.

The study shows, moreover, little, if any, relationship either between job vacancies and the rate of growth of personal incomes or rate of inflation and the rate of unemployment. Quarterly data suggest simultaneous movements in prices and wages, though monthly results indicate a lag of a month and a half for prices.

At this point, it is useful to compare the results of the Phillips-curve analysis for Yugoslavia with that of other countries. Table I summarizes results for short- and long-run trade-offs between effects of wage inflation and a rise in the unemployment rate reported in several studies.<sup>5)</sup>

<sup>3)</sup> Jože Mencinger, «Inflacija potražnje ili inflacija troškova?» *Ekonomika Analiza*, 1-2, 1971, pp. 1-22; Laura D'Andrea Tyson, «The Yugoslav Inflation: Some Competing Hypotheses», *Journal of Comparative Economics*, Vol. 1 No. 2, June 1977, pp. 113-146. See also the writings of Alexander Bajt, especially «Patterns of Instability in Socialist Countries», A. Ando, et al., editors, *International Aspects of Stabilization Policies* (Federal Reserve Bank of Boston, Boston, 1974), pp. 357-380.

<sup>4)</sup> Mencinger, *op. cit.*

<sup>5)</sup> See Tyson, *op. cit.*, pp. 120-139.

Table 1

FIRST-YEAR AND LONG-RUN EFFECTS ON WAGE INFLATION OF  
A 25% RISE IN THE UNEMPLOYMENT RATE

Country	Change in Wage Inflation (percentage points)	
	First-year	Long-run
Belgium	-1.7	-3.8
Canada	-1.5	-4.9
Germany	-1.0	-2.0
United Kingdom	-0.5	-0.9
United States	-0.3	-1.2
Chile*	-1.3	-1.6
Yugoslavia	-1.1	-1.7

\* The elasticity of consumer prices with respect to wages is estimated at 0.26. This estimate is based on price equations which show an elasticity of 0.41 of wholesale prices with respect to industrial prices, an elasticity of 0.78 of industrial prices with respect to wages, and an elasticity of 0.82 of consumer prices with respect to wholesale prices.

Source: Laura D'Andrea Tyson, «The Yugoslav Inflation: Some Competing Hypotheses», *Journal of Comparative Economics*, Vol. 1, No. 2, June 1977, p. 128.

Allowing for differences in data measurement, techniques, and problems related to cross-national differences, the results are, nevertheless, suggestive.

Tyson, drawing on the studies by Penry for Belgium (1963—72), Canada (1964—72), Germany (1963—72), U. K. (1962—72), U. S. (1960—72), and by Corbo for Chile (1962—72) presents estimates for Yugoslavia (1962—72).<sup>6)</sup> To judge from the results in Table 1, which show the reduction in wage inflation predicted by a 25 per cent increase in the average unemployment rate, the experience in Chile and Yugoslavia are similar. In the short-run the largest reductions in wage inflation as a result of increases in unemployment are in Belgium and Canada, followed by Germany, Yugoslavia, and Chile.

In the long-run, the results suggest again that Belgium, Canada lead in the largest reduction in wage inflation induced by increases in unemployment. They are closely followed by Germany, Yugoslavia, and Chile. The smallest reductions, apparently, are observed for the U. S. and U. K. The similarity of the short-run and long-run results for Yugoslavia and Chile can be accounted for, at least in part, by the low elasticity linking wages and consumer prices in those countries.<sup>7)</sup>

What these results suggest is that Yugoslavia shares in the experience of other countries in that an increase in unemployment is likely to

<sup>6)</sup> George L. Penry, «Determinants of Wage Inflation Around the World», *Brookings Papers on Economic Activity*, 1975, pp. 403-447; Vittorio Corbo, «An Econometric Model of the Chilean Inflation», unpublished Ph. D. Dissertation, M. I. T., 1971.

<sup>7)</sup> Tyson, *op. cit.*, p. 128.

have a favorable but small effect on reducing wage inflation. For reasons already cited care is indicated in implementing these results and/or in drawing sweeping policy conclusions.<sup>8)</sup> Indeed, to the extent that a short-run trade-off exists between inflation and unemployment, it cannot be exploited in a frictionless world if policy is to be socially optimal. Such exploitation would require a policy based on deception and thus necessarily would be sub-optimal. Even a situation characterized by sticky wages and prices such as Yugoslavia and in other countries would not allow a very useful role for countercyclical policy according to some observers.<sup>9</sup> In the long-run, moreover, virtually all the theoretical evidence suggests a virtually vertical long-run Phillips curve and which also seem to be supported by recent empirical evidence for some countries.<sup>10)</sup>

Consider now the relationship between Yugoslav enterprise pricing and the rate of changes in prices. To judge from the evidence presented by Tyson for the period 1962-72 approximately 62-66 per cent of the variance in the rate of change in producer prices in the Yugoslav social sector can be explained by a model which contains labour costs, labour productivity, material costs, and capacity utilization, as explanatory variables.<sup>11</sup> These results are all the more interesting in view of various distortions which occurred during the period as a result of various temporary price controls and price freezes.

The estimated coefficients reported by Tyson indicate that a 1 per cent increase in the rate of growth of wages gives rise to a 0.4 increase in the rate of growth of prices, while a 1 per cent increase in the rate of growth of standard labour productivity leads to a 2.8 per cent decline in the rate of growth of prices.<sup>12</sup> According to the study capacity utilization suggests an increasingly steep trade off with inflation as higher levels of product demand are reached. An increase of one percentage point in the level of capacity utilization from 93.5 to 94.5 per cent results in only 0.13 percentage points while an increase of one percentage point in the level of capacity utilization from 95.2 to 96.2 yields an increase in the rate of inflation of approximately 1.90 percentage points. There is thus little question but that incremental increases in product demand in already tight supply conditions are quickly converted into powerful inflationary pressures.

<sup>8)</sup> The theoretical and empirical limitations with which Phillips-curve studies are burdened is discussed and summarized in Anthony M. Santoremo and John J. Seater, «The Inflation-Unemployment Trade Off: A Critique of the Literature», *The Journal of Economic Literature*, June 1978, pp. 499-544.

<sup>9)</sup> Robert J. Barro, «Long-Term Contraction, Sticky Prices, and Monetary Policy», *Journal of Monetary Economics*, July 1977, pp. 305-316; Bennett T. McCallum, «Price-Level Stickiness and Feasibility of Monetary Stabilization Policy with Rational Expectations», *Journal of Political Economy*, June 1977, pp. 627-634.

<sup>10)</sup> See, for example, Barro, «Unanticipated Money Growth and Unemployment in the U. S.», *American Economic Review*, March 1977, pp. 101-105, and Martin S. Feldstein, «The Importance of Temporary Layoffs: An Empirical Analysis», *Brookings Papers on Economic Activity*, 1975, pp. 725-744.

<sup>11)</sup> Tyson, *op. cit.*, pp. 139-143.

<sup>12)</sup> The wide divergence between changes in the rate of growth of wages and changes in labour productivity is accounted for by Tyson as owing to the «fact that the wage term is influenced by changes in payments to labour which are not changes in fixed accounting wages and by the fact that factor shares varied during the estimation period». *op. cit.*, p. 142.

The price variable used by Tyson to represent material costs in the tests is an import price index constructed by Mencinger in 1975. The coefficient estimates are of the correct signs but not always significant. It does suggest that a 1 per cent increase in the rate of growth of import prices gave rise to 0.33 per cent increase in the rate of growth of Yugoslav producer prices.

Insight into the role of raw material costs in price changes is provided by Sofija Popov in her study for seventeen branches of industry for the period 1960-75.<sup>13</sup> Estimates based on quarterly data indicate that price increases during the period can be accounted for by material cost increases. Indeed in only four branches of industry is the  $R^2$  less than 60. To judge from the evidence the majority of industries under review register greater coefficients of material prices than the input-output table would require. In fact, in some of the industries these coefficients are greater than unity. For example, in five branches of industry the coefficient is greater than one per cent and in only two is it less than 0.5 per cent. The average mean lag of prices to increases in materials costs is apparently less than a quarter.

Though statistically significant, labour cost effects on price changes do not appear as important as raw material costs. In fact, considerable variation exists as between the several branches of industry as indicated by the  $R^2$  ranging from .48 for the tobacco industry to .88 for the metal industry. More than half of the industry branches under review yield insignificant  $R^2$ 's. Moreover, price changes respond slowly to labour cost changes. In only one branch of industry is the response less than a quarter and a half, with many registering a response of more than four quarters. To be sure material costs do carry a component of labour cost.

Both the Tyson and Popov studies employ the traditional pull-cost pricing model underlying most empirical studies of price determination. In such a model prices in the long run are determined by unit costs which in turn depend on production conditions and the input prices of variable factors of production. In the short-run Tyson modified the model so as to allow product conditions to exert an independent influence on price inflation, over and above the influence exerted through demand-induced increase in factor costs. According to Tyson the best excess-demand variable as judged by overall statistical performance is a lagged nonlinear capacity-utilization variable.<sup>14</sup>

The results produced by these empirical studies suggest at first glance a similarity to our second and third variations of the «cost-price-spiral-inflation». The limited number of major producers in the social sector act as oligopolists and «administer prices». Their worker-managers share in the «spoils» derived from the demand side. They take advantage of the inelastic or expanding demand conditions on the product market to obtain higher incomes without fear that the entry of new firms will reduce their gains or cause more unemployment.

<sup>13)</sup> Sofija Popov, «Jednačine kretanja cena u industriji Jugoslavije», *Economic Analysis*, No. 1-2, Vol. XII, 1978, pp. 71-96.

<sup>14)</sup> This variable takes the form:  $NCLU_{t-1} = 1/(r - CU)_{t-1}$  where  $r$  is some critical maximum limit on capacity utilization and  $CU$  is actual seasonally adjusted capacity utilization. Tyson *op. cit.* p. 140.

The descriptive rather than analytical nature of the oligopoly argument is clear. What are the limits to the worker-managers in quest for ever higher incomes? In absence of a favorable state of demand in the economy their decision to «raise» their incomes and prices may well result in «distortions» in the relative price structure, or a one-time increase in the general level of prices coupled with a loss of sales and increased unemployment. It is not enough that worker-managers have power to «raise» prices they must have *increasing* power to do so if the inflationary spiral is to continue unabated. This in turn must be supported by velocity increases and/or continued distortions in the relative price structure, thereby validating the inflationary process.<sup>15</sup>

As to the type of inflation which can best describe the country's experience, the theoretical and empirical evidence is not inconsistent with several views of inflation. Their common link does hinge on the existence of a favorable state of demand which allows inflation to continue. Increases in the aggregate level of demand fueled by monetary factors appear to be the most plausible explanation. This does not exclude the view which argues that differential growth in productivity among sectors and firms when coupled with personal income increases in all sectors and firms as the source of inflationary pressure.<sup>16</sup>

Support for this view leans on the system of income determination and price formation in the country.<sup>17</sup> Worker-managers in firms, especially those that are capital-favored, where productivity increased, raised their incomes. This rise «spilled over» into less productive firms where worker-managers, in order to protect (if not to increase) their relative income shares, sought and obtained price increases. These price increases in turn increased costs to other firms and so to further price increases.

In effect, a «cost-push inflation» model modified so as to include significant elements of the administered price version of that model would appear to be appropriate. The monetary authorities simply react by increases in the money supply so as to validate price increases. Thus, in effect, the monetary authorities by providing a favorable aggregate demand environment justify whatever price increases occur. There is no fear of losing sales or incomes on the part of worker-managers, especially for those in capital favored firms.

<sup>15</sup> For an interesting and useful discussion of the role of increasing demand and the pattern of inflation under price controls see Ljubomir Madžar, «The Pattern of Inflation Under Price Controls», *Economic Analysis*, No. 1-2, Vol. VIII, 1974, pp. 91-96. Especially «... In periods of rapidly increasing demand in a market the prerequisites of perfect competition cannot be met, even if they were completely fulfilled prior to the assumed demand increase. Since the supply cannot instantaneously adjust to an increase in demand, every firm acquires a sort of monopolistic position since nobody else will take over its share of demand even if it decides to raise the price somewhat». p. 96.

<sup>16</sup> See, for example, Branko Horvat, «Diferencijalno povećanje produktivnosti privrednih grupacija kao izvor inflacije», *Problemi privrednog razvoja i privrednoga sistema Jugoslavije*, Dragomir Vojnić et al., editors (Zagreb: Ekonomski Institut i Informator, 1977).

<sup>17</sup> See, for example, O. Kovač i Zoran Popov, *Neka obeležja privrednih kretanja u sedamdesetom godinu* (Beograd: Institut Ekonomskih Nauka, 1976), p. 43.

Consider now the monetary situation which has, in effect, assured a continuing favorable aggregate demand environment. The period since 1960 and particularly since 1971 is characterized by monetary instability not only in Yugoslavia but in the world as a whole. In Yugoslavia over the six-year period 1971-76, for example, the average annual increase in the money supply ( $M_1$ ) ranged from 14.1 per cent to 48.4 per cent while the reserve base (B) increase ranged from 10.1 per cent to 35.0 per cent.<sup>18</sup> Indeed, with the exception of 1971 the rates of monetary expansion exceed the expansion of reserve money. In fact, during the most pronounced rate of increase in the stock of money (1972, 1973, 1976) the average annual growth rates of  $M_1$  (i. e. currency in circulation + float) and B (i. e. monetary base under control of the National Bank of Yugoslavia) are 45.7 per cent and 29.0 per cent respectively, whereas in the years of an unexpectedly more moderate growth (1971, 1974, 1975) the average annual rate of increase in  $M_1$  and B is 23.0 per cent and 15.4 per cent respectively.

Đimičević and I have argued elsewhere that monetary policy is a very potent instrument for influencing the aggregate demand environment in Yugoslavia.<sup>19</sup> Fiscal policy has been neglected in part as a result of the central planning period and in part because strict Keynesian theory never has been dominant in Yugoslavia. The country's financial transmission mechanism is based mainly on money real good portfolio adjustments of individual balance sheets, excluding financial assets as a significant choice of holding assets instead of money. Second, as a result of these peculiarities of the transmission mechanism, effects of changes in the supply are shortlagged and more directly related to changes in expenditures for goods and services-expenditures for investments in fixed assets and then expenditures for consumption. These peculiarities are consistent with monetarist view of factors significantly influencing the aggregate demand environment. They represent the effects of changes in money supply under specific conditions of an undifferentiated financial structure and a rigid system of interest-rate formation.

The above process of adjustments of demand to the supply of money contains also peculiarities in the demand function and supply fun-

<sup>18</sup> Marko Voljč, «Comparative Analysis of Money Multipliers in Yugoslavia», *National Bank of Yugoslavia Quarterly Bulletin*, Vol. V, No. 4, October 1977, pp. 23-33; Rebecca R. Ratliff, «A Comparative Analysis of Money Multipliers: The United States and Yugoslavia», *Proceedings and Reports*, Vol. 11-12, George Macesich, editor (Florida State University, Tallahassee, forthcoming); Petar Madžarac, «Business Banks and the Constitution of 1974», *Proceedings and Reports*, Vol. 9, George Macesich, editor (Florida State University, Tallahassee, 1976), pp. 95-97; Blagoja Nanevski, «Recent Developments in the Yugoslav Monetary System», *Proceedings and Reports*, Vol. 9, George Macesich, editor (Florida State University, Tallahassee, 1976), pp. 98-102; Tihomir Jovanovski, «Monetary Equilibrium in a Socialist Economy», *Proceedings and Reports*, Vol. 10-11, George Macesich, editor (Florida State University, Tallahassee, 1977), 25-27.

<sup>19</sup> Đimičević and George Macesich, *Money and Finance in Contemporary Yugoslavia* (Praeger Publishers, New York, 1973).

tion of money, as a result of institutional peculiarities.<sup>20</sup> Demand for money depends mainly on income, the interest rate being a rather insignificant variable. Because of a changing pattern of income distribution by sector (especially an increasing share of individuals in income distribution), demand for money appears at first hand as rather unstable, which may contradict the monetarist view in this respect. This is, however, consistent with the monetarist approach if the stability of demand for money is interpreted as stability of a demand function for money under stable institutional conditions. As for the supply function of money, it too appears unstable in the short-run owing to a changing institutional framework and a strong pressure for government borrowing from the central bank in the long run, however, it does show that changes in highpowered money are the dominant determinant of the money supply.

Under these conditions monetary policy traditionally has been the main instrument of indirect economic policy intervention. Empirical evidence shows that monetary policy may be efficient in implementing monetary policy targets (changes in money supply being the main target of monetary policy) if strong government pressure is excluded. Thus, the question of whether creation of money is under control of monetary authorities (whether it is an exogenous variable in the monetary model) or cannot be controlled by these authorities (it is an endogenous variable) has a promonetarist answer. This answer, however, must be qualified for reasons of «fixed» exchange rates between the dinar and other currencies and international monetary interdependence focusing on the world stock of money. But more on this issue below.

The problem of efficiency of monetary policy in implementing economic policy goals is more complicated. Empirical evidence suggests that the efficiency of monetary policy in this field is less than in implementing target. This is, however, mainly because policy measures always have been taken too late and therefore necessarily have been too strong. In addition, under changing institutional conditions monetary measures usually have not been followed by the appropriate adjustments in other economic policy measures. For all of these measures, monetary policy usually has had overshooting effects upward or downward, which suggests that monetary policy may be fairly efficient if properly used, not that it is an inefficient instrument of economic policy.

This may be illustrated by the evidence on per cent changes in the money supply by sectors for the years 1959-76 summarized in Table 2.<sup>21</sup>

<sup>20</sup> See also George Macesich and Joan Haworth, «Komparativna analiza tražnje novca u Jugoslaviji i u drugim zemljama», *Ekonomika Misao*, 1971, 1, pp. 41-57; Ljubica Teslić-Nadlački, «Tražnja novca sektora preduzeća», *Ekonomika Analiza*, Vol. VIII, No. 1-2, 1974, pp. 65-78; Ljube Trpeski, «Some Determinants of the Demand for Money by the Business Sector in Yugoslavia», *Proceedings and Reports*, Vol. 10-11, George Macesich, editor (Florida State University, Tallahassee, 1976-77), pp. 28-31.

<sup>21</sup> I draw on the evidence and analysis presented by Dimitrije Dimitrijević, «Targets of Monetary Policy in Yugoslavia», presented in the joint University of Belgrade — Florida State University Research Seminar on Comparative Economic and Monetary Stability, Belgrade, June 1977.

Table 2  
CHANGES IN MONEY SUPPLY BY SECTORS<sup>1</sup>

(End of Year, Per Cent Change)

	Total Money Supply		Money Holdings By				Total Minus Col. 3
	Observed	Beyond (+) or Below (-) Change in Demand for Money <sup>2</sup>	Socialist Enterprises	Governments	Other Public Persons	Households	
	1	2	3	4	5	6	7
1959	14.5	-6.9	-0.1	51.0	29.3	23.5	28.7
1960	23.4	4.6	20.7	166.9	6.2	9.5	25.5
1961	17.6	0.9	25.1	-41.7	29.1	31.7	12.2
1962	35.0	20.4	32.8	28.2	59.9	15.6	36.9
1963	29.0	6.3	14.0	92.0	36.0	31.2	40.7
1964	19.1	-10.6	16.9	-6.2	25.8	24.9	20.5
1965	4.2	-20.1	21.7	-31.4	-12.3	10.6	-6.6
1966	6.2	-14.8	-3.7	36.5	-9.4	34.3	14.8
1967	-5.6	-9.8	-27.0	-9.0	9.8	14.5	10.1
1968	26.1	16.8	31.2	115.5	3.9	20.5	23.6
1969	11.7	-5.2	-4.0	16.1	11.9	25.3	19.8
1970	20.1	0.8	7.9	33.8	19.2	25.7	25.2
1971	14.9	-11.6	2.0	5.6	24.3	21.4	19.5
1972	40.5	17.1	76.5	7.4	22.6	28.1	29.6
1973	37.3	10.0	55.9	37.3	38.0	23.3	29.6
1974	26.0	-5.3	24.2	39.2	30.4	21.0	26.9
1975	33.2	7.9	57.0	-0.9	37.9	21.1	21.5
1976	53.0	34.2	94.6	36.5	32.5	19.7	26.5

Source: Dimitrije Dimitrijević, «Targets of Monetary Policy in Yugoslavia», presented in the Joint University of Belgrade-Florida State University Research Seminar on Comparative Economic and Monetary Stability, Belgrade, June 1977.

<sup>1</sup> Sectors are defined as institutional sectors, as in the Flow of Funds Accounts of the National Bank of Yugoslavia.

<sup>2</sup> The change in observed money supply corrected by the change in nominal GNP (representing the approximate assessment of the change in demand for money). Thus, the figures represent higher or lower per cent increase in money supply than the change in demand for money.

The relative stability in money holdings by the household sector is clear as is the instability of money holdings by socialist enterprises. It appears that socialist enterprises are, in effect, residual holders. This does not mean that socialist enterprises are passive in adjusting their money balances. It does mean that they apparently cannot make adjustments in their money balances efficiently. Lack of an effective money and capital market and effective interest rates creates uncertainty about the availability of credit and thus access to needed resources. One consequence is that socialist enterprises hold excess money rather than paying off debts to financial institutions. Another is that unrealistic interest rates create excess demand for credit, thereby adding to uncertainty and corresponding problems of borrowers.

The socialist enterprises, as Dimitrijević well states, do not have an incentive to decrease their money balances through financial transactions. Neither are they able to add to their money balances in the event that other sectors decide to increase their holdings in the face of an insufficient increase in money supply. As a result, socialist enterprises tend to hold extra balances during monetary expansion and less than desired balances during monetary contraction.

What then do these enterprises do with their undesired money balances? The answer is that they attempt to rid themselves of these excess balances by increasing expenditures on fixed investments. Indeed, the most direct effect of increases in the rate of growth of the money supply is an increase in expenditures on fixed investment by socialist enterprises. Dimitrijević reports that for the period 1964-71 the coefficient of determination  $R^2$  for this relationship is .53 within the same month and an  $R^2$  of .43 for total expenditures.

There is, however, a ceiling imposed on socialist enterprises and their expenditures on fixed investment so that adjustment to excess money balances via this route is limited. Regulations imposed in 1975-76 serve to reinforce the ceiling, thereby further limiting the ability of these enterprises to adjust their excess money balance by increases in fixed investment. The effectiveness of these regulations is suggested in a slowdown in fixed investment expenditures in the face of strong monetary expansion. Such measures have not eliminated the desire and necessity on the part of socialist enterprises to adjust their money balances. The question is in the form which such adjustment will take place in the face of an inadequate money and capital market in the country. Administrative intervention is not a substitute for active and functioning money and capital markets.

### B. External Environment

Important as these internal factors are to an understanding of inflation in Yugoslavia, they may well be only surface manifestations of more fundamental world wide disturbances. Yugoslavia as a country on «fixed» exchange rates heavily dependent on international trade and receiving significant capital inflow from abroad is a coparticipant in

the common process of world inflation.<sup>22</sup> It shares with other countries with «fixed» exchange rates the common world money supply. As a relatively small country, inflationary forces originating abroad «spill into» the economy from the outside. It does not share the characteristic of large countries whose internally generated inflationary forces «spill over» into the rest of the world. Under a system of «fixed» exchange rates there really is only one type of inflation and that is inflation of the entire system.

For such countries as Yugoslavia this means that internal price levels are at first determined by the external price level. The internal price level must be of a value relative to the external price level such that payments, including capital flows, are in balance. Consequently, the internal money supply is determined by external conditions, but its composition may be affected by internal monetary circumstances. Nonetheless, a special explanation for domestic disturbances can arise only if internal prices move differently from external prices.

If a country is not on fixed exchange rates, the situation is different. Internal monetary changes affect the price level and through it exchange rates, so the price level is no longer rigidly linked to price levels abroad.

Many qualifications could be added to the above without invalidating the argument that as long as a «fixed» exchange rate discipline is maintained and as long as monetary authorities act to stem drains of international reserves before devaluation becomes inevitable, there will be no permanent effect of internal monetary policy on internal prices in such small countries as Yugoslavia. The concept of a world supply of money with countries linked by fixed exchange rates is useful even if oversimplified—especially since 1973 when major countries have floated their currencies vis-a-vis one another. The facts are that monetary authorities in the major countries have behaved far less independently than our theory of floating rates would predict. Indeed the international monetary system since 1973 has functioned more like a fixed-exchange rate system than as a textbook system of floating rates.<sup>23</sup>

Thanks to the International Monetary Fund we do have estimates of the rate of growth of what it calls the world money supply.<sup>24</sup> It is computed as a weighted average of the growth rates of the money supply in member countries. The evidence on the average rates of growth of the world money supply accords well with inflation rates for three di-

<sup>22</sup> To be sure, Yugoslavia (along with other countries in the 1970's) passed over to a system of «fluctuating rates» on July 12, 1973. See Marijan Korošić, «Politika tečaja dinara»; Mijo Sekulić, «Kretanje strukture uvozne zavisnosti i globalne konkurentnosti jugoslovenske privrede»; Ante Čičin-Sain, «Utjecaj doznaka radnika i seljenika na razvoj uvozne zavisnosti i konkurentne sposobnosti jugoslovenske privrede, 1966-1977». *Uvozna ovisnost i konkurentna sposobnost jugoslovenske privrede*. Mijo Sekulić i Dragomir Vojnić, editors, (Savezni ekonomski savjet, Zagreb, 1978).

<sup>23</sup> Arnold C. Harberger, «A Primer on Inflation», *Journal of Money, Credit, and Banking*, November 1978, p. 511.



fferent periods for sixteen industrial countries and twenty-eight less developed countries. During 1952-67 when inflation rates hovered at 2-3 per cent per year, the world money supply was increasing at about 7 per cent a year. During 1967-72 when the rate of inflation increased to about 3.5-4.5 per cent, the world money supply rose to about 10 per cent per year. During 1972-76 when the average inflation rate increased to about 10-14 per cent, the world money supply increased to 12.5 per cent per year. It does seem reasonable to conclude that world monetary expansion is a factor—albeit an important factor, in generating world inflation.

Table 3

## AVERAGE ANNUAL INFLATION RATES: YUGOSLAVIA

(Per Cent Per Annum)		
1952—1967	1967—1972	1972—1975
1952—53 3%	1967—1968 4%	1972—73 19%
1953—54 11%	1968—69 8%	1973—74 22%
1954—55 5%	1969—70 13%	1974—75 18%
1955—56 10%	1970—71 20%	
1956—57 2%	1971—72 15%	
1957—58 —1%		Prices:
1958—59 5%		Median 19%
1959—60 10%	Prices:	Average 20%
1960—61 10%	Median 13%	Range 18%—22%
1961—62 8%	Average 12%	
1962—63 10%	Range 4% to 20%	Money Supply
1963—64 12%		(1972—76)
1964—65 19%	Money Supply:	37% Average
1965—66 30%	15% Average	
1966—67 2%		
Prices:		
Median 10%		
Average 9%		
Range —1% to 30%		
Money Supply:		
16% Average		

Source: Milena Jovičić, «Ocena deficita platnog bilansa Jugoslavije», *Economic Analysis*, Vol. XII, No. 1-2, 1978, Table 3, pp. 44—45. Money Supply figures from Table 2.

<sup>24</sup>) For a discussion of these estimates and inflation rates I draw on Harberger, *ibid.*, pp. 505-521. The comparable rates for Yugoslavia for implicit price deflator for inflated Gross Social Product are: 1952-67, range — 1% to 30%, median 10%, average 9%; 1967-72, range 4% to 20%, median 13%, average 12%; 1972-75, range 18% to 22%, median 19%, average 20%. Money supply increases from Table 2: 1952-67, 16%; 1967-72, 15%; 1972-76, 37%.

One may well ask what are plausible explanations for such increases in the world money supply. In effect, what are the sources of this fundamental world-wide inflationary disturbance in which internal events of individual countries, especially small countries, appear little more than surface manifestation? One plausible hypothesis is advanced by Arnold Harberger in the form of variations in international reserves as the key explanation.

The decade of the 1960's witnessed an increase in the supply of American dollars — a key currency in the international system. In fact this is the consequence of American involvement in the Vietnam War. At the same time the world banking community created important new sources of reserves in the form of Eurodollars, German marks, Swiss francs. In addition the IMF added to international reserves by the creation and significant increase in SDR's (Special Drawing Rights). By the mid-1970's the IMF expanded lending to various Central Banks of its member countries, most of it under the so-called IMF Oil Facility, particularly to assist countries hard hit by significant oil price increases in 1974. To this may also be added that the last-ditch defense of fixed exchange rates in 1976 and the resulting massive creations of domestic money outside the U.S. had much to do with the speedup of world inflation at just about the time the fixed-rate system was collapsing.

Combined, these developments produced the necessary reserves for the rapid expansion of the aggregate money supplies of industrial countries, including those developing countries linked closely to that of the industrial world. These rapid increases in the aggregate money supply produced rapid upward surge in prices that has characterized the 1970's. Deficit financing and primarily on the part of major industrial countries whose very size enables them to spill over into the rest of the world inflationary consequences of such financing has served to speed up world-wide inflation.<sup>25</sup>

The intensity of upward pressure on aggregate demand may also be gauged by evidence on income distribution. In many countries a process of income redistribution is taking place, with larger shares of income going to wage and salary earners and smaller shares to profits, entrepreneurial, and unearned income. In part this is the result of market forces, but it is also the consequence of deliberate government policies. The evidence summarized in Table 3 indicates the shares of material revenue accounted for by compensation of employees and government transfers to households for a number of industrial countries. Between 1955 and 1972, compensation of employees in all the countries listed account for an increasingly larger share of national income.

The growth in the share of government transfers to households is ever more striking. Between 1955 and 1972 transfer payments tripled in the Netherlands, the country showing the sharpest growth to about one-fifth in Japan, the country which experienced the slowest growth. Undoubtedly these transfer payments originate in rising old-age pensions stemming from the changing age structure of the population in these

<sup>25</sup>) See, for example, the estimates by Harberger, *op. cit.*, pp. 511-514.

countries. Other transfer payments have also increased. The net result of these income transfers is to increase consumption expenditure on the part of their recipients.

The size and importance of these transfer payments is suggested by the evidence presented in Tables 4 and 5. In 1955, for example, they equalled 7 per cent for the U. S. and Japan at the lower range, and 20 per cent for Germany and France at the upper range. In 1972 the ranges registered 9 and 14 per cent in Japan and U. S. to 30 and 40 per cent in France and the Netherlands respectively. Though comparable data for the LDC are not available, scattered evidence suggest that much the same process is underway.

Table 4

SELECTED INDUSTRIAL COUNTRIES: SHARE OF COMPENSATION OF EMPLOYEES AND GOVERNMENT TRANSFERS TO HOUSEHOLDS IN NATIONAL INCOME

(Per cent, based on data on current prices and local currencies)

	A. Compensation of Employees and Government Transfers					Per Cent Change in Share 1955—1972
	1955	1960	1965	1970	1972	
Belgium	59	64	68	71	76	29
France	63	63	70	73	74	17
Germany	62	66	71	74	77	24
Italy	54	58a	66	69	76	41
Netherlands	56	63	73	84	87	55
Sweden	65	69	76	81	85	31
United Kingdom	69	71	73	76	77	12
Canada	64	70	68	73	74	16
Japan	50	50	57	55	60	20
United States	67	70	69	77	77	15
B. Compensation of Employees						
Belgium	48	51	54	55	58	21
France	49	49	52	54	55	12
Germany	50	52	56	58	60	20
Italy	43	45a	50	53	57	33
Netherlands	48	51	57	62	62	29
Sweden	57	59	64	67	69	21
United Kingdom	63	64	65	66	67	6
Canada	57	61	60	64	63	11
Japan	45	46	52	50	54	20
United States	62	64	63	68	67	8

## C. Government Transfers

Belgium	11	13	14	16	18	64
France	14	14	18	19	19	36
Germany	12	14	15	16	17	42
Italy	11	13*	16	16	19	73
Netherlands	8	12	16	22	25	212
Sweden	8	10	12	14	16	100
United Kingdom	6	7	8	10	10	67
Canada	7	9	8	9	11	57
Japan	5	4	5	5	6	20
United States	5	6	6	9	10	100

\* 1961

Source: OECD, *National Accounts*, various issues; U. S. Department of Commerce, *Survey of Current Business*, various issues, and Helen B. Junz, "Some Observations on the World-wide Intensification of Inflation", Discussion Paper No. 58, January 14, 1975, Division of International Finance, Board of Governors, Federal Reserve System, Washington, DC.

Table 5

SELECTED INDUSTRIAL COUNTRIES: GOVERNMENT TRANSFERS TO HOUSEHOLDS AS A PERCENTAGE OF PERSONAL CONSUMPTION EXPENDITURES

(Per cent, based on data in current prices and local currencies)

						Per Cent Change in Share 1955—1972
	1955	1960	1965	1970	1972	
Belgium	14	17	21	25	27	93
France	20	21	27	29	30	50
Germany	20	35	25	26	28	40
Italy	15	18	22	23	27	80
Netherlands	13	18	25	35	40	208
Sweden	12	15	18	24	28	133
United Kingdom	9	10	12	15	16	78
Canada	10	13	11	15	17	70
Japan	7	7	8	9	9	29
United States	7	9	9	13	14	100

Source: OECD, *National Accounts*, various issues; U. S. Department of Commerce, *Survey of Current Business*, various issues, and Helen B. Junz, "Some Observations on the World-wide Intensification of Inflation", Discussion Paper No. 58, January 14, 1975, Division of International Finance, Board of Governors, Federal Reserve System, Washington, DC.

In fact, consumption expenditures in the past decade and half suggest that their role is much more prominent than earlier. In the 1950's and early 1960's in such rapidly growing countries as Japan, consumption played a diminishing part in total expenditures. Scattered evidence confirms the view that by the middle of 1960's the trend for consumption to grow more slowly than other categories of expenditures was arrested.

Much the same can be said for the growth rates of major components of industry. Manufacturing industries in the developed countries has declined in relation to that of total output. Consumer goods sector, on the other hand, appears to be gaining momentum. The investment patterns suggest a channeling of resources into industries producing finished goods and service industries. The net result appears to be a general erosion of the supply base in the basic materials industries. The effect, of course, is to put pressure on long-term price trends. This is further reinforced by diminishing proportion of labour force in industrial countries that is engaged in the production of goods. The fact that productivity of labour in service industries tends to be lower than that in industry while wages keep pace with those in industry serves to intensify the upward pressures on prices and costs.

Explicit government policy commitment in the industrialized countries to high levels of employment suggest a reluctance to use restrictive demand management until the last possible moment but not hesitant in employing deflationary measures at the earliest possible stages of a downturn. The effort, of course, is to make government policies on balance expansionary. These problems are further compounded by the general tendency on the part of various governments to underestimate the strength of underlying demand force. Moreover, fiscal policies in many countries respond sluggishly to stabilization demand with the result that monetary policy carries the major burden for stabilization.

Again scattered evidence for the 1960's and 1970's suggests that governments of the various industrial countries, with the possible exception of France, have not pursued more stringent fiscal policies in recent years than in earlier years. The evidence for the U. S. is clear. Taxes were cut in the early 1960's in order to help bring the economy to a better level of capacity utilization than had been the case in the 1950's.<sup>26</sup> In the mid-1960's when relatively high employment levels were reached, the Vietnam War put additional strain on resources, the government was slow to increase taxation and allowed inflationary pressures to continue to build. To judge from the evidence on national accounts the U. S. Government was a massive borrower in every year starting in 1966 (1969 excepted). Much the same is also true for other industrial countries, particularly Italy, Germany, and the Netherlands.

With fiscal policy sluggish, the burden placed on monetary policy is such as to cause it large swings. The undesirable consequences on the investment climate so important in providing expansion in capacities inherent in emerging demand trends are evident. The constellation of

<sup>26</sup> See, for example, George Macesich, *Ekonomska stabilnost: uporedna analiza* (Beogradski Izdavačko-Grafički Zavod, Beograd, 1973).

forces so created placed considerable upward pressure on longer-run inflation well before events in the early 1970's led to an acceleration of prices. These factors, when combined with expectations shared by citizens of most countries that standards of living would continue to increase, interacted with government policy commitment to programs and levels of employment which simply are unrealistic.

## V. SUMMARY AND CONCLUSION

The essence of the message presented in this paper is that a small country such as Yugoslavia is severely restricted in conducting monetary policy which is independent of external events. Much of the blame casting and sensationalism for inflation on worker-managers is misplaced. No fundamental conflict exists between the view that prices rise because somebody raises them and the view that somebody raises them because the state of demand permits such a rise without losing sales and incomes.

The fundamental disturbance to which Yugoslavia along with other countries is reacting is world-wide inflation which has accelerated since the early 1970's. Problems of adjustment are further complicated for the country, because it is recipient of substantial capital inflow in the form of remittances and borrowing abroad. The internal price level must be of a value relative to the external price level such that payments, including capital flows, balance. The money supply and in effect monetary policy is thus determined by external conditions. The country's internal prices did not, in fact, move differently in direction from external prices. Both internal and external prices increased.

The increase in internal prices and subsequent acceleration of prices especially in early 1970's in Yugoslavia emphasizes the relevance of the so-called phenomena of «overshooting». This is the phenomena familiar in technical literature on inflation is when a small country on «fixed» exchange rates in the process of «importing» the world inflation experience significant periods in which its inflation through no fault of its own is faster than the world's. Harberger cites a number of other examples as well.

Price increases and the decision on the part of worker-managers to «raise» prices is simply the form through which necessary adjustments occurred. If these increases in prices had not been carried out by worker-managers they would have occurred in some other form. In the absence of a favorable state of demand the exercise would indeed have been futile.

This does not mean, however, that worker-managers share no responsibility or that the Yugoslav model operates in a flawless fashion in adjusting the economy to the ebb and flow of the external tide. The shortcomings are well known and regularly discussed by economists and others.<sup>27</sup> A number of these problems regularly bubble up to the surface.

<sup>27</sup> See, for example, the papers and discussions in Mijo Sekulić and Dragomir Vojnić, editors, *Uvozna ovisnost i konkurentna sposobnost Jugoslavenske privrede* (Savezni Ekonomski Savjet, Zagreb, 1978).

I would count as among the most serious shortcomings the lack of an effective and efficient money and capital market so necessary to facilitate adjustments in a sophisticated and complex economy. The consequences, among others, is that socialist enterprises cannot make smooth adjustments in their cash balances. One primary adjustment method available to these enterprises, and for which they opt, is to increase investment. These investments, however, are not always the most efficient or desirable from the viewpoint of the entire economy. The established enterprises tend to be favored since they are already on the scene. Expansion of undesired capacity tends to be the result, while existing capacity in some branches of industry is underutilized. For instance, the resources made available to the country by sizeable capital inflows should go into increasing the international competitiveness of the economy. To judge from the evidence the country's share in world exports has declined from .59% in 1965 to .47% in 1977. Matters are even more serious in exports to OECD countries which has fallen from .41% in 1970 to .27% in 1977. At the same time, the country's imports continue to increase. Thus in 1961—65 exports covered 74% of the country's imports; in 1966—70 this had fallen to 68%; and in 1971—75 the figure decreased to 56%.

Other factors serve to compound the country's problems and serve to complicate the economy's adjustments. This paper discusses a number. Many more can be listed, such as technology transfer problems, joint-venture, lowering restrictions, pricing, income distribution, research and development, especially the industry-science-university interface problems. Serious as they are, these problems are not insoluble. Not all of them, however, are of domestic origin.

### RADNIČKO UPRAVLJANJE, KONTROLISANE CENE I SVETSKA INFLACIJA

George MACESICH

#### Re z i m e

*U ovom se članku tvrdi da se inflacija u Jugoslaviji ne može u celosti objasniti ponašanjem samoupravljača. Aktivnosti samoupravljača koje dovode do inflacionih pritisaka u domaćoj privredi mogu biti, u stvari, površinske manifestacije suštinskih eksternih poremećaja u svet-skoj privredi poslednjih godina. Samoupravljački model ne inklinira obavezno inflaciji. On ne nosi očiglednu pretnju makroekonomske nestabilnosti.*

*Suština poruke data u ovom članku jeste da je mala zemlja kao što je Jugoslavija veoma sputana u vođenju takve monetarne politike koja je nezavisna od spoljnih događaja. Krivica za inflaciju koja se svla-juje na samoupravljače, najvećim je delom upućena na pogrešno mesto. Ne postoji suštinski konflikt između mišljenja da cene rastu zato što ih neko povećava i mišljenja da ih neko povećava zato što stanje tražnje dopušta takav rast bez smanjenja prodaje i dohotka.*

*Osnovni poremećaj sa kojim se Jugoslavija susreće zajedno sa drugim zemljama jeste u svetskim razmerama raširena inflacija, koja se ubrzava od sedamdesetih godina. Problemi prilagodavanja dalje se komplikuju, jer je Jugoslavija veliki primalac kapitala u obliku doznaka i zaduženja u inostranstvu. Interni nivo cena mora da odgovara eksternom nivou cena tako da plaćanja, uključujući i kapitalne tokove, budu izbalansirana. Ponuda novca odnosno monetarna politika determinisana je tako, spoljnim uslovima. Interne se cene nisu kretale u suprotnom smeru od eksternih cena. I interne i eksternne cene su povećane.*

*Rast internih cena i njegovo ubrzanje naročito sedamdesetih godina u Jugoslaviji istakli su značaj takozvanog fenomena »naduvavanja«. Ovaj je fenomen poznat u tehničkoj literaturi o inflaciji, kada mala zemlja pri »fiksnom« deviznom kursu prolazi, u procesu »uvoza« svetske inflacije, kroz određene periode u kojima je inflacija u njoj, bez njene krivice, veća nego u svetu. Harberger navodi i druge primere.*

*Porast cena i odluka samoupravljača da »povise« cene samo je oblik ispoljavanja neizbežnog usklađenja. Da porast cena nisu sproveli samoupravljači, on bi se javio u nekom drugom obliku. U odsustvu povoljnog stanja tražnje, povećanje bi zaista bilo beskorisno.*

*Ovo, međutim, ne znači da samoupravljači ne snose nikakvu odgovornost, niti da jugoslovenski model funkcionise na besprekoran način u prilagodavanju privrede plimi i oseki eksternih strujanja. Nedostaci su dobro poznati i često diskutovani u ekonomskim i drugim krugovima. Mnogi od tih problema obično isplivaju na površinu.*

*U najozbiljnije nedostatke autor ubraja nepostojanje efektivnog i efikasnog novčanog tržišta i tržišta kapitala, tako potrebnog za olakšanje prilagodavanja u osetljivoj i složenoj privredi. Posledice, između ostalog, jesu i te da socijalistička preduzeća ne mogu lako da izravnaju blagajnu. Elementarni regulativni metod koji ta preduzeća mogu da primene, i za koji se odlučuju, jeste povećanje investicija. Ove investicije, međutim, nisu uvek najefikasnije ili najpogodnije sa stanovišta celokupne privrede. Postojeća preduzeća nastoje da budu favorizovana pošto su već na sceni. Verovatni ishod jeste ekspanzija nepoželjnih kapaciteta, uz neiskorišćenost postojećih kapaciteta u nekim granama industrije. Na primer, sredstva koja su putem velikog priliva kapitala stavljena zemlji na raspolaganje, treba da odu na povećanje međunarodne konkurentnosti privrede. Jer, kako podaci pokazuju, učešće Jugoslavije u svetskom izvozu opalo je sa 0,59% u 1965. godini na 0,47% u 1977. Stanje je još ozbiljnije kod izvoza zemljama OECD: učešće Jugoslavije u tom izvozu smanjeno je sa 0,41% u 1970. na 0,27% u 1977. godini. U isto vreme, jugoslovenski uvoz nastavlja da raste. Tako je u periodu 1961—1965. u Jugoslaviji izvoz pokrивao 74% uvoza, u razdoblju 1966—1970. ovaj je odnos pao na 68%, a u razdoblju 1971—1975. na 56%.*