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Economic Planning in Yugoslavia

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The Economic Setting

Since the end of the 1940s—that is, since the break from Soviet hegemony—Yugoslavia has entered upon a path of profound political and economic transformation. While it is impossible to say that today, fifteen years later, this process of transformation has been completed, fundamental political, institutional, and economic forms have emerged that can be deemed lasting, and thus lending themselves to, and calling for, systematic analysis. Among these forms, economic planning is one of the most characteristic and perhaps the most important for understanding the operation of the Yugoslav economy.

However, planning in Yugoslavia cannot be treated in isolation. It can be studied and understood only as an integral part of the economic system. Now because the economic system of present-day Yugoslavia is *sui generis* as much as Yugoslav planning itself, I consider it necessary to discuss briefly in this section that system in general terms, and to place the narrower subject of economic planning in its proper perspective. Only in this way will it be possible to devote the later sections to the principal technical aspects of the planning procedure without being forced to go over questions that really do not belong to the topic of this analysis.

The salient characteristics of the economic system of Yugoslavia can most conveniently be explained by considering the function of each of the three fundamental decision-making units, that is, the firms (producers' associations), the public sector, and the households. With respect to firms, two sets of principles must be discussed: (1) those governing the behavior of individual firms and (2) those governing relations among firms and between firms and other economic agents.

The rights and obligations of Yugoslav firms all derive from one basic principle of ownership peculiar to the Yugoslav system: While

the means of production belong to the society (social ownership), the direct *usufructus* from property, after payment of some basic charges to, and compliance with some legal provisions established by, the society (the public sector), belongs to all those who work in the enterprise. The basic operating principle of Yugoslav firms consistent with such a form of ownership is maximization of profit (return) per worker. Current business decisions of a Yugoslav firm, as much as those of an American firm, will be affected by the public sector only through indirect policy tools, such as various forms of taxation, rules of depreciation, etc. The difference between a U.S. and a Yugoslav firm in this respect is only one of degree and not one of substance: The legal "rules of the game" in Yugoslavia are much more numerous and subject to change more frequently. The important point to be made is that no provision of the economic plan (itself a law adopted by the National Assembly) is binding for any particular firm.

Yugoslav firms will conform with provisions of the National Plan only to the extent that tools of economic policy are shaped in such a way as to generate the planned targets, and not because they would be forced to do so by direct order of the authorities. It is this basic principle that distinguishes the Yugoslav economic system from the so-called centrally planned economies, and which, as we will see presently, gives the Yugoslav planning mechanism a character entirely its own.

The rule governing economic relations between individual firms and the rest of the economy—excepting relations with actual or potential employees—is the law of markets. Each firm is entitled to sell at the highest price it can and buy at the lowest price it can. As a general rule prices are established through free market forces, but in some instances, and at various times, prices may be regulated by the authorities in order to prevent extreme inefficiencies of resource allocation and/or income distribution.

While workers themselves are in very much the same position as Western workers regarding choice of employment, Yugoslav firms do not hire at a contractual fixed wage, but rather in exchange for a given share in the net income of the enterprise. Of course, to each job description corresponds a certain minimum income guaranteed to the worker, and it is possible to think of that minimum as a wage. The Yugoslav worker thus carries part of the risks of the Western entrepreneur, and in turn benefits from good performance of his enterprise. He also participates in a significant manner in the running of the enterprise.

We may now turn to the role of the authorities. Clearly, we are concerned here only with their economic functions. Among these, preparation and implementation of economic plans is probably the most important. The second important function of public authorities—central, regional, and especially local—is that of initiation or entry of new enterprises. Indeed, this is the one significant instance where the general principle of the transfer of entrepreneurship onto the workers is vitiated. Bodies of workers who, once the enterprise is established, work in and manage the enterprise, generally are not in a position to form an enterprise. Thus, by and large, the function of entry of new firms is fulfilled by the public sector. However, as soon as the operation of the enterprise begins, the usual duties and prerogatives are assumed by workers.

Finally, the authorities, generally local, participate with the workers' representative bodies in the selection of the director of the enterprise. However, once the director is chosen, he is bound only by law and is responsible only to the workers of his enterprise.

The planning function of the public authorities is the main subject of this paper, and consequently we do not have to elaborate on it here. Only a few introductory observations are in place at this point.

First, we may ask the very general question, What is the role of economic planning in Yugoslavia? Besides its psychological (or moral) impact—that is, creation of a certain plan-consciousness—three real roles can be identified.

1. The plans and the measures designed to implement them tend to minimize misallocations of resources and disequilibriums of all types, especially in the intermediate and the long run.

2. The plan has the function of transferring decisions concerning the rate of capital formation and savings from the sphere of consumers' to the sphere of social (or political) sovereignty. And there is no doubt that the implicit social rate of interest (or time preference) is far below the private.

3. The third broad function of Yugoslav planning is regional, and in some cases sectoral, equalization of income distribution, especially in the long run.

The extraordinary performance of the Yugoslav economy in the past ten years can be attributed only in part to Yugoslav planning. Decentralization of economic decision-making, a virtually complete autonomy of individual producing units, and distribution of net profits among workers are other factors certainly not less important in Yugoslavia's rapid growth.

Another subject ought to be discussed briefly before we turn to the technicalities of the planning procedure. In an economic system endowed with so high a degree of individual producers' autonomy and decentralization, clearly the plan cannot assume any other than an extremely general form. The final (five-year) plan document—fifty pages or so—contains only very general, sectoral targets. The latter, although the plan in Yugoslavia is a law, are binding for no one in the productive sector. It has to be followed—often with additional interpretation—only by official or semi-official bodies whose express task it is to implement the plan.[1]

Plan Preparation

The entire process of plan design and elaboration, as it evolves from its initial stages through the presentation to and enactment by the National Assembly, is an intricate interaction between various political bodies, professional institutions, producers' associations, regional organs, and others. It is not the purpose of this paper to elaborate on this subject. Let it only be said that the focal role in the process is played by the National Planning Institute; it is this body's comparatively technical task of economic analysis entering the planning process that we will be primarily concerned with in this section.

The subject to be treated in this section naturally falls into two distinct parts, corresponding to two distinct stages of Yugoslav planning method, namely, (1) analysis of initial conditions (of most recent data) and historical trends and (2) preparation of plan projections (estimates) for the future, using information derived under (1) and some externally given parameters. Detailed discussion of the subject will be organized according to these two headings.

Compared with many other countries, and probably with all others at a similar stage of development, Yugoslavia enjoys an important advantage in the availability of statistical data suitable for stage (1).[2] This is in part the consequence of a deliberate effort, in part a natural result of the operation of the economic system. In fact, the major—if not the only—control that a decentralized socialist economy has over the operation of independent forces is control via detailed accounts and

[1] We will return to these questions in greater detail in the last section. Also, some of the answers that the reader may want to seek at this point are implicit in the next section.

[2] My principal source for the information in this section is Jakov Sirotkovic, *Problemi Privrednog Planiranja u Jugoslaviji,* Zagreb, 1961.

other reporting by these firms. For example, statistics are published annually by the National Bank of Yugoslavia, giving for each of the approximately 2,500 firms employing more than twenty workers about 150 figures describing just about every aspect of the operation of these firms. Several input-output tables are available for various years, giving various degrees of detail, and 80-sector tables are to be constructed every two years.

In spite of the abundance and quality of statistics, Yugoslav planners do not use—or at least have not reached the stage of using—a single, all-inclusive planning procedure. In other words, the plan is not based on a closed general equilibrium system where all targets and policies would be derived simultaneously. Rather, a number of partial plan elements and procedures are employed, and fitted together, when necessary, through a process of successive approximations.

By no means is it implied, however, that the planning methods employed in Yugoslavia are rudimentary or inadequate. It is just the opposite, judging from my rather incomplete knowledge of other planning procedures; Yugoslav planning compares quite favorably.

Several distinctive characteristics of the planning procedure ought to be mentioned from the outset. Following the Marxian concept of "enlarged reproduction," the Yugoslav planners most scrupulously and at all stages make the distinction between means of production (i.e., capital goods and intermediate products), on the one hand, and consumers goods, on the other. Thus, unconsolidated gross national product becomes the key planning magnitude, rather than the Western (consolidated) GNP; this approach both provides a first step toward a more comprehensive input-output technique, and permits an analysis of structural and parametric changes which otherwise would go unobserved.

Yugoslavia's attempt to study from historical data changes in key parameters, such as the capital output coefficients for various branches of industry, and to project such trends into the future, is another aspect of the planning method deserving mention. Still another characteristic, related to that just stated, is the comparatively limited use of simultaneous econometric methods. Use of that tool presupposes a certain stationary condition of the economic universe; and indeed, such stability cannot be counted on in countries that, like Yugoslavia, find themselves in a comparatively early stage of development and grow at a rapid pace.

Now let us turn to what has been termed earlier in this section Stage 1 of the procedure, namely, study of initial conditions and

historical trends. Several key tables (or economic balances) are used for that purpose. The most important among these is the basic economic balance, reproduced as Table 1 for 1956.

In that balance we find a set of key economic data for three different production sectors—capital goods, intermediate products, and consumer goods—as well as for two aggregates—the total economy and total means of production. The top part of the table reflects the principal stock data, while all the rest of the information presented are flow variables.

The basic economic balance is, so to speak, the cornerstone of the Yugoslav planning procedure. As we will see presently, a set of basic relationships can be derived from it and used for global plan projections. Moreover, as the basic economic balance is available for every year starting with 1952, it is possible to study the changes in the basic relationships over time.

From the basic economic balance a simple input-output table is derived (Table 2), relating principal supply and final demand sectors. Together with information on capital stocks in the three principal sectors (top of Table 2), it constitutes the key tool of the planning procedure.

A brief scrutiny of Table 2 brings out the fact that only the most aggregative structural phenomena can be analyzed by using the seven sectors listed. As we have noted in the preceding section, the customary form of Yugoslav plans calls for a greater degree of disaggregation. Hence the basic economic balance is supplemented by four supply-demand balances, providing necessary detail consistent with Yugoslav plans.

The first of the four (Table 3), and the most comprehensive, reflects the balance of available resources and purchasing power for the whole economy. It will be noted that the total supply and demand of 3,374 billion dinars equals the sum of the first three elements of column or row 8 of the input-output table (Table 2) diminished by the net foreign trade balance.

Total supply and demand for capital goods can be disaggregated in a similar fashion, by producing sectors on the one hand and type of assets on the other. This is shown in Table 4. The sum of 401 billion dinars again is consistent with total output of domestic capital goods and the net trade balance as given in the input-output table.

Finally, in Tables 5 and 6 we recognize the supply and demand balances for intermediate products and consumer goods respectively. They again represent a disaggregation of totals to be found in the basic economic balance.

TABLE 1

Yugoslavia: The Basic Economic Balance for 1956

(billion dinars, current prices)

| | Total Economy (1) | Means of Production | | | Consumer Goods (5) |
		Total (2)	Capital Goods (3)	Intermediate Products (4)	
Capital stock	4,628.8	2,817.5	283.0	2,534.5	1,811.3
Fixed capital	3,747.0	2,246.4	229.6	2,016.8	1,500.6
Working capital, total	881.8	571.1	53.4	517.7	310.7
In output, total	675.0	497.7	26.3	471.4	177.3
Raw materials	386.8	290.7	17.5	273.2	96.1
Work in progress	106.7	79.2	4.5	74.7	27.5
Finished products	181.5	127.8	4.3	123.5	53.7
In turnover, total	206.8	73.4	27.1	46.3	133.4
Employment (thousands)	7,278.0	3,733.6	349.3	3,384.3	3,544.4
Depreciation	188.0	125.0	16.0	109.0	63.0
Current material input	1,677.0	1,112.0	221.0	891.0	565.0
All material costs	1,865.0	1,237.0	237.0	1,000.0	628.0
Wage bill	577.0	312.0	53.0	259.0	265.0
Surplus value	896.0	584.0	85.0	499.0	312.0
National income	1,473.0	896.0	138.0	758.0	577.0
Global value of output	3,338.0	2,133.0	375.0	1,758.0	1,205.0
Foreign trade					
Exports	366.0	243.0	52.0	191.0	123.0
Imports	369.0	235.0	26.0	209.0	134.0
Balance	–3.0	+8.0	26.0	–18.0	–11.0
Gross available resources	3,374.0	2,141.0	401.0	1,740.0	1,233.0
Net available resources	1,509.0				
Commodity turnover	1,248.0	424.3	167.2	257.1	823.7
Net available resources	1,509.0				
Personal consumption	848.0				848.0
Collective consumption	47.0	(131.0)			47.0
State and national defense	183.0	(196.0)			183.0
Total	230.0	(327.0)			230.0
Nonproductive investment	97.0				97.0
Accumulation, total	295.6	268.9	34.5	234.4	26.7
In fixed capital	191.9	144.7	12.1	132.6	47.2
In working capital, total	103.7	124.2	22.4	101.8	–20.5
All production	66.5	114.6	16.8	97.8	–48.1
Raw materials	11.6	42.6	9.2	33.4	–31.0
Work in progress	37.4	38.0	2.3	35.7	–0.6
Finished products	17.5	34.0	5.3	28.7	–16.5
In turnover	37.2	9.6	5.6	4.0	27.6
Reserves and undistributed					

Source: Jakov Sirotkovic, *Problemi Privrednog Planiranja u Jugoslaviji,* Zagreb, 1961, p. 184.

TABLE 2

Yugoslav Input-Output Relations, 1956

(billion dinars, current prices)

	Capital Goods (1)	Intermediate Products (2)	Consumer Goods (3)	Investments		Consumption (6)	Exports (7)	Total (8)
				In Working Capital (4)	In Fixed Capital (5)			
Fixed assets	229.6	2,016.8	1,500.6					3,747.0
Working assets	53.4	517.7	310.7					881.8
1. Capital goods				21.0	327.9		26.0	375.0
2. Intermediate goods	192.0	771.8	522.2	63.0			209.0	1,758.0
3. Consumer goods				58.3		1,052.0	134.0	1,244.0
4. Imports	29.0	119.2	42.8		52.0	123.0		366.0
5. Depreciation	16.0	109.0	63.0					188.0
6. Wage bill	53.0	259.0	265.0					577.0
7. Surplus value	85.0	499.0	351.0					935.0
8. Total	375.0	1,758.0	1,244.0	142.3	379.9	1,175.0	369.0	5,443.0

Source: Sirotkovic, *Problemi Privrednog Planiranja u Jugoslaviji*, pp. 293, 347.

TABLE 3

Yugoslavia: Balance of Available Resources and Purchasing Power, 1956, Over-All Economy

Supply	Billion Dinars	Per Cent	Demand	Billion Dinars	Per Cent
Domestic output	3,338	99.0	Input of material	1,677	49.6
Industry	1,778	52.7	Total productive investment	522	15.5
Agriculture	686	20.4	In fixed assets	380	11.3
Forestry	69	2.0	In working capital	142	4.2
Construction	214	6.4	Personal consumption	848	25.2
Transport	218	6.5	Collective consumption	131	3.9
Trade and catering	197	5.8	Current	47	1.4
Handicrafts	176	5.2	Nonproductive investment	84	2.5
Foreign trade balance	–3	–0.1	State and national defense	196	5.8
Changes in stocks	39	1.1	Current	183	5.4
			Nonproductive investment	13	0.4
			Stocks and undistributed		
			Nonproductive investment		
			Balance		
Total	3,374	100.0	Total	3,374	100.0

Source: Sirotkovic, *Problemi Privrednog Planiranja u Jugoslaviji*, pp. 187-188.

TABLE 4

Yugoslavia: Supply of and Demand for Capital Goods, 1956

Supply	Billion Dinars	Per Cent	Demand	Billion Dinars	Per Cent
Domestic output	375	93.5	Gross productive investment	401	100.0
Industry	179	44.7	In fixed capital	380	94.8
Agriculture	5	1.2	In working capital	21	5.2
Construction	130	32.4	Reserves and undistributed		
Transport	40	10.0	Stock reserve		
Trade	21	5.2	Others		
Foreign trade balance	26	6.5			
Total	401	100.0	Total	401	100.0

Source: Sirotkovic, *Problemi Privrednog Planiranja u Jugoslaviji*, pp. 187-188.

TABLE 5

Yugoslavia: Supply of and Demand for Intermediate Products, 1956

Supply	Billion Dinars	Per Cent	Demand	Billion Dinars	Per Cent
Domestic input	1,758	101.0	Material input	1,677	96.4
Food	1,116	64.1	Investments in working capital	63	3.6
Agriculture	325	18.7	Stocks and undistributed		
Forestry	57	3.3	State reserves		
Transport	125	7.2	Other		
Trade	39	2.2			
Handicrafts	96	5.5			
Foreign trade balance	-16	-0.9			
Total	1,740	100.0	Total	1,740	100.0

Source: Sirotkovic, *Problemi Privrednog Planiranja u Jugoslaviji*, pp. 190–191, 213.

TABLE 6

Yugoslavia: Supply of and Demand for Consumer Goods, 1956

Supply	Billion Dinars	Per Cent	Demand	Billion Dinars	Per Cent
Domestic output	1,205	97.7	Investments in working capital	58	4.7
Industry	483	39.1	Personal consumption	848	68.8
Agriculture	356	28.9	Collective consumption	131	10.6
Forestry	12	1.0	Current	47	3.8
Construction	84	6.8	Nonproductive investments	84	6.8
Transport	53	4.3	Stocks and national defense	196	15.9
Trade and catering	137	11.1	Current	183	14.8
Handicrafts	80	6.5	Nonproductive investments	13	1.1
Foreign trade balance	-11	-0.9	Stocks and undistributed		
Change in stocks	39	3.2	State reserves		
			Other		
Total	1,233	100.0	Total	1,233	100.0

Source: Sirotkovic, *Problemi Privrednog Planiranja u Jugoslaviji*, pp. 190–191, 213.

As we have noted previously, the central tool of the Yugoslav planning procedure is the information contained in Table 2. The results obtained using that tool can be termed Stage 1 of the planning procedure. The final outcome of Stage 1 is an estimate of all the basic aggregates entering Table 2 for the target period of the plan. In other words, Stage 1 can be visualized as a transformation of Table 2, for a basic period 0 (say, the most recent year recorded prior to the beginning of a new five-year plan) into another such table for the target plan period T. Schematically,

$$(\text{Table 2})_0 = \begin{bmatrix} \alpha \\ \beta \end{bmatrix} = (\text{Table 2})_T$$

where α and β are two sets of factors performing that transformation. The set α contains exogenously given (preassigned) elements, such as the planned over-all rate of growth of certain aggregates. The set β, on the other hand, contains the rates of change over time $\delta^x m / \delta t$ of coefficients x_m reflecting certain basic proportions contained in Table 2.

Call each of the 49 elements of the bottom part of Table 2 a_{ij} ($i,j = 1, \ldots, 7$) and a_{ia} and a_{sj} the row and column sums respectively. Further, call the six elements of the top part of Table 2 b_{km} ($k = 1,2$; $m = 1,2,3$) and b_1 and b_2 the two row sums. Then there are 17 coefficients ($m = 1, \ldots, 17$) whose rates of change over time enter β, defined as follows:

Fixed capital coefficients:

$$x_1 = \frac{b_{11}}{a_{1s}}, \quad x_2 = \frac{b_{12}}{a_{2s}}, \quad x_3 = \frac{b_{13}}{a_{3s}}$$

Working capital coefficients (also referred to as turnover coefficients):

$$x_4 = \frac{a_{1s}}{b_{21}}, \quad x_5 = \frac{a_{2s}}{b_{22}}, \quad x_6 = \frac{a_{3s}}{b_{23}}$$

Technological coefficients:

$$x_7 = \frac{a_{21} + a_{41}}{a_{s1}}, \quad x_8 = \frac{a_{22} + a_{42}}{a_{s2}}, \quad x_9 = \frac{a_{23} + a_{43}}{a_{s3}}$$

Coefficients of imports:

$$x_{10} = \frac{a_{41}}{a_{21} + a_{41}}, \quad x_{11} = \frac{a_{42}}{a_{22} + a_{42}}, \quad x_{12} = \frac{a_{43}}{a_{23} + a_{43}}, \quad x_{13} = \frac{a_{45}}{a_{s5}}, \quad x_{14} = \frac{a_{46}}{a_{s6}}$$

Coefficients of exports:

$$x_{15} = \frac{a_{17}}{a_{s1}}, \quad x_{16} = \frac{a_{27}}{a_{s2}}, \quad x_{17} = \frac{a_{37}}{a_{s3}}$$

The rates of change of the x_m's over time are estimated from past trends (recall that Table 2 is available for a number of years preceding the base period) and after considering a variety of predictable factors affecting these rates. Consequently, the x_m's can be taken as (at least approximately) known for a future period—specifically, for the target year of the plan.

Let us now turn to factor α of the transformation. It contains the rates of growth of a_{1s} and a_{3s}, that is, of gross output of capital goods and of consumer goods. The two rates, r_1 and r_3, are obtained independently of the procedure here discussed, using a model of the Harrod-Domar variety, together with postulates about the future rate of accumulation and future balance-of-payments conditions and an estimate of the capital output coefficients.

The levels of a_{1s} and a_{3s} in the target period thus are exogenously given. From these two and the projected values of coefficients x_7, x_8, and x_9, a_{2s} then is calculated from

$$a_{2s} = a_{1s}x_7 (1 - x_{10}) + a_{2s}x_8 (1 - x_{11}) + a_{3s}x_9 (1 - x_{12}) + a_{2s}x_{16} + a_{24}$$

where a_{24} is an estimate of intermediate goods investment in working capital.[3] The three terms on the right-hand side of the relation, it will be observed, give the estimates of a_{21}, a_{22}, a_{23}, and a_{27}.

Using the expected values of the fixed and working capital coefficients, the entire upper part of Table 2 can be evaluated for the target date of the plan. The three export coefficients x_{15}, x_{16}, and x_{17} are sufficient to determine terms a_{17}, a_{27}, and a_{37}. The first three import coefficients x_{10}, x_{11}, and x_{12} lead to the planned values of a_{41}, a_{42}, and a_{43}.

Assuming that in the target period investments of capital goods in working capital will be zero, a_{15} can be computed as a residual. Total investments in working capital, a_{s4}, must be consistent with the rate of growth of b_2, and thus a_{s4} is obtained. The term a_{24} being known already, accumulation of inventories of consumer goods, a_{34}, is obtained. Consumption of domestically produced consumer goods, a_{36}, can also be obtained as a residual.

The sums over columns 5 and 6 together with the two remaining import coefficients, x_{13} and x_{14}, suffice to evaluate a_{45}, a_{46}, a_{s5}, and a_{s6}. Thus all the column sums of the input-output table and all elements of the first four rows are determined for the planning target date.

[3] Professor Sirotkovic's exposition referring to this stage of the argument is unclear, and appears erroneous. The equation presented here is my reconstruction of the relationship. It is impossible to ascertain from Sirotkovic how the term a_{24} is estimated.

What remains to be determined are only the terms representing amortization, the wage bill, and the surplus value for each of the three output sectors. The three amortization terms a_{51}, a_{52}, and a_{53} are determined by the Yugoslav planners from postulated amortization rates and the implied capital structure in the three sectors.

Because the total gross outputs a_{81}, a_{82}, and a_{83} are known, only one of the two remaining rows has to be determined to obtain the other. It is this distribution between the wage bill and the rest of net value added that plays an important role in matching supply with demand for products of various types, such as private consumption, collective consumption, and investment. This distribution, an important tool of short-run economic policy, is influenced by an intricate system of fiscal and other obligations on the part of Yugoslav enterprises. We will return in greater detail to this subject in the following section.

At present let us come back to the main stream of the argument for this section. Knowledge of the principal aggregates entering Table 2, for the terminal year of the planning period, does not provide all the detail called for by the final plan document, nor would it be sufficient to guide those who implement the plan. However, the key data whose derivation we have explained thus far are the indispensable basis for further sectoral projections.

It will be recalled that among the principal statistics underlying the planning procedure, use was made thus far in our exposition only of the basic economic balance (Table 1) and its derivative Table 2. The other information—the sectoral economic balances (Tables 3 through 6) together with available input-output estimates (primarily the a-matrix) and a host of other statistical data—becomes relevant at this point. We have observed already the consistency of the totals of the sector economic balance with certain entries, or subaggregates, appearing in Table 2. This set of relations must be valid for the target plan period as much as it was in the base period. Consequently, the totals of projected sectoral balances are given, at least as a first approximation, by the estimate of Table 2 for the target period.

The distribution of total supply and demand aggregates (such as capital goods, intermediate products, and consumer goods) appearing in Table 2 then is estimated from historical data. The principal element in this estimation procedure is—as with the transformation factor β explained already—the analysis of the behavior of relative shares of the various supply and demand sectors over a number of past periods. For example, the target share of industry in total supply of consumer products certainly is not statistically independent of that

share in the base period. Neither, if that share has revealed a certain trend in the past, can it be doubted that the expected value of that share in a future year would be dependent on that trend. Moreover, a great deal of subsidiary evidence, such as the study of consumer behavior, or detailed input-output relationships, can be used in arriving at detailed projections of future demands and supplies.

Once such disaggregated estimates are obtained, their impact on the basic structure (Table 2) can be studied. And if the two are found inconsistent, the latter can be recomputed on the basis of new evidence. This iterative process can be repeated at will.

However, the process does not have to be overly exhaustive, nor do the Yugoslav planners have to be overly worried about possible minor inconsistencies. Indeed, the great advantage of Yugoslav planning is the very fact that the plan is not the absolute *conditio sine qua non* of the economy, as it is in centrally planned nonmarket economies. It can be counted on that the final iteration—necessarily convergent—will always in Yugoslavia be performed by market forces. Possible imperfections of the plan will then only be reflected in an imperfect attainment of the social optimum. But there can hardly be any doubt that such imperfections are far less important than those that would, or could, arise in the absence of a plan.

Plan Implementation

We have already noted in the preceding two sections the considerable degree of decentralization and reliance on the market mechanism enjoyed by the Yugoslav economy. These attributes are also apparent in the context of plan implementation. There is not much in the technique of implementing the plan that can be labeled as direct intervention. Yugoslav policy measures are generally as indirect as are those in an average Western economy. There is little difference in substance between Yugoslav techniques of influencing the course of the economy and our own. Both, at least to an economist, will appear as the policy tools or instruments of the type known to us from Professor Tinbergen's writings.

There are differences, but of degree rather than substance. The Yugoslav policymaker has at his disposal a far greater number of tools than we generally find in Western economies. This, while desirable in theory because a larger number of targets becomes attainable, can in practice become a hindrance, at least for a time. The Yugoslavs

themselves often recognize that certain policies were misused or used to an inappropriate extent.

Yugoslav policy tools, while not different in basic quality, are often directed toward long-run rather than short-run targets. Indeed the principal purpose of the plan is long-run equilibrium growth, and short-run adjustment either is secured (or is hoped to be secured) as a by-product, or is relegated to the market mechanism.

There are five categories of policy instruments at the disposal of Yugoslav planners: (1) fiscal instruments, (2) credit instruments, (3) price instruments, (4) wage instruments, and (5) foreign trade instruments. The fiscal tools form a whole spectrum. Almost without exception, they are applied at the level of the firm, and can most conveniently be explained in connection with the distribution of income of the enterprise. A schematic representation of such a distribution is presented in Figure 1.
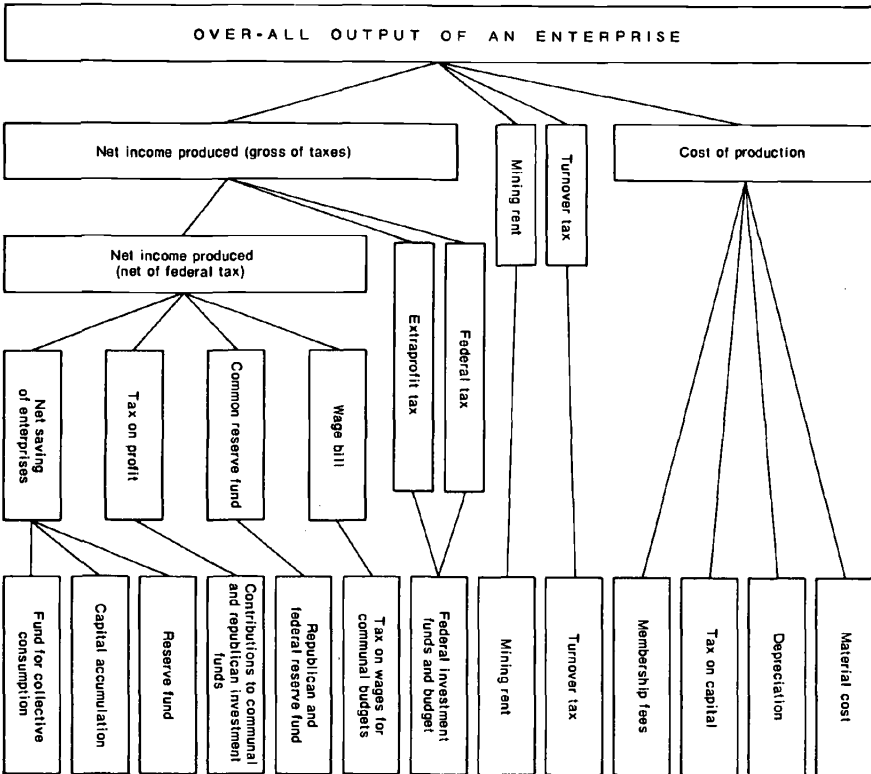

Figure 1

As the schema is to a large extent self-explanatory, only a few general comments are in order. On the side of production costs, only the so-called tax on capital calls for comment. In fact, it is an interest liability—generally of 6 per cent—levied on all fixed and working capital. Its impact on efficiency of resource allocation is obvious. What the Yugoslavs call the turnover tax is actually a value-added tax (in some respects more efficient than a turnover tax). It is levied selectively, either as a tool for discouraging consumption or to counteract monopolistic advantages. Similar advantages in mineral industries are coped with through a mine rent liability.

Federal taxes are levied on the residual. What remains after federal taxes is the net income of the enterprise, allocated more or less freely [4] between the wage (plus bonus) bill and net profit. Each part is subject to further taxes and reserve fund contributions.

Some of the tools can be adjusted, if necessary, to fit comparatively short-run targets, even though their principal function is a long-run balance consistent with the plan. In this sense, they can be understood as an insurance against more important miscalculations on the part of the planners, or as a last-resort forced iteration of the process outlined in the preceding section.

Two types of credit policy must be distinguished, one directed toward short-run credit—primarily financing of working capital—the other regulating long-run credit. The former, besides influencing formation of working capital, is also the most important regulator of monetary expansion and hence of the over-all price level. In this respect it resembles the operations of our own Federal Reserve Board. In recent years, as part of an over-all effort to increase the share of capital formation by producers, enterprises have been called on to finance most of their working capital themselves.

But by far the more important of the two credit policies is regulation of long-term credit for "productive" capital formation. This is done by federal, national, and local banks. The most important among these is the National Investment Bank, which manages central investment funds. These funds, while deliberately being reduced as a share of total investment resources, still are about one-third of those resources.

Because as a general rule federal resources are employed to supplement other official, or firm funds (especially in major projects), the leverage of the instrument is considerably greater than what would correspond to one-third of national investment resources. Thus, influencing

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[4] More will be said on this point in connection with wage policy.

the allocation of, say, one-half of total investment funds, the National Investment Bank is in ample possession of the means to attain the sectoral and regional targets of the plan. Actually, it is the principal, if not the only, obligation of the bank to bring about the over-all structural results called for by the plan.

This, of course, leaves the bank with a good deal of freedom to decide on how its funds will be allocated. By and large, criteria of economic efficiency are being followed. Private-type profitability is perhaps the most important one; if social marginal returns become the dominant consideration (e.g., allocation of funds to a poor region in spite of low returns), this will be stated by the legislators explicitly as an instruction to the bank. But the profitability index is not the only one used in deciding who among the applicants for loans will receive the limited resources of the central funds. Foreign exchange (net) requirements of a given project will also play a role, as will the repayment period, degree of participation of other funds in a project, and the rate of interest to be paid by the recipient on debt outstanding.

We may now turn briefly to the wage and price policies. The Yugoslavs, during the years of their "economic independence," have moved a long way in the direction of free determination of labor income by individual enterprises. Most recently, it can be said that wage rates are largely determined by enterprises. The authorities pursue wage policies through general and quite flexible instructions about wage determination in relation to productivity, industry, and/or branch averages, and other general indicators. Local and state commissions are attentive that excessive wage distributions should not arise in situations of monopoly and/or windfall advantage.

It can safely be postulated that the basic philosophy of (relative) price formation in Yugoslavia is that of the market price mechanism. This is not to say that all prices are free of control; most of the controls, however, can be designated as temporary. The only ones of more lasting character (as, undoubtedly, in most Western economies) are those directed toward situations of monopoly. Indeed, greater social efficiency can be attained using such controls.

To the extent that the plan reflects adequately its premises, and is correctly elaborated, relative prices *among* sectors reflect relative scarcities intended by the planners. Once the distribution of national income between investment and consumption is decided on (according to social or other criteria) it is only rational to try to maximize consumers' satisfaction. If the objective function is social rather than private utility, that is, if consumers' sovereignty is not recognized in some respects, then

taxes of various forms can be employed to set prices and outputs *within* sectors at desired levels and to prevent maldistributions of (producers') income.

Now, turning to the actual practice in Yugoslavia, let it be said that at present about one-fourth of the output of intermediate goods is subject to price ceilings. The ratio for consumer goods is about one-third; however, in this case the controls are not price ceilings but rather an obligation on the part of sellers to report an intended price increase in advance. The authorities then have the right to question or even refuse the price rise. In practice this happens only very seldom. With the exception of the case of monopoly, mentioned already, the existing price controls can be largely explained as a device to prevent major maladjustments in a period of transition from administrative pricing to a full-fledged market mechanism.

In the sphere of foreign transactions, Yugoslavia has had since 1961 a single rate of exchange. At that time a provisional system of tariffs was adopted, to cushion disruptions that would otherwise have arisen from an abolition of multiple rates.

Even though there is a single rate, various import categories receive a different treatment. Certain products, primarily essential materials and intermediate products, can be imported perfectly freely at the given rate of exchange. A special treatment is given to imports of capital goods; these are imported either subject to licensing within an over-all capital goods quota, or subject to certain specifications relative to the use of depreciation (replacement) funds. Also, the National Investment Bank provides foreign exchange for capital goods necessary for projects it finances. Foreign exchange for other purposes is subject to various forms of licensing, and clearly, because of the secondary importance of such imports for the economy, is quite scarce.

On the export side, a combination of export subsidies and tax refunds is temporarily applied to exports that previously (before introduction of a single rate) were exported at preferential rates.

The general purpose of these various arrangements, as in many other developing economies, is to provide infant industry stimulation, whether to import-competing or exporting industries. Also, these measures have the purpose of making smooth and gradual the alignment of previously highly distorted internal prices with world prices.

The relation between external and internal prices in conjunction with import policies is also an important tool of farm price policy. Actually, prices of imported foodstuffs together with price ceilings and/or stimu-

lation for major farm inputs are the principal regulators of income and tools of economic policy in the predominantly nonsocialized agricultural sector.

COMMENT
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It is symptomatic of the underdeveloped state of Yugoslav studies that radically divergent views can coexist on the economic system of Yugoslavia. Some scholars—Professor Vanek foremost among them—take it to be what Belgrade's ideologues say it is: A socialist market system guided by macroeconomic instruments in the framework of long-term plans. Others are rather inclined to see in it "an ambivalent system, partly governed by the laws of imperfect competiton and partly administratively controlled." [1]

In 1958 I came away from a cursory study of Serbian and Croatian economic periodicals and from a number of interviews with directors of Yugoslav enterprises with the impression that the second of these views was essentially correct.[2] Vanek's paper gave me an occasion to follow up on later developments. I found that in 1960 and 1961 moderate progress had been made toward making the decentralized scheme work, but that the administrative controls imposed to combat the inflation in more recent years have brought back a degree of centralization that, at least at the beginning of 1964, seemed greater than six years ago.

Since long-term planning, on which Vanek's paper is concentrated, is least bound up with the way the economy is run, I may start my discussion at this point and thence go on to the more controversial aspects of the study.

Although I have read with care the book by the Croatian economist Sirotković on which Vanek relies for his analysis of Yugoslav planning,[3] I still cannot tell whether Sirotkovic meant to describe Yugoslav planning practice in the late 1950s or to prescribe for its improvement. He seems to have melted together what is with what should be—a practice that will be familiar to readers of Soviet economic literature.

But even the idealized version of Yugoslav planning that Sirotković

[1] Professor Bicanic of Zagreb University, cited by Ljubor Sirc in "Control and Competition in Yugoslavia" in M. Miller *et al., Communist Economy Under Change,* London, 1963, p. 149.

[2] Cf. my article "Reform and Retreat in the Yugoslav Economy," *Foreign Affairs,* January 1959.

[3] J. Sirotković, *Problemi Privrednog Planiranja u Jugoslaviji,* Zagreb, 1961.

lays out before us is short on theoretical sophistication. If the Yugoslavs follow his scheme, I can hardly go along with Vanek's claim that Yugoslav planning procedures compare "quite favorably" with those employed in other countries or with his denial that their methods are "rudimentary or inadequate." Sirotković's normative prescriptions hardly go beyond the projection of past trends in coefficients, a doubtful practice when one considers the favorable circumstances under which the Yugoslavs stepped up their output from 1953 on—fuller utilization of capacity, relative abundance of the labor force, tail-ends of investment projects started in the late 1940s, foreign credits, etc. Moreover, the fixed and working capital coefficients he focuses on (X_1 to X_6 in Vanek's paper) are so aggregated and made up of such heterogenous elements that they are most unlikely to behave as constants. I should expect these coefficients to be sensitive to changes in the magnitude of all the variables in the system. They cannot therefore be used for the purpose of relating variables at a future point in time with any degree of reliability.

In general, it would appear that even the crudest linear programing techniques based on aggregated data would be an improvement over the mechanical scheme advocated by Sirotkovic. As Professor Ragnar Frisch has pointed out, if one attempts to map out a large investment program without the aid of some form of linear programing, "one is practically certain to be taken by surprise afterwards in unexpected balance of payments difficulties and other troubles." [4] One of these "other troubles" in a partially decentralized economy such as Yugoslavia's is the occurrence of inflationary pressures—a problem to which I shall return at a later point of this Comment.

It may not be entirely fair to test the pudding of Yugoslav planning by its eating, since changing circumstances have a way of upsetting the initial hypotheses on which long-term plans are based, but it should at least be noticed that the execution of the 1961–65 plan ran so far off course that the plan had to be abandoned less than two years after its inception. The Fourth Plenum of the League of Communists resolved that henceforth less ambitious plans would be drawn up, which would be sure to keep the economy moving in a balanced and stable way. [5] The deviations from plan in 1961 and 1962 that prompted this reappraisal included rates of growth of gross national product and industrial output that came to only about half the rates planned for those years. Exports which were supposed to rise by 8.4 per cent in 1961 fell by

[4] Quoted in Hollis Chenery, "Comparative Advantage and Development Policy," *American Economic Review,* March 1961, p. 33.
[5] As reported by Wolfgang Eggers in *Osteuropa Wirtschaft,* 1964, p. 43.

1.8 per cent. In 1962 they rose by 21.5 per cent as compared to a plan of 18 per cent, while imports fell by 2.2 per cent when they were scheduled to rise by 6 per cent. Nonagricultural employment and gross fixed investments also lagged appreciably behind plan.[6]

The discrepancy between plans and realizations, incidentally, is not necessarily an indication of the high degree of decentralization of the Yugoslav economy. The Soviet Union and the East European nations are rarely, if ever, able to stick to their long-term plans, even though the planners keep nearly all the reins of economic power in hand. Miscalculations and the inability to predict future trends in labor, capital, and material productivity are usually more to blame than the devolution of responsibilities to lower organs (although, exceptionally, the failure of the Czechoslovak plan for 1961–65, which was also abandoned in 1962, had much to do with a poorly conceived attempt at a partial decentralization).

This brings me back to the thorny problem of the nature of the Yugoslav economic system and of the role that planning plays in it.

It is obvious that the necessity of planning and the impact of errors in predicting future trends will be less if the government confines its role to maintaining an appropriate level of effective demand, while allocations among alternative uses are made by the market. The first question to be asked then is the extent to which the allocation of resources in Yugoslavia is governed by prices shaped under the influence of supply and demand. According to Vanek, restrictions on the price mechanism are minor and temporary and designed mainly to curb monopoly situations. He claims, without citing any source, that only about a quarter of the output of intermediate goods is subject to price ceilings, while one-third of the output of consumer goods consists of items whose prices cannot be increased without prior notification to the Federal Price Office. I have doubts about both these figures. In 1956, according to a well-known Yugoslav economist, price ceilings were imposed on 52 per cent of the domestic output of intermediate goods. These amounted to 27 per cent of the gross output of industry.[7] As far as I know, there has been no tendency to decontrol prices since then, nor have the relative proportions of controlled and uncontrolled materials changed radically.

[6] United Nations, Economic Commission for Europe, *Economic Survey of Europe in 1961,* Part I, Geneva, 1962, Chap. I, p. 43; *Economic Survey of Europe in 1962,* Part I, New York, 1963, Chap. II, pp. 47–48.

[7] Nikola Čobeljić, *Politika i metodi privrednog razvoja Jugoslavije (1947–1956),* Belgrade, 1959, p. 309.

On the other hand, about 40 per cent of total retail trade is subject to maximum markups, which effectively rule out "speculations" in the trade network on these items, while "virtually all the other goods," according to a 1964 source, fall under the price-control law.[8] While it is true that controlled prices may be raised one month after authorization has been requested from the Price Office if this authorization has not been formally denied, it must also be taken into account that these requests are in practice only made when they are "justified" by cost increases. Enterprises do not normally raise prices to take advantage of an especially favorable market situation, whether this advantage is of a monopolistic character or simply due to an excess of effective demand. The Communist Party, often working through the enterprises' workers' councils, brings its influence to bear on management to act according to the norms of "social conscience." The role of prices as a device to ration off demand, to call forth marginal amounts of supply, or to attract resources in the short run—which might justify extraordinary profits in certain situations—is not officially sanctioned or even recognized. Where the dominant market position is exploited is not so much in overt price gouging but in quality deterioration and in cost padding—typical phenomena associated with controls everywhere.

It is symptomatic of the official attitude toward price formation that the government in 1964 raised prices of electric power, coal, and a number of agricultural products on the assumption that these price increases would have no effects on other prices of the industrial consumers of these products because in effect no such repercussions would be tolerated.[9]

Vanek writes that "once the distribution of national income between investment and consumption is decided on . . . , it is only rational to try to maximize consumers' satisfaction." If I understand him correctly, he implies that with the exception of special taxes designed to correct prices for disparities between social and private utility, Yugoslav markets achieve this aim. To do so, consumers must express their tastes through their consumption decisions in retail trade. We have already seen that prices of consumer goods were fairly tightly regulated. But there is another, perhaps even more serious reason, why consumers' preferences were not transmitted with any degree of precision to producing enterprises: The personnel of socialized retail establish-

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[8] *Ekonomska politika*, September 26, 1964, p. 1343.

[9] *Ibid.*, September 19, 1964, p. 1319. Actually the cost increases due to higher prices of primary materials eventually forced up the prices of many processed products, despite this injunction.

ments had little or no incentive to do so. At least up to 1961, the date of the source of my information, the wage fund of these enterprises depended on their turnover rather than on their profits.[10] This regulation had the effect of discouraging trade in slow-moving items, of reducing the range of products traded (thus restricting choice), and of limiting personal service to customers to a bare minimum.[11] The short-comings of Yugoslav retail shops, as far as I could observe in 1958, were similar to those in Poland or Czechoslovakia, where incentives were also based mainly on the volume of sales rather than on profits or on value added.

As to industrial enterprises, it is not so clear either that they are profit-maximizers, whether at the imposed ceiling prices or at the prices they choose to set. Benjamin Ward suggested some years ago that in enterprises where the workers' council was strong, profits per employed worker might be maximized rather than total profits. This behavior, systematically pursued, would lead to quite different decisions on the scale of operations and the choice of inputs from those we should expect in a profit-maximizing situation.[12] While I doubt that the councils are normally powerful enough to impose such a course on the management board, there may be enterprises where these distortions occur. Another problem, which is perhaps unavoidable in the socialist framework in which enterprises operate—where directors of enterprises have little security of tenure and can be turned out at the request of the workers' council with the concordance of the local peoples' committee [13]—is that enterprises may be managed with a view to making the largest possible profits in the short run, at the expense of their long-run interests or those of society as a whole. This characteristic helped to undermine the investment-auction system tried out for a brief period in the mid-1950s. Managers who tendered the highest bids for credits—that is, who offered to pay the highest interest rates—were those in the most difficult financial situation and/or those who knew that they would not be around when the time came to repay the loans.[14] This system soon had to be abandoned

[10] Velimir Vasic, *Ekonomska Politika Jugoslavije,* Belgrade, 1961, p. 242.

[11] It will of course also have undesirable effects on the cost side, but these are unrelated to the failure to cater to consumers' taste.

[12] Benjamin Ward, "The Firm in Illyria," *American Economic Review,* September 1958.

[13] On the conditions under which directors may be dismissed, see G. W. Hoffman and F. W. Neal, *Yugoslavia and the New Communism,* New York, 1962, pp. 241–42.

[14] Source cited in Sirc, "Control and Competition," p. 152.

and replaced by the administrative rationing of funds by the Investment Bank (at least for projects financed neither from the enterprises' own funds nor from those at the disposal of the republics, districts, and communes).

Where the market fails as an allocating device—for the distribution of most intermediate goods and for the bulk of investment funds [15] —it is evident that some sort of central coordination and direction is needed to avoid the waste that would be caused by decentralized decisions governed by false indicators of relative scarcities. In the realm of investments, I have mentioned that the Investment Bank fulfills this function. (It is commonly asserted in Yugoslavia that the chief leverages of centralized bureaucratic controls over the economy were transferred in the process of revamping the economic system in 1952 from the Planning Commission, where these controls had been vested prior to that date, to the Investment Bank.) Vanek in his paper asserts that in so doing it follows "by and large criteria of economic efficiency." This I find hard to interpret. He cannot mean that funds are dispensed chiefly according to monetary rates of return: Heavy industry, which received 69 per cent of the total investment credits allotted to industry from centralized investment funds in 1961,[16] exhibited appreciably lower rates of return than industries producing for the consumer market.[17] (This was in part due to the fact that their prices were more rigidly controlled.) But if he has in mind some nonmonetary standard of "social profitability," then I wonder what quantitative criteria the bank can apply: Since current prices do not reflect relative scarcities, and shadow prices, as far as I know, are not calculated from economy-wide programs, then where are these "criteria of economic efficiency" to be found? The best the bank can do is to conform to the plan, whatever might be its shortcomings.

The Investment Bank of Yugoslavia controls another key input in

[15] Vanek asserts that the Investment Bank accounts for a third of "investment resources" and "influences" perhaps 20 per cent more. According to the statistical yearbook of Yugoslavia for 1963, the decentralized funds at the disposal of investors made up less than 20 per cent of total investments in 1960, 23 per cent in 1961, and 38 per cent in 1962. In industry alone they came to only 17.7 per cent in 1961 (Savezni Zavod za Statistiku SFRJ, *Statisticki Godišnjak SFRJ 1963*, pp. 264–65). All other investment outlays were from centralized investment funds, local and republican budgets, and blocked amortization funds.

[16] *Ibid.*, p. 265. In this calculation I included in "heavy industry" the following sectors: electric power, coal mining, petroleum, ferrous metals, nonferrous metals, minerals, metal processing, shipbuilding, electrical, chemical, and building materials.

[17] Cf. the approximate calculations made by Sirc, "Control and Competition," p. 153.

the production process, namely, foreign exchange. As Vanek points out, the system of variable "coefficients," which amounted to a highly differentiated schedule of exchange rates designed to protect inefficient domestic industries from foreign competition and to encourage the exports of high-cost goods, was abolished in 1961. But the Investment Bank continued to exercise administrative controls over the allocation of foreign exchange; in particular, it went on channeling scarce exchange to purchase foreign equipment for heavy industry, while agriculture, transportation, trade, tourism, and catering had to do with declining allotments for this type of imports.[18] There are no more "private-type profitability" criteria in this type of allocation than in the case of investments.

So far I have said nothing about the nonmarket allocation of materials subject to price ceilings. It is apparent that intermediate goods, such as steel, whose prices have remained virtually constant since 1954, while the inflation spread to other sectors,[19] cannot be obtained by consumers in any desired quantities and that some formal or informal rationing must take place to distribute available supplies. In practice the most important institution that effected this distribution prior to June 1960 was the branch association of producers (*udruzenje*). Since that date the branch councils (*saveti grana*) in the framework of Federal Industrial Chambers have been supervising the procurement of materials for their associated enterprises.[20] Under the old associations, the member-enterprises distributed available supplies among themselves. Although I was informed in 1958 that there were frequent differences of views as to how this distribution should proceed, the fear of direct government intervention kept these conflicts "within the family." My guess is that the reorganization of 1960 increased the government's role in supervising industry *via* the industrial chambers. But it will take a good deal of research—of the type David Granick and Josef Berliner once conducted on informal decision-making processes in the Soviet economy—before we shall have any firm understanding of the nature and the degree of centralization of allocation channels bypassing the market in the Yugoslav economy.

To conclude this Comment I should like to speculate on the reason

[18] See the *Annual Report* of the Yugoslav Investment Bank for 1961, Novi Sad, 1962, pp. 14 and 15.

[19] The price of steel rails of commercial quality remained fixed at 80,000 dinars from 1954 to at least September 1961. In the meantime the cost of living had risen by 55 per cent (Savezni Zavod za Statistika, *CENA*, July–September 1961, Belgrade, 1962, pp. 24–25).

[20] Vasic, *Ekonomska politika,* pp. 54–55.

why the Yugoslav government found it necessary to superimpose so many direct and indirect controls on what was originally meant to have been a real market mechanism.

If we leave aside the possible political reasons why the state may have wished to retain centralized controls over the economy, we can say that these interventions were essentially due to a conflict between the strategy of economic development the Yugoslavs pursued and the institutional model they adopted to implement it. Between 1950 and 1952 Yugoslavia started to veer away from the Soviet model without ever giving up on the Soviet strategy of development, consisting in high ratios of investments to national income and the concentration of investments on heavy industry. Furthermore, the government was committed to a policy of evening out the enormous disparities in the level of development of the six different republics making up the federation. (As late as 1955 the national income per head of Slovenia was two and a half times greater than that of Macedonia.[21]) This meant that a part of the profits earned in the more developed republics—Slovenia and Croatia—were earmarked for investment in more backward areas —Montenegro, Macedonia, and Bosnia-Herzegovina. The government wished to grant economic powers to the republics and particularly to the communes (*opstine*) to allow them to found new enterprises and to carry on their own development. The established industries in the more industrialized parts of the country had to meet heavy demands on their gross profits from the federal government for investment elsewhere, from their republic, from their commune, and finally from their own workers and staff, through the latter's association in the workers' councils. The resolution of these conflicting demands was to some degree determined by the so-called financial instruments described in Vanek's paper, but there was necessarily considerable uncertainty, *ex ante*, both as to the magnitude of the value added by each firm and its final distribution each year. This uncertainty was compounded by the greater freedom given to the workers' councils in 1961 to determine workers' wages from these margins and by the decision taken in 1964 to allow the communes to take a larger part of enterprises' net proceeds.

It was well-nigh impossible to calculate with any accuracy the sums that would be distributed in the form of wages and those earmarked for decentralized investments by enterprises, communes, and other recipients of funds from producers. This uncertainty in the application of the instruments, along with a fairly liberal short-term crediting policy on the part of the National Bank and increasingly favorable terms for

[21] Computed from data in *Statisticki Godisnjak 1963*, p. 356.

the farm sector, gave rise to a perennial inflationary problem.[22] Since the financial instruments were too blunt to keep the inflation in check, direct controls on prices were resorted to. As these controls distorted the price structure, they made market criteria increasingly inadequate to guide allocation decisions. To cope with these market failures, more direct controls had to be instituted. This institutional disequilibrium eventually led to the present "ambivalent system."

Interestingly enough, a strong opposition has grown in recent years, especially among Croatian and Slovenian economists and politicians, to what Vladimir Bakaric, the Secretary of the Communist League of Croatia, calls the present "administrative-centralist system." Many Yugoslav economists would agree with Bakaric that "the difficulties which are in essence the product of the old [centralist] system cannot be overcome by using methods stemming from that system." The economy must break out of this vicious circle. What is needed, in other words, is not more controls to patch up the system but "more freedom in the economy." [23] There is also increased understanding among influential Yugoslav officials of the point made by Dr. Branko Horvath, in his article in the *Economic Journal* of December 1958, that excessively high investments, carried out at the expense of consumption, may so destroy workers' incentives as to be self-defeating for the purpose of maximizing the rate of expansion of the economy. Bakaric hints that excessive capital transfers from the more advanced to the less advanced republics may also have the effect of retarding over-all growth.[24]

If these and other liberal-minded economists and politicians could have their way, the Yugoslav economic system would be transformed into something more closely resembling the market economy described in Professor Vanek's paper.

[22] Between January and August of 1964, for instance, investments, which were slated to rise by 10 per cent according to the plan for the entire year, actually went up by 40 per cent compared to the same period of 1963 (investments by communes and districts rose by 51 per cent and investments from bank credits by 213 per cent). According to one source, there was an increase of 540 billion dinars in effective demand since last year "which was not matched by a comparable increase in the volume of goods available for consumption and fixed investment." Bricks, one of the few building materials whose prices are not controlled, were 23 per cent more expensive in the summer of 1964 than in 1963 (*Ekonomska Politika,* September 5, 1964, p. 1219; *ibid.,* September 19, 1964, p. 1307). Other details on the inflation are contained in *ibid.,* September 12, 1964, p. 1285.

[23] Speech by Bakaric in *Vjesnik* (Zagreb), September 21, 1964 and his interview with *Ekonomska Politika,* published on October 10, 1964.

[24] In his speech reported in *Vjesnik,* September 21, 1964. He also argues in the same speech that the necessity of these transfers is the "greatest cause or pseudo-cause of the retention of the administrative-centralist system."